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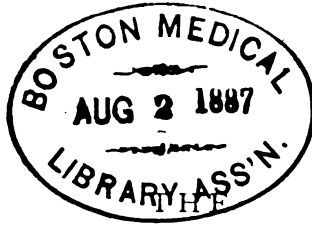
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THE TREATMENT OF OPIUM ADDICTION.

BY DR. J. B. MATTISON,* BROOKLYN, N. Y.

Several years have passed since the writer had the pleasure of reading before this society a paper on the subject of opium addiction. During this time his professional attention has been largely, and, of late years, exclusively devoted to the study and treatment of this toxic neurosis, and, with increasing experience has come improved therapeutics, all of which warrant him in again inviting attention to a topic which possesses a great and growing importance, the extent of which will be none the less appreciated by the reflection that many of those who fall victims to its steady advances, are recruited from the ranks of our own confreres.

Opium addiction is a *disease*—a well-marked functional neurosis, and deserving recognition to a greater degree than it has hitherto received. In the vast majority of cases, the *vice* theory of its origin is incorrect, so that, with few exceptions, the term "opium habit" is a misnomer—implying as it wrongly does, an opiate using under individual control.

As elsewhere stated—"The Genesis of Opium Addic-

* Read before the American Association for the Cure of Inebriates, October 22, 1884.

tion," *Detroit Lancet*, Jan, 1884—two causative factors exist—necessity and desire—but the result, if the opiate be sufficiently long continued is essentially the same—a condition of disease, as evidenced by various functional ills.

The central tracts involved are the cerebro-spinal and sympathetic systems. Deviations from health noted, are due to departure from the normal tone of one or both of these centers. Organic lesions are rare—possibly, some instances of renal or brain disease—the usual ultimate result being a state of marasmus—impaired nutrition and profound nerve depression, ending in death.

In the paper to which reference has been made, attention was invited to a new method of treatment, and as this is largely the same we now employ—some improved changes will be noted in passing—we reassert that it is based on the power of certain remedial resources to control abnormal reflex sensibility, and accomplishes, largely, two cardinal objects: minimum duration of treatment and maximum freedom from pain.

It is a fact well attested by clinical observation, that the ravages of opium excess are spent mainly on the nervous systems before noted, inducing changes that give rise to great nervous disturbance when the opiate is peremptorily withdrawn—unless some mitigating measures be interposed, and which, even in the process of very gradual withdrawal, is seldom, if ever, entirely avoided.

A recital of the varied symptoms of abrupt opiate renouncing is not here needed. Let it suffice to say we regard them all, certainly the most important—the aches, pains, yawnings, sneezings, shiverings, nausea, vomiting, diarrhoea, restlessness, delirium, convulsions, exhaustion, collapse—as reflex indications of great irritation in those centers, and any method having the power to counteract and control this condition must contribute vastly to the patient's comfort and cure.

Heretofore, two plans have obtained in the treatment of opium addiction. One, which may well be called heroic, the

entire and abrupt withdrawal of the usual opiate, invariably gives rise to great distress, to relieve which, various remedies are, at the time, resorted to. Those not fully informed, and desirous of knowing the extent of this suffering, which is far from imaginary, as some would have us believe, should consult Levinstein's work, in which are given details of twenty-four cases of hypodermic morphia addiction treated by this method, which the author, by a process of logic neither safe nor sound, declares to be the best. *This statement we emphatically dispute.* No treatment that entails such suffering, as in the cases cited, can claim preëminence over one more humane and equally effective. A study of the resultant effects in the instances alluded to reveals evidence of dire distress, in seven cases so extreme—perilous collapse—that a temporary return to hypodermic morphia became imperative to avert a fatal termination.

The other plan, consisting in a very gradual decrease of the usual opiate, meanwhile toning up the system to make amends for the accustomed narcotic, secures the desired result at much less discomfort, and we know of no reason why it should not be just as permanent. It is, however, open to the objection of requiring a much more protracted treatment, while it also tends to exhaust the patient's patience, and many refuse to continue till success is secured.

The method we commend is a mean between these extremes, and consists in producing a certain degree of nervous sedation and consequent control of reflex irritation by means of the bromides, though we refer, specifically, to the *bromide of sodium*, having used that exclusively in cases under our care. This plan, which so far as we are aware is original with ourselves, is merely a new application of a well-established principle, for the power of the bromides to subdue abnormal reflex irritability is so constant that it may be looked upon as an almost invariable sequel of such medication. Dr. Ed. H. Clarke, in his valuable treatise on the bromides, says "diminished reflex sensibility, however different physiologists may explain the fact, is one

of the most frequent phenomena of bromidal medication that has been clinically observed, and is, therapeutically, one of the most important." The testimony of other observers is to the same effect—Gubler, Guttman, Laborde, Voison, Damourette, Eulenberg, Claude Bernard, Brown-Sequard, and Echeverria, all giving evidence as to the power of these agents over abnormal reflex action, and, at the same time, over the general nervous system. Admitting that the symptoms of opiate disusing pertain almost exclusively to the domain over which the bromides exert so decided a control, we have a new field presented for the exercise of this valuable power, and the fact, proven conclusively by our experience, that it *does* exert this happy effect, fully supports the idea advanced as to the pathology of this disease.

In speaking of the bromide of sodium we refer entirely to the influence of the *continued dose*, by which we mean its administration twice in the twenty-four hours, at regular intervals, so as to keep the blood constantly charged with the drug. A most important difference exists between the effect of this mode of exhibition and that of the single dose, or two or three doses so nearly together as to form practically one, for in the former case the system is constantly under the bromide influence, while in the other, the drug being largely eliminated in a few hours, the blood is nearly free from it a large portion of the time. Results obtainable from the continued use cannot be gotten from the single dose, and, as a consequence, its value is far greater in the disease under consideration.

Again the action of the continued dose being somewhat remote—three to five days usually elapsing before there is decided evidence in this direction—much more desirable results are secured by its employment for several days *prior* to an entire opium abandonment, meanwhile gradually reducing the opiate, than if the withdrawal be abrupt and then reliance placed on the bromide; for, in one instance, the maximum sedative effect is secured at the time of maximum nervous disturbance from the opium removal, and its counter-

acting and controlling influence is far in excess of that to be had from its employment after the lighting up of the nervous irritation. What we term *preliminary sedation* forms a peculiar and valuable feature in our giving of the bromide, our experience having convinced us that we have in it an unequalled means of obviating the discomfort incident to the treatment of this disorder.

The value of the various bromides depends on their proportion of bromide. Bromide of potassium contains sixty-six per cent., sodium seventy-eight, and lithium ninety-two per cent. We should, therefore, expect a more powerful influence from the latter agent, and, according to Weir Mitchell, it has a more rapid and intense effect. The sodium, however, answers every purpose and has several points in its favor over the other bromides—is pleasanter to the taste, more acceptable to the stomach, causes little cutaneous irritation, and much less muscular prostration. In this connection, recent experiments and observations by Drs. Ringer and Murrell on the superior value of the sodium salt are of interest, and may be found in the *British Medical Journal*, 1883.

Either of the bromides, in powder or concentrated solution, is somewhat irritant, sometimes producing emesis, and in any event, delaying its absorption. A practical point, then, is that it be given largely diluted. We give each dose of the sodium in six or eight ounces of cold water, and have never known it to cause vomiting.

To secure the requisite degree of sedation within a limited period, it is essential that the bromide be given in full doses. We are convinced that failure in its use, in any neurosis, is very often due to a non-observance of this point. Our initial dose of the sodium is sixty grains, twice daily, at twelve hours intervals, increasing the amount twenty grains each day, *i. e.*, seventy, eighty, ninety grains, and continuing it five to seven days, reaching a maximum dose of 100 to 120 grains twice in twenty-four hours. During this time of bromidal medication, the usual opiate is gradually reduced,

so that, from the eighth to the tenth day, it is entirely abandoned. A decrease of one-quarter, or one-third, the usual daily quantity is made at the outset, experience having shown that habitues are almost always using an amount in excess of their actual need, and this reduction occasions little or no discomfort. Subsequently, the opiate withdrawal is more or less rapid according to the increasing sedation, the object being to meet and overcome the rising nervous disturbance by the growing effect of the sedative—in other words, maximum sedation at the time of maximum irritation.

Exceptions to this may occur. Some patients are so weak and anæmic, on coming, that a previous tonic-course is deemed judicious; the usual opiate is continued for a time, and, meanwhile, with good food, tonics, and other measures, an effort is made to improve the impaired condition, and with success, for we have seen patients gain markedly in strength and weight during this regime.

Sometimes, a patient, before placing himself under our care, has reduced his daily taking to the lowest amount consistent with his comfort. If so, the initial large reduction is not made, but the decrease is gradual throughout. Again, in some instances, no reduction is made for two or three days, at the end of which the bromide effect is secured, in part, and the decrease is then begun. And in all instances, this rule governs—*each case is a law unto itself, and the length and amount of the bromide giving and consequent rate of opiate decrease is determined entirely by individual peculiarity as shown both before and during treatment.*

Surprise may be expressed and objection made regarding the extent of the bromide doses, but the fact must never be overlooked that we are not to be governed in the giving of any remedy by mere drops or grains, but by the *effect produced*. Again, one effect of opium addiction is a peculiar non-susceptibility to the action of other nervines, necessitating their more robust giving to secure a decided result. More, under the influence of certain abnormal conditions, doses which ordinarily are toxic, become simply therapeutic.

The annals of medicine abound with instances in support of this statement, and among the most striking may be noted the following. Dr. Southey read before the Clinical Society of London, notes of a case of tetanus, which occurred in a boy ten years old. The first symptoms of trismus were observed two days after a severe fright and drenching, due to the upset of a water-butt. They steadily increased up to the date of his admission to St. Bartholomew's Hospital, on the eighth day of his illness, when the paroxysms of general opisthotonos seized him at intervals of nearly every three minutes. Each attack lasted from fifteen to thirty seconds, and although between the seizures the muscles of the trunk became less rigid, those of the neck and jaw were maintained in constant tonic cramp. The patient was treated at first with chloral, ten grains, and bromide of potassium, twenty grains, every two hours, and, afterwards, with the bromide alone, in sixty grain doses, every hour and a half. When about two ounces were taken in twenty-four hours, the attacks became less frequent; but at first each separate seizure was rather more severe, and on the evening of the eleventh day he was able to open his mouth better. On the thirteenth day the bromide was decreased to twenty grains every three hours, and on the fourteenth day was discontinued altogether. When the bromide had been omitted twenty-four hours the attacks returned at intervals of an hour, and the permanent rigidity of the muscles of the neck was re-established. His condition now steadily became worse, so that on the eighteenth day of his illness it became necessary to resort to the previous large doses—one drachm—every hour and a half. After three such doses, the expression became more natural, and he was able to open his mouth again; but it was not until the twenty-fifth day of the disease that it was possible to discontinue the remedy. The patient remained in a state of remarkable prostration and drowsiness, sleeping the twenty-four hours round, and only waking up to take his food for eight days, and passed all his evacuations under him. He subsequently steadily and rapidly

convalesced. The bromide produced no ache or other disagreeable effect, and certainly seemed to exert a markedly controlling influence upon the tetanus.

Surely, under ordinary circumstances, no one could think of giving such doses of bromide, but here, under the antagonizing influence of the intense reflex irritation, their effect was vastly beneficial, conducing, beyond question, to the patient's cure.

Given as we commend, no effect is usually noted before the second or third day. Then patients mark an increasing drowsiness which deepens into slumber, more or less profound—so much so, at times, that it is difficult to remain long awake. With this is a growing aversion to active exercise, not solely due to lessened muscle force, but largely to mental hebetude. Some cases are met with in which the hypnotic effect is not very decided, but the rule is as stated. Sometimes a saline taste and increased saliva with the bromic breath are noted, and the tongue becomes furred. Acne is usually absent. The renal secretion is almost invariably largely augmented. We have known patients to pass more than 100 ounces in twenty-four hours; and we have noticed this—that where the renal activity is not increased, or is diminished, the sedative effect of the drug is more prompt and decided. The practical point of this is obvious—such cases require a less prolonged bromide giving.

With some there is slight, transient loss of co-ordinating power in the fingers, and exceptionally, in unusually sensitive subjects, there may occur mild startings of the fore-arm tendons. These, however, soon subside, and their going is largely hastened by local faradic seances.

Dr. König, *Centralblatt für Chirurgie*, recommends that morphine be given hypodermically in one-seventh of a grain doses, preceding the inhalation of three or four drachms of chloroform to produce quiet and sleep in insomnia from alcoholism, or to produce narcosis for surgical operations.

BRAIN DISORDERS FROM ALCOHOL.

BY ROBERT LAWSON, M.D., M.B., OF LONDON, ENGLAND.

The large number of cases of insanity which owe their origin, directly or indirectly, to excessive drinking, not only makes the observation of such cases, when massed in a large asylum, comparatively easy, but renders it necessary that an accurate knowledge of the varieties and tendencies of this form of brain disease should be arrived at. My motive will be to record in as simple a manner as possible, some casual observations which have been almost thrust upon me while engaged as an assistant medical officer in asylums which have provided shelter and treatment for the insane alcoholic patients of the densely-populated counties of Middlesex and York.

For my own convenience I shall speak of alcoholic brain disorder under two heads. The first class of cases will embrace those of which the prominent characteristic is that they show a temporary interference with, and morbid intensification of, brain function.

This class will include *delirium tremens* and *mania a potu*, and the classification is, I think, more accurate than would be the case if I were to speak of these disorders as being simply acute; for, though they may be acute in the sense of being severe, they are not acute according to the meaning which the term is generally used to convey, as running a short and definite course. The presence in the blood and tissues of a poison which it is necessary to eliminate, and the existence of a delirium which multiplies itself as long as the deterioration of nutrition and the instability of the nerve centers combine to maintain it, constitute a condition which renders precise limitation of the symptoms and course of the disorder impossible. Without any apparent difference in the constitution of a patient, or in the means by which the mania

has been induced, the intense furor which sometimes accompanies alcoholic brain disorder may disappear under treatment during the course of a single night, while under precisely the same appreciable conditions the excitement may in another case continue for weeks.

In both cases the etiology, the treatment, and the issue, may be the same; but the mania is a factor of so versatile and mobile a character that, though the general and ultimate effect of sedative and nutritive treatment may be safely anticipated, the time which will be required for the production of a good result can never be even approximately determined.

Under the second head I shall speak of cases which are characterized anatomically by an essential variation from the normal structure of the contents of the cranial cavity. This group will embrace cases of chronic alcoholic mania not passing into dementia; cases of dementia of which the principal feature is almost absolute loss of memory for recent events; and cases which either verge upon or merge into general paralysis of the insane.

Under the first head I shall at present refer only to the state which bears the most characteristic name—*mania a potu*—inasmuch as simple alcoholic delirium is a disease with which general practitioners are more familiar than specialists in lunacy. When admitted to asylums, patients suffering from *mania a potu* closely resemble each other, even in the details of their history, the nature of their excitement, and in the circumstances of their admission. They have generally undergone an initiatory experience in the police court and the strong cell; are not unfrequently brought to the asylum at night, as if a sudden resolution had been arrived at as to the advisability of regarding the patients as the victims of disease essentially different from an ordinary attack of delirium tremens. At times the maniac is firmly secured and accompanied by a body of policemen. His suppressed excitement manifests itself in his expression, which varies in the same individual from abject timidity to sudden and violent emotion and aggressive impulsiveness. The infliction

of restraint intensifies the mania in more ways than one. By the employment of force the patient is confirmed in his belief that evil is in store for him, and is driven to bay by the feeling of utter helplessness, which, as an external reality, combines with the insane timidity alternating with his outbursts of aggressive excitement. His inability to look upon things in a rational manner places him in a position which corresponds with the experience of an animal inhaling an anæsthetic. In him the humane motive has the appearance of a hostile design, and he experiences all the agony which results from the entertainment of vague notions of coming evil. When relieved from restraint the patient's excitement is almost invariably alleviated, and the administration, forcible if necessary, of liquid nourishment and anti-acid effervescents, with bismuth and opium, is frequently followed, with comparative speed, by refreshing repose. Sometimes, as I have already said, the effect of concentrated liquid nourishment and sedatives is so marked that one administration is sufficient to produce a comparative removal of the excitement, and the patient begins to be skeptical about the hallucinations which he so recently acted upon with avidity and energy. By a continuation of treatment, and by freedom from restraint, he resumes his former calmness of demeanor, and cannot unfrequently fix the exact time of his own recovery by being able to employ his memory in going back, step by step, to a particular hour when reminiscence, first becoming difficult, gradually becomes impossible. He cannot remember the incidents of his excitement, and has only a dim recollection of the nature of his delusions and hallucinations.

Unfortunately, however, cases so gratifying in their issue are not often met with. The primary effect of sedation is almost always good, but probably in the middle of the night the patient's sleep becomes less sound, peripheral irritations of a somatic or emotional nature thrust themselves upon the consciousness, and the dreamy thoughts which naturally crowd into the mind 'twixt sleep and waking again, arouse

delusions and hallucinations. The patient cannot control his terror or analyze his sensations, and he tries to escape from imaginary foes.

If in a single room, he may attempt, and sometimes successfully, to escape through an iron-guarded ventilator, the aperture of which would seem to the inexperienced to be altogether incapable of allowing the passage of a human body. If in a padded room, he knocks himself about in wild confusion; and, if in a dormitory, he generally makes a sudden dart from bed, and rushes wildly forward in search of some place of safety. But even in such a case the prognosis is rarely unfavorable, and after several sudden outbursts of excitement, the maniac—strengthened by the regular administration of digestible and highly nourishing food, relieved by elimination from the irritation of alcohol on the nervous tissues, and soothed by kindly treatment, and by such remedies as opium or digitalis—usually regains his reason without showing the slightest traces of dementia; and, after a period of convalescence, is discharged recovered—to resume his ordinary employment, and unfortunately, in too many cases, to resume also the indulgence which compelled him to pass through so trying an ordeal. Though it is evident that in such cases Nature herself performs the greater part of the cure, yet there can be little doubt that some benefit can be obtained by judicious modifications of diet and by the administration of medicines. In the West Riding Asylum I have, both in this and in other forms of severe mania, seen marvellous results produced by the use of a very highly concentrated essence of fresh meat. This essence is made by placing in a porous covered jar three pounds of fresh meat, free from bone, cut small, and without fluid. The jar is placed in the steam cooking-chamber and allowed to remain till the meat is seen to have yielded about a pint of essence. It is salted and simply seasoned with pepper, unless otherwise ordered.

With regard to the medical treatment of such cases, I have always placed the most reliance on the administration

of opium in moderate doses, combined with one-drachm or even two-drachm doses of lig. bismuthi. Dr. Magnan, in speaking of such cases as those to which I have just been referring, says that it is rare in alcoholic mania to have exalted delusions. I have met with only one case of pure *mania a potu* in which there were delusions of exaltation.

Dr. Major, of the West Riding Asylum, has kindly permitted me to peruse this case for the purpose of making a few comments upon it. The patient had had several attacks of mania, all occurring during or after bouts of drinking, and the attack which led to his being brought to the asylum seems to have been one of the worst. Before his arrest he had been collecting crowds in the street, making remarks to them about his great ability, and, in gratitude for their patience in listening to him; had been in the habit of supplying them with drink. When taken before the magistrates, he made a witty defense, which occupied about forty minutes. He talked a great deal about his accomplishments, the colleges he had attended, and his numerous dealings with the aristocracy. Both before and after his admission to the asylum his actions and conversation were characterized by considerable wit and humor. In the prison he constructed an effigy of himself, suspended it by the throat from a fastening, and made a sign of distress to attract the attention of the warders, who rushed in, after he had hidden himself for the purpose of enjoying their consternation at witnessing the apparent suicide of their prisoner. When on the way to the asylum he asked to be allowed to look at the certificate, intending to secure it, so as to be able to act the part of a relieving-officer, and hand over the warder who was conveying him to the asylum. On admission he was very talkative and witty, and tried to get a reputation for knowledge of languages. He spoke in Latin; but when answered in the same tongue, he was not able to maintain the conversation. He represented himself to have been a Captain in the Engineers, and to have bought a public-house for £5,000. This patient made a good recovery, and was discharged in about two months.

This is, no doubt, a somewhat uncommon form of alcoholic insanity, inasmuch as in this instance alcoholism seems to have been an exciting cause acting upon a predisposition to well-defined recurrent attacks, which were but slightly tinged with the particular influence of the exciting cause. The only delusions of suspicion which he had were against the police officers who had arrested him.

Two points connected with these attacks of *mania a potu* seem worthy of passing notice. The first is, that one frequently meets with cases in which, within a comparatively short space of time, six or eight, or even more, attacks have occurred in the same individual, from all of which he has recovered without the least trace of consecutive dementia. It appears that, if the vessels remain moderately healthy, the mania is due to the actual saturation of the tissues with alcohol, and to the tendency which one series of delusions has to cause the formation of another, up to the time when the alcohol has been eliminated, and the excitement subdued by proper nourishment and sedatives. The second point is, that a hereditary and collateral tendency to insanity appears to be more than usually common among the victims of *mania a potu*.

In proceeding to speak of the forms of alcoholic insanity in which the presence of some organic change in the cerebral vessels, or the brain substance, is supposed to exist, I have first to mention a form of chronic mania produced by alcoholism, which Dr. Magnan seems to have omitted from his classification.

In our English asylums there are numerous cases in which the alcoholic disease manifests itself in the form of recurrent attacks of excitement, generally based upon some delusion of suspicion, or some hallucination of the special senses. Such cases may be of very long duration, and may undergo no change during the greater part of their course. They may commence as uncured cases of *mania a potu*, or they may be the result of a gradually developing mania arising from the constant abuse of alcoholic stimulants for prolonged periods. That they are characterized by a strong

predisposition to insanity, is shown by the fact that they sometimes occur in very young patients, in whom the constitutional condition must have favored the development of mania. One of the most typical instances I have ever seen was that of a youth who was about twenty-one years of age, and in whom delusions of suspicion and hallucinations of the special senses were developed with great fertility. A leading feature of these cases is, that sometimes the patient may be quiescent, tractable, and industrious for a considerable time, unless his delusions are voluntarily or accidentally aroused; but, when they are touched upon, his excitement is extreme. He threatens violence, and frequently appears to be on the point of employing it, but rarely does so. His speech is voluble and vituperative, and his movements agitated and rapid; but he is comparatively coherent, shows no defect of memory, and no other signs of dementia. In rare cases, the patient is sullen and intractable, and given to instantaneous outbursts of violence, of which he offers no explanation, and which assume a homicidal or destructive character.

Such a patient is one of the most dangerous of asylum inmates. Cases which manifest the symptoms of chronic alcoholism of the variety under consideration present a wonderful uniformity in the nature of their delusions. They are essentially delusions of suspicion. The patients imagine that they have been forced to sleep upon damp beds; that poison has been placed in their food; that electricity has been brought to play upon them; that they have been drugged with morphia, dosed with chloroform, or stifled with sulphurous fumes.

They are tortured with voices using the most obscene and threatening language, and regard themselves as victims operated on by hidden agencies, which act with a subtilty greater than that of magnetism or electricity; and though, when their hallucinations are excessively harrassing they are sometimes driven to attempt suicide, yet their mental agitation has little effect upon their bodily nutrition, and they invariably eat well and maintain excellent health.

There is another well-pronounced class of cases which owe their origin to excess in alcoholic drinks, and which possess some interesting features. In this class the patients are generally advanced in life, are not infrequently women at the meno-pause, and generally bring with them a history of excessive drinking suddenly abandoned.

The feature of such cases, which is sufficiently striking to give character to them, is the almost absolute loss of memory for recent events. The patients are cheerful, attentive, understand what is said to them, and show little dementia as far as simple processes of reasoning are concerned, but are absolutely destitute of memory for passing events. When the medical officer makes his visit (perhaps the third in the course of the day), and asks, "Have you seen me before?" the patient asserts that he or she has not, and the constant, ineffectual repetition of the question at short intervals shows that the capability of retaining new impressions has completely disappeared. I do not mean to assert, however, that all such cases are necessarily of alcoholic causation, but only that they are a frequent result of alcoholic excess. In fact, I think that in those cases where organic changes have been produced in the brain, the nature of the symptoms will be determined not so much by the character of the exciting cause as by the physiological function of the regions diseased. The same complete failure of memory, for instance, as I have just now commented on, is frequently present in specific disease of the brain; and Dr. Major has drawn my attention to a case in which the exciting cause was the shock produced on the patient by the death of her husband. Though the mention of the circumstances of her husband's death always produced in her the most painful emotions, it was on such occasions accepted by her as a novelty. Each time that the lamentable event was mentioned, she regarded the information as something she had never heard before, and the grief she manifested was consistent with this remarkable forgetfulness. Still, in other respects, she was comparatively rational.

In such cases there are not, as a rule, the other ordinary symptoms of dementia.

The patients are not dirty in their habits, sometimes employ themselves, are interested in immediate impressions, but retain no recollection of recent experiences. Such cases seem to begin with comparative suddenness, and may terminate—after a considerable interval, in which loss of memory has been the leading symptom—in apoplexy, epilepsy, hemiplegia (from clot or progressive softening), or in simple brain wasting. In such cases there are no paroxysms of excitement, but there is a tendency toward general weakening of the muscular system, and a cheerful expression, and insane laugh, which, however, cannot be confounded with the look of fatuous rapture which adorns the face of the general paralytic.

The last class of cases of alcoholic etiology, to which I shall refer, are those which are frequently difficult to diagnose as distinct from general paralysis. They simulate that disease strongly, and may even merge into it. They occur principally in men somewhat beyond the age commonly assigned as the period at which general paralysis manifests itself.

In one respect, also, they are peculiar, inasmuch as the history of the cases generally begins with an attack of what would formerly have been called brain fever. An attack of cerebritis in a man of forty-eight, or fifty, who has been much addicted to alcohol, may leave him in a state of almost absolute dementia and partial paralysis. When he attempts to stand, his knees bend under him. He is degraded in his habits, and eats ravenously. He rarely speaks; but when he does, it is usually to express exalted ideas.

His manner may be habitually sullen, or constantly cheerful and fatuous. For a few months his symptoms may show no modification, when suddenly he may burst out into an attack of aggressive excitement. He shows symptoms of a new attack of eucephalitis, and, though completely helpless, manifests by his conduct the presence in his mind of delu-

sions and hallucinations. His attempts at violence toward those of whom he knows nothing, and whose motives are humane, show the existence of the former, and his rushing or striking at imaginary objects, is sufficient evidence that he is actuated by the influence of the latter.

Self-mutilation reveals the existence of some important mental aberration, and I have known one instance when a patient, strongly alcoholic in his history, and whose case presented such features as I have sketched, lacerated his body with his teeth in a most serious manner.

In such cases, counter irritation of the shaven scalp, and the internal administration of digitalis or aconite, sometimes produce wonderfully beneficial effects. After each attack of excitement, such patients are seen to lose more and more the use of their limbs. They become more and more demoted, and have recurrent attacks of excitement, which close observation ascribes to groundless suspicions and half-expressed hallucinations. They are rarely convulsed, and, in this respect, as well as in the nature of their delusions and hallucinations, and in the rapidity of the course of the disorder, they show a decided diversion from the typical course pursued by general paralysis.

After death they may be found to have brains presenting no meningeal adhesions, and little frontal wasting ; but, on the other hand, showing greater evidence of inflammatory action than those which are found in general paralytic brains. The white matter is often firm and glossy, and tinged with all colors, from a delicate pink to a faint cardinal hue. The cortex is, as a rule, fairly thick and deep in color. The small vessels are generally tough and coarse, and the large vessels atheromatous.

My object in this paper has been to speak of the features of several well known, and other less known, forms of alcoholic brain disease. I have not referred to alcoholic excess as a cause of general paralysis, except so far as my last class of cases sometimes contain instances which merge into that disease. I consider that the relation which alcoholism bears

to general paralysis is capable of a much more scientific explanation than any that has yet been offered. That explanation will, I believe, come from those who combine a knowledge of microscopy with an appreciation of the most recent views regarding cerebral physiology. I have confined myself to a statement of the symptoms of such cases of alcoholic brain disease as special privileges have afforded me the opportunity of studying, and it seems to me that experience points to the fact that excessive or injudicious indulgence in alcoholic drinks causes cerebral irritation, mal-nutrition, and probably inflammation, which, according to certain special conditions, lead to delirium, delusional mania, chronic excitement with exacerbations, and even to loss of memory, muscular prostration, exhaustion, and death.

St. Raphael's Hospital, London, England, receives female inebriates who are destitute and unable to pay. The secretary reports that one-half of all the cases under treatment are cured. An appeal is made to raise six thousand dollars to complete the hospital. There are several other places for destitute drinking women in the large cities of Great Britain, but none for poor men who are unable to pay.

The president of the Texas Medical Association, Dr. Brown, in his annual address thus refers to asylums for inebriates: "It is believed that an asylum for inebriates is demanded; ten years of urging our legislature, and of vigorous efforts at educating the people up to this idea would be well spent, and thousands of acres of our idle asylum lands would be judiciously appropriated, and richly repay the State that performed this great charity. As no other body has taken the initiative in this matter it is presented for your action."

THE VALUE OF RELIGIOUS INFLUENCE IN
THE TREATMENT OF INEBRIETY.

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

I have long ago declared from the study of many cases of inebriety, that no degree of faith, or prayer, or earnest, honest intention on the part of the patient, can alone save him from inebriety. In all cases, I am convinced, as a physician, that these agencies are of great value, and always urge my patients to a higher living based on faith, the exercise of prayer and a determined will to rise above the entailment of disease from which they suffer. I also urge that these forces cannot be made available unless supplemented by active work, the use of physical agencies, the exact application of means and methods which shall reach out and control the organism. Some physicians have taken exceptions to my views of the secondary value of spiritual forces in the treatment of these disorders, and have written to me detailing cases which have recovered by this means; also cases which have failed from the want of them. I think that any of these physicians will find, from a study of many different diseases, cases which have recovered in a manner more or less mysterious, which might be fairly attributable to the same spiritual forces: such as faith and prayer. Yet, the application of these means to other cases of the same disease would always fail, especially if they are used exclusively. The value of faith and prayer in inebriety is, in all probability, nothing more than the effect of mind on the body, and the application of the principle of hope and confidence which every physician seeks to inspire in the patient's mind, no matter what the disease may be. If this is trusted, to the exclusion of other means, failure will follow; and yet not unfrequently cases of disease go on to recovery, buoyed up on this, or *harmless infinitesimals*, which simply give a tonic

activity to the mind and permit the full action of nature. In many cases I have been convinced that the shock to the mind from the presence of some powerful mental emotion was sufficient to arrest diseased action, and even change the malady and its progress.

Illustrative cases of this character are seen in those persons who exhibit a total change of character and habits, either from religious emotion or from grief or fear. Or those who suffer from disease, complicated with a strong nervous element. I have seen inebriates who became suddenly converted make a radical change of all their habits, and after a time become melancholic, demented, and die. Here was a change of the nature and character of the disease, from the presence of mental emotion. In another case of supposed mania and melancholia, the advent of a change of fortune restored him to a clear, vigorous activity.

I do not propose to discuss this question of the power of prayer or faith in inebriety, but wish simply to present some studies of cases which bear on this point, and which I think furnish the most rational conclusions. The first proposition I make is this : that no exercise of faith and prayer or honest intention exclusively, can either save the inebriate or prevent him from falling. In a study of ten cases on this point, I found that seven had been, before and after the beginning of inebriety, active church members, had experienced conversion and led active lives of faith and prayer for longer or shorter intervals, depending on circumstances. Two of these were periodical inebriates, and had, during the free interval between the attacks, led a most consistent Christian life of faith and prayer. One of the seven exhibited the strange delusion of religious mania when drinking; at all other times he was a quiet skeptic and doubter, but when once under the influence of alcohol he was the most ardent religious devotee, exhorting with great enthusiasm, and asking the prayers of every person he met, to save him. His mind seemed filled with intense fear of failing to get to heaven, and every thought and exertion seemed directed to

this end; but secretly he drank constantly, never to be stupid, but just enough to keep up a degree of excitement. This would last for two or three weeks, then merge into a low form of nervous fever, from which he would recover and remain sober for an indefinite time. This was a form of emotional inebriety which is sometimes seen in those who are either quarrelsome or excessively happy, benevolent or parsimonious, while using alcohol. The other three had been good church members before inebriety came on, but on becoming inebriates left the church.

I am confident that all chronic inebriates have a diseased emotional nature which finds a natural outlet in religious activity, and that the exercise of faith and prayer is a contagious element which they feel readily, from their nature and the surroundings. This can be seen in all communities where every temperance and revival movement carries these men to the front rank and among the earliest converts. Also in every political excitement and social change, the most enthusiastic and excitable partisans are inebriates.

The following case is significant, in both its cause and the means which failed in the treatment. H. A., a clergyman, an active, hard working man, whose history gave no evidence of any inherited taint; from childhood he was an abstainer and rigid temperance man. After conducting a series of revival meetings extending over many months, becoming worn and exhausted, one day, during the administration of the communion, the idea impressed him that this wine would be of medicinal value. It was the custom to store what remained of the wine at the parsonage, and when the service was over he drank some, in his study; the effect was so pleasing that he continued to drink, and before night became literally intoxicated. The next communion season he was seized with an intolerable desire to drink wine again, which he gave way to after the service, in his study, and became intoxicated as before. This alarmed him, and he sought, by his power of will and prayers, to prevent its occurrence. The next period was marked by the same fall

and intoxication. After this intoxication the desire left him and only returned when pouring out the wine at the next communion season. Two years later I was consulted. He was nervous and much debilitated; was using patent bitters every day; had not been to the communion table for many months; was filled with fear that he would drink, and afraid of falling with the least temptation; hence was praying incessantly, and using every means to prevent such a recurrence by the exercise of strong will and faith. He said he was impelled to go and buy wine, and only after did he realize the danger. He could not tell why, except that the Evil Spirit impelled him to do so. He had exchanged pulpits and invited a brother clergyman to be with him at the communion season, and direct contact with wine was avoided, but a strange, nervous agitation followed, which soon became positively painful and increased until all sense of pride or consciousness of his condition was lost; then he resorted to the most cunning intrigue to procure wine, never seemingly able to realize his condition until after an attack of intoxication.

If he was watched at this season he could keep from using wine; this would last a week or more, then all restraint was lost. During these attacks he at times exhibited a remarkable sensitiveness to conceal his condition. He preached more earnestly and was very religious and excitable, also more enthusiastic, where he had been cool before. I advised that he give up all work, and prayers, and go out into the country, put himself in some kind friend's control, work in the open air and keep perfectly cool and free from excitement; that he was suffering from dipsomania, which would break out more prominently, or develop into some other form of disease. His clerical advisers insisted that he could help himself by being more in earnest and depending more on Divine help. Acting on this advice he obtained a short leave of absence to visit Europe, and returned a few months later, having drank more there than at home. From this time his course was rapidly downward, and to-day he is an inmate of an insane asylum. This man was most con-

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scientific, and anxious to do right, and honestly tried to check this desire for drink by both his will and the exercise of faith and prayer. He was suffering from dipsomania, brought on by overwork and cerebral exhaustion, and could only be benefited by the application of exact remedies following the line of known physical laws. Had he been placed in some hospital for inebriates, recovery would have followed.

The second case was that of a farmer who came home from the army, where he won distinction for bravery, but had acquired periodical inebriety. I was consulted by letter, and urged the physical nature of his malady and the necessity of physical treatment. This he objected to, stoutly asserting his ability to stop any time. Being a favorite in that community he became the object of interest for both the temperance and church reformers, who sought, by the application of all their means, to save him. During the next three years he joined the church, relapsed, was received back again, was very prominent and earnest, then became cold and slanderous; also united with the temperance society, worked well for a time, and relapsed. Was the subject of the united prayers of the community for many years, and signed the pledge repeatedly; made innumerable efforts and resolves to stop, but failed; was a praying man, and sought every means to get help from this source; then gave up in despair. He wasted his property, and, in a paroxysm of drink, set fire to his building and perished in the flames. Here the failure was simply in not applying remedies that were adequate to meet his case. He was suffering from a physical disease which could be reached by physical remedies.

These two cases may stand as typical of many others who are disappointing their friends, and are enigmas to all who come in contact with them. Always attempting to recover, and with extreme confidence entering upon every effort that promises this end; then relapsing very unexpectedly, and only to repeat this process at an uncertain time and moment.

Another class of cases have come under my care that are

equally enigmatic, but more common. Like the others they have disordered emotional symptoms, are either elated or depressed; at times seem to have great power of control, passing through many temptations, with great firmness; then, all unexpectedly, relapse on the slightest provocation.

The following is a typical case of this character: Brown, a lumber merchant, an intensely active man, with healthy parentage, who had been an occasional drinker from twenty years of age, began to use alcohol to excess when thirty-four years of age. Five years later he was an irregular inebriate, drinking very severely for a week or more, then reforming for an uncertain interval, varying from a few days to a year. He was a leading man in the community, and the object of great solicitude by his friends. From his brother-in-law, a physician, I obtained the following history: He drank always at home, in his room, and would not go out, but insisted on doing business and having friends come there to see him. He was either very jubilant and hilarious, or stupid and drowsy. All advice and pleadings of friends were listened to with unusual politeness. Clergymen and others would come and pray for him at these periods, to his apparent pleasure. He would become violent if any attempt was made to take away the spirits, claiming he would stop when he pleased. Then, suddenly, he would call for a pledge, sign it, and stop at once, go to church, exhibit great zeal for the temperance and church work, or go to the saloons and talk, and attempt to help inebriates reform by advice and money. These efforts would last an uncertain time; then, unexpectedly, he would begin to drink at home again. Sometimes he would "swear off," as he termed it, for a year or more, and remain rigidly temperate up to the last moment, then drink in a manner equally mysterious. When he pledged to abstain for a certain time, it was carried out rigidly, to the exact moment. If during his paroxysm of drink he could be induced to sign a pledge, it was the end of all further intoxication or drinking. This puzzled his friends, and seemed purely a vice which he could check it at will. At times he made active exertions to build

himself up by the exercise of faith and prayer, and never seemed to realize his condition or be conscious of the excess. He continued in this way for many years, and finally died of acute pneumonia, after an attack of drinking.

A., an actor, thirty-five years of age, with unknown parentage, consulted me about irregular attacks of inebriety attended with intense depression and suicidal delusions. The paroxysms were preceded by attacks of acute dyspepsia, which came on unexpectedly to him or his friends. He joined the church and many temperance societies, advised with clergymen and others, but obtained no relief; his friends said he was very cheerful, and if his buoyant spirits could be kept up during the attack of the dyspepsia he would remain temperate, but if from any cause he became depressed, inebriety was inevitable. At times he would determine not to drink, and carry it out; again, he would exhibit the same firmness and energy, yet fall. My advice to stop work and go under physical treatment for this condition was neglected, and to-day he is alternately reforming and relapsing, seemingly dependent upon obscure unknown conditions.

These cases both exhibited disordered emotional symptoms, and seemed to try hard to recover by the use of the will and the exercise of faith and prayer. They both could, at times, restrain themselves, and were enigmas to their friends. These cases may be called emotional or accidental inebriates, and follow an apparently erratic, confused course, appearing and disappearing at unexpected times and seasons. A noted temperance lecturer, who is of this class, has a paroxysm of drink craving every two hundred days. At times he is able to resist, at others he gives way, but no matter what the time or circumstance may be, the return of this paroxysm is certain and invariable.

I am sure that a study of these cases will indicate the laws which govern them, and show the same realm of physiological and psychological forces as that which govern other diseases. I protest against calling every symptom that is obscure an evidence of vice, and attempting to reach it by

spiritual agencies alone. Because an inebriate, under the emotional excitement of religious or temperance appeals, reforms and remains temperate, to reason that these means will be effectual in all other cases, or that the disorder is simply a vice, is thoroughly unscientific. Cases are found where chronic inebriates recover at once without any cause, under the most adverse conditions; the same unknown element is seen in all diseases, indicating merely our ignorance of the knowledge and conditions of all the laws governing them. Any careful study of inebriety will show that its complex causation and character cannot be reached by any specific or special methods, all efforts to cure it as a vice by spiritual means must result in failure. I would not discourage the efforts of church and society, but seek rather to educate them into a broader view of the subject and the use of means adequate to reach the disorder. I would urge upon the profession the study of this subject with a true scientific spirit, and thus seek to teach the enthusiastic church and temperance reformers how to work more effectually and upon a broader plane. The profession should teach the world what inebriety is and how to treat it, and not reformed inebriates and clergymen, who are heard in every town in the land. The following conclusions I am sure will be confirmed by all who have had any experience, and are founded on rational natural means:—

1. Inebriety is a physical disease which must be reached by both physical and psychical means.
2. All methods of treatment must be along the line of natural laws, and include all means, both physical and spiritual, that can build up and strengthen the entire man.
3. Spiritual means are only valuable in proportion as they are used with other means, and where they are effectual alone, they are the exception to the rule and cannot indicate any direct line of treatment.

DELUSIONS AS TO LOCALITY IN CHRONIC ALCOHOLISM WITH A TENDENCY TO DEMENTIA.

BY L. D. MASON, M.D., CONSULTING PHYSICIAN, INEBRIATE ASYLUM, FORT HAMILTON, N. Y.

The particular delusion referred to here may not be peculiar to all stages of, or exemplified in, every case of chronic alcoholism with a tendency toward dementia, or indeed confined to cases of alcoholic dementia. But having observed this special delusion in a number of cases of chronic alcoholism, merging into dementia, I look for it, and not unfrequently meet with it in this class of cases.

The term "*Delusion as to Locality*" explains itself—the patient is under the impression that he daily, if not more frequently, visits localities at a distance from his usual place of residence, sees friends, and transacts business, and performs his accustomed duties; whereas, the actual facts are, he has not been out of the walls of his own home, or the asylum in which he is confined, it may be, for months. If you use your logic, he is apparently nonplussed at the inconsistency of being in two places at the same time; but this is only temporary, and he will return to his insane delusions.

A marked instance occurred at the Inebriate Asylum, Fort Hamilton. The patient, a German about 55 years of age, confined in the institution for chronic alcoholism, with a tendency towards dementia, requested that he might be permitted to visit his parents that afternoon. He said they resided in Germany, on a farm near a certain town on a certain river, stating the locality. They were old people, very infirm, and it was important that he should visit them, as the farm was a stock farm, and the cattle needed his attention. He was under the impression that he was in Germany, a short distance from the farm. When assured that he was at the Fort Hamilton Asylum he simply stopped his pleading,

but resumed it shortly after, and continued to do so occasionally. The delusion was complete.

In a case now under treatment, first at his own home, and afterwards at the asylum, the patient, a retired sea-captain, is under the impression that his ship is in port; that he daily visits her, and is getting her ready for sea. The facts are, that the ship he was formerly master of sailed some six months ago; and his wife assures me that he has not been on any ship for over a year. Here also, the delusion is also complete. Other instances might be mentioned exemplifying this delusion as to locality.

The delusion co-exists with the symptoms of chronic alcoholism, and approaching dementia more or less complete, as evinced by failure of the intelligence and of the memory; this mental attribute being in abeyance, sometimes entirely, as characterized by forgetfulness of events, even of recent occurrence; insomnia present, and gastric derangement, or occasional periods of mental excitement occur; but the tendency is toward general indifference of the patient as to his surroundings; he becomes apathetic, automatic in his movements, and gradually lapses into dementia more or less complete. This "delusion as to locality," occurring in the earlier stages of mental alienation, looked at from a certain standpoint, is a rational one. The patient expresses no extravagant ideas, as does the parietic in the earlier stages of his disease. But the delusion is one arising from his daily avocation, and is not overdrawn or exaggerated, and unless the friends or the physician were aware that such were not the case, there is nothing in the statements of the patient inconsistent with the occurrence which he states has taken place.

From what has been stated, the following queries suggest themselves:

1. Are "delusions as to locality" peculiar to cases of dementia arising from alcohol?

2. If so, may not this special delusion be one of diagnostic value in differentiating alcoholic from other forms of dementia, and also aid in making a prognosis?

RESPONSIBILITY AFFECTED BY ALCOHOLIC
ANÆSTHESIA. DEFECT IN THE MUSCU-
LAR SENSE.*

BY T. L. WRIGHT, M.D., BELLEFONTAINE, O.

That the responsibility which is so important an element in perfect manhood, is seriously impaired by alcoholism, will not be denied by those who have carefully and conscientiously studied the subject. In speaking on this topic, I will limit myself to facts connected with alcoholic anæsthesia; for, in persons where the structure of the brain and nerves is greatly injured, no question as to irresponsibility will be raised by anyone.

I will employ the term responsibility, as meaning—the extent to which a person, under the common rules of fair-play and equity, should be expected to meet, in his own person, or his reputation, or his fortune, the consequences of his own acts. But the *own acts* of an individual are presumed to be those originating in motives of strict personality; and begun, and conducted, and concluded, in accordance with such powers of judgment and will as belong to the usual capacity and opportunities of the mind directing them. But if society, either by legislative enactments or otherwise, hinders the freedom of a mind already entangled in disease, by obtruding upon it some temptation, that, from the nature of its infirmity, it is unable to resist or thrust aside, the conduct ensuing cannot fairly be held to be the *own act* of that mind. Equity says that the standard of responsibility should here be reduced.

In another paper I have referred to the unintentional violence with which a drunken man seizes upon the persons of others. I considered this peculiarity to be due to the con-

* From "*Inebriism—a Pathological and Psychological Study.*" [In preparation.]

dition of anæsthesia which affects men in a state of intoxication. Their tactile insensibility compels drunken men, in order to be assured that they are in contact with others, to grasp them with a considerable degree of energy. A man benumbed by cold, will clutch his whip, or his knife, or any objects that he handles, with uncommon firmness, so that he may be sure that he has it in hand.

But the insensibility, which it is a characteristic of alcohol to induce, may prove to be the possible source of great harm, through the unwitting infliction of severe bodily injury. As I believe real events are more satisfactory and instructive than theories, I will relate a case wherein anæsthesia was the probable occasion of the application, unconsciously, of so great muscular force, as to result in homicide. I will give a synopsis of a printed brief, detailing such facts in the case as were susceptible of proof. They are not only germane to the point in discussion, but they illustrate in a remarkable manner the principles and facts that relate to the whole subject of inebriety.

In the year 18—, a homicide was committed in a large city. A certain young man was charged with the crime. The following is a portion of the family history of the accused, and also the history of the homicidal act.

The young man's maternal great-grandfather was a notorious gourmand, an excessive drinker of alcoholic liquors,—a confirmed inebriate. The maternal grandmother exhibited at an early age the stimulant-craving appetite of her father. She would go on protracted sprees, lasting often for weeks, during which time she would visit common drinking resorts. While her position when sober was good, and her means ample to sustain herself in luxury in the palatial mansion in which she lived, she would consort with those much below her socially, in her efforts to get drunk. On several occasions her husband placed her under the restraint necessary for medical treatment, to save her life from alcoholic excesses. And such was her conduct and condition until her death.

Next we come to the daughter of the victim of the homicide, and the mother of the indicted youth. She, too, was afflicted from an early age with the inherited thirst for drink. She indulged her appetite to such an excess that she would become wild and delirious, and would wander out at night from her parents and her home, in inclement weather, unconscious of her condition, and apparently without object or destination ; and, after being absent for some time, would be led home unresistingly by any one that happened to recognize her. Prior to giving birth to her son—the accused—she was suffering such extreme nervous derangement and prostration, that she would swoon many times per day, in which condition there was always a suspension of consciousness.

The history of the brothers and sisters of these women is, practically, a monotonous repetition of their own story. It is unnecessary to transcribe it here, except in a single particular ; and that relates to the neurotic history of the accused himself, whose ancestry is, in part, set forth above.

Retracing the ancestry of the accused on his father's side, we find the father was for years previous to, and for years after, the birth of the accused, addicted to the use of intoxicating liquors, which he frequently indulged in to excess. The young man himself, from early childhood, manifested a desire and appetite for intoxicating drinks. Between the ages of twelve and fourteen years, he became an impulsive and periodic inebriate, with an overpowering propensity for intoxication. His excesses grew in frequency and duration. He was restless and unhappy, with a disposition to roam and ramble about. On three different occasions when intoxicated, he suddenly, and without preparation, visited distant cities. This was when he was fourteen or fifteen years of age. After this, the drinking habit was continued at irregular intervals, he seldom abstaining as much as a month. He would pawn his clothes for the means to procure whisky, after squandering his money. During these carousals, his moral faculties seemed blunted, and gave

evidence of decline. Although honest when sober and in his normal state, he would, under the influence of intoxication, pawn the jewelry of members of the family, to enable him to indulge his desire for whisky; and afterwards notify his father, who redeemed the articles for him. Before commencing a debauch he would be restless, and could not remain quiet in one place; would gape, and stretch, and seem quite unhappy. Sometimes he was low-spirited and melancholy; sometimes he could not rest at night, and took narcotics to induce sleep. When intoxicated he grew very pale, with vacant, expressionless eyes, of a glassy appearance; he had also nervous twitchings, clutching of the hands, stammering speech, and unnatural voice. His mind was often full of new business enterprises, but continually changing, and would pursue nothing long. At times he would not drink intoxicants; at other times he could not abstain. If he drank any, he was sure to continue drinking till he was drunk, worn out, and exhausted. He would often resolve to reform; and to carry out, and strengthen his resolution, he has joined several temperance associations, and taken pledges at different times, which he seldom kept inviolate more than a few weeks. When long without liquor, he would grow nervous, uneasy, and dissatisfied in his feelings; and when in this condition, if he got a taste of whisky, he could not stop drinking until he had drunk all that he could get in any possible way, or was in such an exhausted condition that he was sick and prostrate in consequence of his excesses. And, previously to his arrest, this had been his drinking habit for more than six years.

For a month before the homicide, he had been on a drunken debauch, and during much of that time was excessively intoxicated; and at no time was free from the influence or effects of stimulants. On the night of the homicide, and the day and night preceding it, he was poisoned by excessive libations of alcoholic liquors, having taken over fifty drinks that are known of, amounting in aggregate to more than half a gallon of whisky.

In such a condition, accompanied by an acquaintance, he proceeded to the house of his grandmother, in order to secure her watch by stealth, to pawn it for means to buy whisky. This was in the evening, before the lady had retired, and the watch was on her person, and not, as he had expected, under her pillow. He returned, after taking more whisky, to the house, which was also his own temporary home. This was two hours after the first visit. He now obtained the watch ; which he had often pawned before, and which had as often been redeemed by his grandmother when its whereabouts became known to her. The young man also secured some rings from her hand. In accomplishing this, it is supposed that the old lady, being infirm and asthmatic, and seventy years of age, was so handled as to prevent her from loud speaking and arousing the family ; and in consequence of such treatment, it is believed she was suffocated and thus died.

The accused left the house, pursued his course of inebriety, pawned the watch—the owner's name being plainly written on it—dealing directly and openly with a pawnbroker that knew him and his family well, walked about the streets as usual the day following, and was on his way to his grandmother's, and his own temporary home, the next night, in utter ignorance that the old lady was dead, or at all injured in person, when he was arrested. He withheld no fact from the officers arresting him ; told how himself and his companion went to the house to get the watch to raise money on it, but was ignorant of the old lady's death, and manifested astonishment on being informed of the fact. He was affectionate to his grandmother, and always exhibited sincere filial attachment for her, had never quarreled with her, and had been, in return, the recipient of all the love a grandmother usually lavishes on a favorite grandchild.

Depositions were taken with reference to the probable mental responsibility of the young man, who was indicted for murder in the first degree. These were obtained from several gentlemen who had made inebriety a special study

for years. The character of the depositions was such that, through their representations in part, the prosecution, with the consent of the court, ignored the indictment, and accepted, without going to trial, a plea of guilty to a mitigated offence, the penalty whereof was confinement in prison for a limited period of time.

Besides the universal kinship of humanity, men are imbued with traits of character which distinguish race, tribe, or family. Yet these are subordinate to a personality and an individualism which impose responsibility and invite criticism. But it sometimes occurs, that the practical *isolation of person and character* which should distinguish the individual in particular, does not take place; or, at least, is not complete. The separation of ancestry from posterity is, occasionally, unfinished and undefined to a degree that strict and undoubted personal independence, and responsibility, are not attainable.

The young man accused, in the case under consideration, came into the world laden with the characteristics and incapacities of a profoundly neurotic ancestry. They were the reflections of organic and functional brain degeneration. These characteristics were an involuntary heritage. They were not trivial and frivolous. They were fundamental and wholly determined in vital and essential particulars, body, mind, and conduct. Whatever may have been the actual state of the mental and moral faculties otherwise at the time of the homicide, there certainly was present a condition of anæsthesia. The muscular sense was defective through alcoholic influence, and the reasonable presumption is, that greater force was employed than could be noted by the perceptive faculties, or than was, in any manifest probability, intended. The accused was bound up through heredity in the misfortunes and diseases of ancestry. He was riveted to his progenitors by the infrangible continuity of radical brain degeneration. Isolation and personality, with a living sense of the *ego*, were physical impossibilities. Fair-play and equity would decide, upon a review of the whole sub-

ject, that the conduct resulting in this homicide was not the *own act* of the perpetrator; and that he should not be held responsible in the same degree as persons would be who are not entangled with great hereditary embarrassments.

Thus anæsthesia may, through a destruction of a consciousness of the muscular sense, contribute, possibly, to the most direful consequences. An inference is, that in a great many minor particulars this indefinite conception of muscular capacity may work much harm.

It is useless to speculate, in the case above described, upon the responsibility which attaches to the act of getting drunk. When the hereditary diathesis awakes in the presence of temptation, the restlessness of nerve and inquietude of mind, under the constitutional disturbance, make the morbid sensibilities wild and desperate; and nothing will so speedily subdue the nervous storm as the ever convenient and alluring alcohol. It is sought in order to give insensibility to nerve agony, and seems, for a time at least, rest, repose. Alcohol affords oblivion for morbid mental troubles, and balm for the quivering nerves. The criminal who would

“Raze out the written troubles of the brain,”

also seeks the anæsthesia and oblivion of alcohol. But the motives of disease should be carefully distinguished from the motives of criminality.

VALUE OF INEBRIATE ASYLUMS.

BY JOSEPH PARISH, M.D., BURLINGTON, N. J.

It has been stated by the best authorities that at least thirty-eight per cent. of all cases of inebriety who go under treatment in inebriate asylums are cured. The question is often asked, is this a permanent cure? The answer is, that such a thing as a permanent cure of any disease cannot be honestly promised beforehand, or announced afterward, by any physician of his patients. The word is a misnomer in this intended application of it, but it has become the fashion among chronic objectors to the asylum treatment of drunkards, to use it, and it is repeated here only for the purpose of

disclosing its absurdity, by presenting it in contrast with other diseases as follows:—

Of how many cases of insanity, when they leave institutions, can it be said their cure is permanent; that there is no possibility of a relapse? How many criminals who are dismissed from the hands of justice, can be said to be reformed beyond the possibility of future failure? How many converts to religion, are so permanently established that they cannot fall? It is not in the power of man, safely to assert any such result of his own finite work. It may be stated, however, as a general fact which challenges scrutiny, that the cures of intemperance may be as sure and reliable as any other forms of disease that present equally acute and complicated symptoms.

Inebriate asylums have demonstrated a few facts, at least, which cannot be gainsayed. Many intemperate men, who have entered them voluntarily, and conformed to their teachings, have gone forth to the world, stronger and better than before, and are still pursuing sober and useful lives, in at least the proportion above stated. One man out of three has been saved, and this against strong adverse circumstances, in most cases. It has been shown, also, that there are not a few cases of incurable inebriates, which may remain quietly and soberly within institutions, for years together, and thus shield themselves from the risk of debauch, and their families from annoyance and danger. It is also proved, that asylums are a constant public rebuke and warning to the people on the subject, which has a deterrent influence in favor of temperance.

There are many persons who have been inmates of such institutions, who are among our most valuable citizens, and who, from the very fact of having voluntarily made public confession of their infirmity, by seeking asylum treatment, and equally public confession of their recovery, do not intend to falsify either the fact of sincerity in making the effort, or of earnestness in pursuing their sobriety, by any inconsistency in this regard, if it can be avoided. There are, on

the other hand, many who are professional debauchees, whose other disorders are covered under the more visible fact of drunkenness, and who are more suited to corrective institutions, than to insane or inebriate asylums. Their chief purpose is self-indulgence. They are constitutionally disordered and defective, and care but little for anything that does not pander to the gratification of a low nature. Such are not inebriates in the sense that is recognized by those who have given the most thought to this subject ; and as elsewhere indicated, this discrimination should be recognized and maintained, by all who have to do with such persons, either in the departments of medicine, jurisprudence, or morals. Through the agency of inebriate asylums, there has been not only a more critical study of inebriety, but a more clear and satisfactory distinction in the varieties of its forms. More valuable additions have been made to the literature of the subject during the past few years than for a generation preceding.

That inebriate asylums can improve in their methods, if they would realize their highest ideals, is admitted, but it is asserted without fear of contradiction that new and imperfect as they are said to be, they have accomplished larger and more practical results with this class of subjects than any system within the knowledge of the age.

It is well known that there are some drunkards who "recover naturally," that is, of their own unaided efforts. They "work out their own salvation" in this matter, and are among the heroic men of the times. It is said that they constitute about three per cent. of the inebriate class ; about ten per cent. of reformatory work is claimed by temperance societies, and it seems to me that they are entitled to this award, in addition to the quiet family work that is being done, under their influence, toward prevention.

These facts, taken together with the fact that inebriate asylums, homes, and reformatories record at least thirty-three per cent. of their cases restored, and that the public sentiment is strengthening every day in favor of sobriety and virtue, there should be no cause for discouragement in any quarter, nor for any other rivalry between the different methods, than that which is born of high purpose, and earnest effort to accomplish the most good for the individual, and the general public.

Abstracts and Reviews.

THE INFLUENCE OF IMMODERATE BEER-DRINKING ON FATAL DISEASE OF THE HEART.

We make the following extracts from a paper read before the Medical Society at Munich, by Prof. Bollinger, and published in No. 7, of the reports of the German society against the abuse of alcohol. Prof. B. said: That idiopathic hypertrophy of the heart occurred more frequently at Munich than elsewhere was proved by the annual reports of the Pathological Society of Munich, and still more by the earlier works of Spatz and Hermann.

In a work of Schmidbauer, carried on under the superintendance of the reporter, the attempt was made, on the plan of exact weighings and measurements, to clearly set forth the frequency and the cause of this almost endemic form of heart hypertrophy in Munich. In one thousand autopsies at the Pathological Institute there were found forty-six cases (thirty-two men and fourteen women), of pure idiopathic heart hypertrophy as the cause of death. There were also incidently found, not as cause of death, thirty-three cases of idiopathic hypertrophy of the heart (twenty-three men—ten women). These figures were obtained during a period in which nearly two thousand cadavers were examined, and have in every respect been carefully verified. All those cases of enlargement of the heart from valvular disease, arterial sclerosis, disease of the coronary arteries, or granular hypertrophy of the kidneys have of course been left out of consideration. A few cases of hypertrophy of the heart may possibly be referred to immense muscular exertion and violent exercise. Still the great mass of cases, as the reporter proved

by a great number of separate and carefully-followed observations, especially in cases of suicide, can only be explained as the result of a habitual over-indulgence in beer, in connection with a true plethora, whose existence however is denied by the majority of modern physiologists and pathologists.

In the habitual over-indulgence in beer, the direct action of alcohol on the heart, and further the fact that the beer itself contains a fair amount of easily-assimilated materials, as well as some that are at least comparatively nourishing, should be taken into consideration. The habitual beer-drinker who drinks all day almost without pause, finds himself therefore in a sort of continual plethora of the digestive organs. According to the researches of the reporter, it was ascertained that in Munich, the normal male heart is larger than elsewhere (330 grm. to 58 kilos of bodily weight). In the case of healthy men, 30 to 35 years old, the normal weight of the heart is even so great as 370 grm. to 61 kilos. of bodily weight, a result that apparently agrees with the common widespread, intemperate consumption of beer.

The pathological anatomy of the hypertrophied hearts was generally characterized by a uniform dilatation of both ventricles, an enormous thickening of the primitive muscular fasciculi, with enlargement of the nuclei. Whether there was an actual increase in the number of muscular filaments, the reporter could not determine. In regard to the course and termination of the disease notice should be taken of the fact that many a sturdy beer-drinker reaches a good old age notwithstanding his hypertrophied heart, especially if he has stopped the abuse of beer in time, or has, partially at least, diverted its harmful influence through hard work. The great majority of patients, however, who have been seen here, sink rapidly on the appearance of the heart paresis. At the autopsy the following conditions are found which explain the symptoms observed during life. Slight dropsies, ordema of the lungs, brown induration of the lungs, congestive bronchitis, congestion of the liver in all degrees, cyanotic induration of the kidneys, moderate fatty degenerations and

plethora of all the organs. Final fatty degeneration of the heart muscle is often absent, and the final fatal termination in such cases is to be attributed to paralysis of the nerves and ganglia of the heart, which had hitherto shown itself only as a functional trouble until the disease had had time to develop true anatomical lesions.

The speaker went on to discuss the question of plethora, and announced himself as siding emphatically with Von Recklinghausen (especially in view of the results obtained by the examinations undertaken by the Pathological Institute of Munich), as to the existence of a true plethora which may be seen in its most clearly-defined form in cases of habitual beer drinkers. The patients afflicted with the plethoric-alcohol-heart (from 31 to 40 years old), show as evidence of plethora a corresponding corpulence. The bodily weight rises from 61 kilos, normal, to 74 kilos; which great mass of dropsical fluid is, as a rule, lost during the final emaciation of the patient.

The extreme frequency of the idiopathic heart hypertrophy in men, who frequently die during the period of lustiest manhood (from 25 to 45 years), argues strongly in favor of alcoholic-plethoric origin of the trouble, and against its being a result of acute rheumatism, which notably prevails amongst women. Among women the idiopathic hypertrophy of the heart, from alcoholic-plethoric causes does not reach so high a percentage as among men, because on account of a quiet life and less muscular exertion they are not so tempted to indulge in beer.

The speaker states that the habitual intemperate use of beer causes certain diseases of the other organs among which he classes the following: Sclerosis of the arteries, apoplexies, nephritis, hepatitis (notably the lighter forms or grades of cirrhosis of the liver), fatty heart, a disposition to hemorrhagic inflammations of the serous membranes, and even phthisis pulmonalis.

From these considerations, and from the frequency of the alcohol heart, is to be explained the fact that in so many

cases inflammatory kidney disorders were found occurring simultaneously with the heart affection; also why eccentric hypertrophy of both ventricles was so often met with in the beginning of inflammatory kidney diseases. On the same ground is explained the fact that in Munich there is often found hypertrophy and dilatation of the left ventricle accompanying mitral insufficiency; in phthisis pulmonalis, emphysema, and chronic pleuritis, the left ventricle is often hypertrophic and dilated.

The author here introduced statistics showing that nearly twice as much beer *per capita* is consumed in Munich, as in any other place in Germany.

At the close of his address, the speaker drew as an inference from his analysis of the question: that the perilous hypertrophy of the heart, so frequent in Munich, could not be explained on the ground of myocarditis, nor as a result of acute rheumatism, but must be viewed as a toxico-functional hypertrophy induced by beer-alcoholism, and its concurrent plethora. Brandy-drinkers were, as a rule, poorly nourished, and there was lacking the accompanying plethora; hence, with these the cardiac hypertrophy was rarely found. The habitual wine-drinker, on the other hand, was well nourished, but as he usually led an idle and luxurious life, he not unfrequently suffered from this hypertrophy.

The fatal insufficiency of the heart in many cases is anatomically not clear. It may be a toxic action on the nerves of the heart, or an exhausted condition of them, brought on by functional over-work. While the moderate use of beer, considered from a hygienic point of view, possessed certain advantages both as a means of pleasure, and of nourishment, its abuse, together with that of all other alcoholic liquors, was accompanied by the greatest dangers.

W. H. VITTMUM, M. D.

The third edition of Dr. Meylert's little brochure on the opium habit is out and for sale by G. P. Putnam's Sons, New York City.

ACTION OF OPIUM ALKALOIDS.

According to some recent researches of Von Schroeder,* conducted in Prof. Schmiedeberg's laboratory in Strasburgh, all the opium alkaloids hitherto examined resemble opium in acting upon the same part of the body, viz., the central nervous system. This conclusion holds good only for mammals, and must be qualified in regard to the frog, for in it narcotine, codcine, papaverine, and the thebane have also a paralyzing action on the motor ganglion of the heart. These alkaloids agree with morphine not only in the organ they effect, but in the nature of their action. The symptoms may be divided into two stages. First, narcosis, due to a paralytic action on the brain, followed by, second, tetanus, due to increased irritability of the spinal cord. This agreement allows these alkaloids to be united with morphine in one group. Notwithstanding this qualitative agreement between the action of these alkaloids on the one hand, and that of morphine on the other, there are considerable quantitative differences in the development and persistence of the narcotic and tetanic stages. The narcosis these alkaloids produce, unlike that of morphine, is not very deep, and quickly passes away; in the case of thebane it occurs in frogs as well as in mammals. The rapid development of the tetanic stage characterizes the action of this alkaloid. There is not, as in the case of morphine, a progressive paralysis, gradually destroying the functions of the different parts of the brain; the action quickly extends over the whole brain, and remains slight, while symptoms of irritation have already begun. This fact renders it advisable to break up the group of opium-alkaloids into two sub-groups, the first of which may be called the morphine group, characterized by the prominence of the narcotic stage, while in the other, which may be called the codicine group, the tetanic stage is more prominent, and the narcosis less so. The members of these groups may be arranged as follows, so that each subsequent member has a weaker narcotic, and

* *Therapeutic Gazette*, July, 1884.

in the codicine group has at the same time a stronger irritant action. In the morphine group, oxyde-morphine; in the codicine group, papaverine, codicine, narcotine, thebane.

The codicine group contains also hydro-coternine laudanine, and cryptopine; but at present we know too little about them to assign a place in the group to them with certainty. The same may be said of codethyline. The codicine group becomes closely allied, by its last members, with the strichnine group. The members of the codicine group should not be used therapeutically for their narcotic action, in the codicines produced from morphine, by the addition of alcoholic radicals, such as codethyline $C_{17} H_{18} NO_2 (CO_2 H_2)$, obtained from morphine by the introduction of ethyl, the narcotic action is diminished, while the convulsive action is increased in proportion to the number of atoms of hydrogen substituted by alcoholic radicals. In the alkaloids produced from morphine by oxydation (oxydemorphine and oxymorphine) their narcotic action is diminished without the convulsant action being increased. Narceine has no apparent physiological action.

The Travelers' Insurance Company of Hartford, Conn., has lately issued a medical chart, illustrating what to do in case of accidents, which, like their policies, should be in the hand of every man in the country. The one will show what to do in case of an accident, the other will provide the money to pay for loss of time and medical services. Among the many beautiful pictures which they have sent out to patrons over the country, is a fine group of famous American authors, which is greatly admired as a work of art.

The *Phrenological Journal* commends itself to every thoughtful student of science, and is the best journal published devoted to this phase of the very perplexing study of mind and matter. The publishers, Fowler & Wells Co., have issued a colored symbolical chart of the head, which is both a work of art, and a very suggestive study, worthy of a place in the library of every scholar and thinker.

INEBRIATE PARALYSIS.

In "The Brain" for July is a paper on this subject by Dr. Dreschfeld, Professor of Pathology at the Victoria University of Manchester. He writes that in alcohol paralysis cerebral symptoms are either altogether absent or play a more subordinate part, and most of the symptoms are referable to the spinal cord or to the peripheral nerves. The disease runs nearly the same course in every case, the grouping of symptoms may vary, but some of them are more or less present always. He divides this paralysis into two types: "One alcoholic ataxia which resembles locomotor ataxy. They differ from the second type of alcoholic paralysis in the absence of hyperaesthesia, hyperalgesia, vasomotor disturbances, paralysis, atrophies, and mental disturbances. The individuals attacked are chiefly men, and the symptoms disappear with the discontinuance of alcohol. In the diagnosis of such cases of pure alcoholic ataxia, one has of course to bear in mind how far alcohol may simply play the part of an etiological factor, and how far alcoholism and ataxia may be mere coincidences; moreover in the ordinary cases of ataxy the symptoms, especially if they come on somewhat acutely, often show for a time a marked improvement. In the above cases, however, the ataxia followed so soon after the excesses and so completely disappeared that I have no hesitation in pronouncing them as alcoholic. This view is still farther supported by the fact that symptoms of ataxia are again seen in the second type to be described (especially the absence of tendon reflex and the lancinating pains). Moreover some of the symptoms of ordinary locomotor ataxy, such as the atrophies, the ocular motor pareses, spinal myosis, et cetera; symptoms which we may consider spinal are absent in the alcoholic ataxia. The symptoms observed harmonize well with the pathological anatomy which underlies the alcohol paraplegia, for as the changes observed chiefly concern peripheral nerves, we can understand the symptoms if we suppose that in the

ataxic type we have an affection, a multiple pneuritis, especially of the sensory nerves. The second type of alcoholic paralysis is an affection which chiefly attacks females who deny the abuse of alcohol, have suffered from symptoms of chronic alcoholism (morning vomiting, chronic gastric catarrh, haematemesis, etc.) previous to the appearance of the nervous troubles. These commence more or less acutely and consist of sensory motor and vaso-motor, and trophic disturbances. The sensory disturbances are as a rule well marked, and very characteristic, and consist of extreme hyperæsthesia of the feet and other parts of the lower extremities with or without hyperalgesia, perversion of the sense of temperature (all objects when brought in contact with the skin feel cold), these are often present in addition to lancinating pains in the lower extremities, and pain when pressure is applied along the vertebral column. The hyperaesthesia is often followed by anaesthesia or diminished sensibility, the hyperalgesia by analgesia. The motor troubles consist of more or less marked paralysis attacking the lower and sometimes the upper extremities. In many cases the extensor muscles are chiefly affected while in not a few cases the paralytic are more general. The superficial and mechanical reflexes are often diminished, the tendon reflexes are nearly always absent; contractures have only been noticed by a few observers. The vaso-motor affections consist chiefly of redness of the feet or hands, occasionally also of other parts of the body, and oedema, especially seen at the ankle, and dorsum of the foot, and back of the hand. The nerves and muscles show marked degenerative reaction though we have but few detailed statements on this subject; cerebral symptoms such as insomnia, restlessness, more or less delirium, and hebetude, though absent at first, often make their appearance during the course of the disease, and are frequently the cause of death unless other complications should occur, such as phthisis, fatty degeneration of the liver, etc. Disorders of the circulatory, digestive, and respiratory organs are often seen during the progress of the disease, but are rather com-

plications or the primary effects of alcohol on the organs, than secondary manifestations of the nervous affection under consideration. The prognosis varies greatly, many cases recover when they come early under the care of the physician and when uncomplicated ; some recover for a time then relapse, while in others the disease pursues a steady downward course, death ensuing from cerebral symptoms, from exhaustion or from some intercurrent affection as is so often seen in other forms of chronic alcoholism."

PATHOLOGY OF ALCOHOLIC PARALYSIS.

In the London Pathological Society, the following note was presented by Dr. Hadden, and discussed at some length. We present a brief of the main points brought out.

Dr. Hadden showed specimens from two cases. The first, a woman, aged thirty-three, had been a heavy drinker. Had loss of memory for three months ; and ten days before her death there was loss of power in legs, and oedema. She had retention of urine, was noisy and delirious.

The legs were powerless, but there was no tremor ; no reflexes ; and loss of electrical excitability in muscles. Liver enlarged, autopsy, generalized tuberculosis, and ulceration of intestine. Medulla, brain, and spinal cord normal.

Second case, female, age forty-two. Father died of diabetes. Had delirium tremens, and could not walk alone. No loss of power in bladder or rectum. Limbs cold, arms wasted ; there was drop wrist, extensors more affected than flexors, interossei involved. Reflexes absent, muscular sense normal, and no anæsthesia of trunk. Legs emaciated, drawn up, and she could not bear to have them touched. Autopsy, aortic atheroma, and a little broncho-pneumonia, cirrhotic liver, brain and spinal cord healthy. Sciatic nerve showed the tubes much decreased in size, medullary sheath and axis-cylinders, also reduced : there was no segmentation of the myelin. Some thickening around nerve tubes, absorption of

muscular fibres in gastrocnemius, with interstitial fat in considerable amount.

In both cases, the cord was healthy, confirming the view that the disease was one of peripheral nerves. In another case, he found atrophy of hypoglossal nerve. Association of cirrhosis of liver, and general tuberculosis was common in these cases.

Dr. Lepine of Lyons read a very interesting paper before the International Medical Congress, on auto-intoxications. Dividing them into the following groups: 1. Auto-intoxication in diabetic patients, and in persons affected with carcinoma of the stomach. 2. Auto-intoxication of intestinal origin, in strangulated hernia (intestinal septicaemia), in the case of unnatural anus, and in different other intestinal lesions without interruption of the continuity of the intestine. 3. Auto-intoxication of bronchitic origin vesicular. 4. Auto-intoxication as a morbid element in acute infectious affections, the toxicity of certain excrementitious products.

The reader will be surprised at the special pathological symptoms which follow these poisonous factors, especially their close resemblance to that which comes from alcohol and also their therapeutical and hygienic relations.

The Popular Science Monthly, D. Appleton & Co., New York City, has become a necessity for every reading man, as much so as the daily paper. Every month it brings a rich collection of papers, which represent the world's best thought, and the last words of science by its masters. The January number of this journal is a small library in itself, and gives promise of a very large return to its readers for the small price of subscription.

Cocaine has been found to be a most valuable remedy in opium inebriety, used subcutaneously in 0.1 grain doses three times a day. It has been used with good results to break up the tobacco desire. Dr. Freud of Vienna thinks that morphia and cocaine are antagonistic. In dipsomania it has been tried with most excellent results.

The Fourth Annual Report of the Inspector of Retreats for Inebriates in England, has been issued, and, like the previous reports, is more remarkable for the non-expertness of the Inspector than for any information on this subject. From it we learn that four institutions are now working under the act. Of these, the Dalrymple Home is the best and most thoroughly equipped for the work. How the value of these places can be estimated from the number of persons received, and those discharged, with statistics of death-rate, and other facts of this character, which of themselves mean nothing, it is difficult to understand. He mentions a fact that two persons have been arrested for selling alcohol to the inmates of these asylums, but were not convicted for want of evidence. To be of any value these reports must be made by men who have some idea of inebriety and its remedies, and how asylums enable these means to be applied. To suppose such places to be mere station-houses, where men are forcibly kept from alcohol a short time, and by this method recover, is a blunder that is hardly excusable in this age of medical progress.

The Proceedings of the Society for the Study and Cure of Inebriety, numbers one and two, are before us. The first number contains the inaugural address of the President, Dr. Kerr, and two papers on inebriety by Dr. Carpenter and Mr. Gustafson. The discussion of these papers, the by-laws of this society, names of members, and resolutions, fill up fifty-one pages of a pamphlet. The second number contains the proceedings of a dinner to Mr. Weston, and a breakfast to the members of the British Medical Association, and two papers on inebriety by Dr. Alfred Carpenter and Oakey Hall, Esq., letters and other matters, filling eighteen pages. These two numbers give great promise for the future of this society. It is very evident that under the leadership of Dr. Kerr, with whom are associated some of the best men in the medical profession of England, the nature and character of inebriety will be thoroughly investigated at an early day.

The First Annual Report of the German Association Against the Abuse of Alcohol, ending July, 1884, is a fifty page volume of considerable interest. This association is made up of many branch organizations in different cities, whose purpose seems at present to be the establishing of coffee-houses to take the place of beer-saloons, and urging substitutes for alcoholic beverages, distributing medical literature on this subject, and general temperance work. This report is mostly an account of the year's operations in this field.

Our readers will be pleased to hear that G. P. Putnam's Sons, of New York City, announce the early publication of *Meyner's Treatise of Psychiatry*. The first volume will be devoted to the anatomy and physiology of the brain, and be edited by Dr. Sachs and fully illustrated. This will be the most valuable treatise on this subject ever brought out in the English language. All specialists of brain and nerve maladies will find this work indispensable. Send to the publishers for circulars, terms, and the date of publication.

The Book Worm, a unique, handsome, and delightfully readable little monthly magazine, containing for the year over 300 pages and many fine pictures, all for 25 cents a year, is a recent characteristic product of *The Literary Revolution*. A specimen copy of *The Book Worm* will be sent free to any address. John B. Alden, publisher, 393 Pearl street, New York.

The Electrical Engineer of New York City, comes with the latest news from the front line of progress in electricity. Whoever wishes to be posted on the rapid and startling advances in this field should read this journal regularly.

The American Inventor of Cincinnati, is another science journal, a monthly, that is very valuable, and should be in every working library.

The Scientific American begins the new year freighted down with matters of the most practical interest to all readers of science.

Editorial.

INEBRIETY A DEFENSE FOR ILLEGAL VOTING.

The following case, submitted to me for an opinion, opens up a field of much medico-legal interest. H——, an inebriate well known in the city where he resides, was arrested for voting twice on election day. In defense, it was urged that he was intoxicated, and was incapable of realizing the nature and character of his conduct. His inebriety dated from hardships and exposures in prison during the war. He had suffered twice from delirium tremens, and during the past year had drank more than ever before.

The night before election he drank to great excess, was around the next day under the influence of spirits, yet not stupid. He gave a voter a horse in the morning to work for a certain man, and made large promises to others for similar favors. In the afternoon he swore in his vote at a different polling district, and was recognized to be intoxicated. Next morning he had a most confused memory of the events of the day before, and could not remember his voting twice. The general history pointed to a steady failure of brain and judgment for the past year, both in acts and in capacity to reason about his circumstances and conduct.

In this connection the history of two similar cases which have become authorities in the legal world will be of interest. One, *The People vs. Harris*, argued in the Supreme Court of California in 1866. The defendant, Harris, an inebriate, offered his vote the second time at the same poll four hours after voting before, was challenged, and swore in his vote. He was recognized as being intoxicated. He was tried, and, although defended on the ground of intoxication and mental

incapacity, was convicted and sentenced to prison. The case was argued in the Supreme Court for a new trial, on the ground that the judge had not allowed testimony to go to the jury relating to the mental status of the prisoner at the time of voting. The judgment was reversed, and a new trial was ordered. The judge in this decision held that "The act of voting more than once at the same election is not a crime unless done knowingly and with wrong intent. Therefore a person charged with this crime may show that he was intoxicated at the time he committed the act, not as an excuse for the crime, but to enable the jury to determine whether his mental condition was such that he knew he was committing an offense."

The second case was *The State vs. Welch*, argued before the Supreme Court of Minnesota in 1874. The defendant, Welch, was a lumberman, and had just returned from a six months' absence in the woods. He did not know who were the candidates, and took no active part in the election. Drank hard all day, voted in the morning, and in the afternoon found him-self at another polling district, and voted again. He did not have any memory of the events of the day. He was defended on the ground of intoxication (which was well recognized by many witnesses), and general incapacity of forming an intent to commit crime, or a knowledge of the nature of the crime. His counsel insisted that the essence of an offense is the wrongful intent, without which crime cannot exist. The judge held that this act was wholly voluntary, and that every man should be presumed to intend his own voluntary acts. He also charged the jury that the enfeeblement of his memory, perversion of will, and clouded understanding by alcohol was a voluntary act on his part, and this should not entitle him to any privilege or excuse for his conduct later. The Supreme Court sustained the lower court and its judgment, deciding "That it is no defense to an indictment for illegally voting more than once at the same election, that the prisoner was so drunk when he gave

his second vote that he did not know what he was doing, and did not know that he had already voted."

This decision outlines the mediæval teachings of the law, which happily are growing less every year. The former decision breathes the spirit of another age, where justice and truth are better understood and dispensed higher up on the scale.

PREMONITORY HINTS OF INEBRIETY.

From a clinical study of cases it is apparent that inebriety is often foreshadowed in many ways long before it appears. As a first study in this direction I have noted some cases where morbid emotional and volitional impulses preceded the outbreak of inebriety.

These disturbances may not be considered as always evidence of the approach of inebriety, but should be studied carefully as intimations of coming storms, and distinct signs of failure and debility, which may take on any form of disease at the slightest notice. Thus a person at a most unexpected time and place will be disturbed with homicidal suggestions that fill him with horror. He will be tempted to kill his wife and child, or if in church to break up the services by blasphemous expressions; or go away and drink spirits and associate with bad characters. These morbid thoughts will not unfrequently take a wide range of the most unusual acts, outside of all customary mental states. The effort to suppress them becomes more difficult as their distressing character increases. Often they have as their object some general gratification to be obtained by an unusual criminal act, as for instance, getting money by forgery, or other means. Frequently a desire to steal, or to possess some object, will fill the mind for days, then pass off, and leave a most intense disgust and abhorrence. Frequently the victim will turn to the church for help, and be told that these are only the temptings of the Devil, to be driven away by a more thorough consecration to religion and the Church. The strain and excitement of this effort soon ends in a recurrence

of these impulses that seem more intense than ever. Then in a moment of despair he will drown his thoughts in alcohol, and inebriety follows most naturally. These morbid impulses concentrate in a desire for spirits, and its effects, sometimes intermittently or continuously. The same morbid condition exists only in another channel, the homicidal and criminal impulses are gone, and the desire for spirits takes its place. After the paroxysm of drink has passed the mind is at rest and free from all disturbances. Later, they come on in various ways, sometimes in paroxysms of agitation, emotional excitement, or impulses to do things foreign to the usual custom, ending in drink-excess.

In many of these cases alcohol is not tolerated, from some reasons unknown, but where it is, its sedative effect is so prominent and pleasing that it becomes ever after a sought-for remedy. These emotional and volitional impulses are often hints of oncoming inebriety when they have reference to food, clothing, and physical comforts. Thus in one case the sudden unusual care manifested to procure the best food and clothing possible was followed by inebriety. In other case, the same extraordinary interest to avoid over-work, and not have proper rest, soon ended in this way.

The changing and almost childish impulses so often noticed in business and professional circles among men and women who are otherwise strong, are hints in the same direction, that are liable to become developed any moment. Often these morbid mental states are unmistakable indications of central brain disturbances which may go on into serious troubles or disappear in recovery.

The intellect is rarely disturbed, and the patient pursues his work as usual, yet these impulses come and go, alarming the reason with the fear that they may become realities. They may be called irresistible morbid thoughts, which often take the form of prompting suggestions, that come from some circumstances that may or may not be known. Sometimes they lead directly to inebriety, as when they refer to

some supposed want of the body, or indirectly when alcohol is used to break up the pain and agony which follows.

In some cases where these impulses are associated with inebriety, they can be traced to similar states which have existed before inebriety has appeared. Not unfrequently these morbid suggestions may last a long time, and not increase, but be a source of sorrow and peril which menaces their every movement. Unfortunately they are concealed, and it is very difficult to ascertain their existence unless the patient is suffering, and even then he treats them as reflecting upon his character, as inner hints of depravity and weakness, that should be overcome. When inebriety is better known, these strange, intellectual, and emotional impulses and promptings will be recognized as signal flags of oncoming disease, and means taken to avert and prevent them.

CREDIBILITY OF INEBRIATE WITNESSES.

In the December number of *Medico-Legal Journal* is a notice of a recent decision in which the credibility of an intoxicated witness is questioned. The lower court held "that the witness, being under the influence of liquor, does not, to any extent, affect his credibility, if he testifies that he distinctly remembers the facts as they occurred." The higher court affirmed "that it does not follow that the capacity of observation and power of memory are destroyed by intoxication, which is not to the degree producing stupor. While it must be admitted intoxication does not destroy credibility, it undoubtedly impairs it. But if the evidence of one who was intoxicated at the time of the occurrences of which he testifies, is corroborated, or his memory of the transaction appears to be distinct and clear, he is entitled to belief." This would be called good law from a theoretical standpoint; but practically it is not correct. It is the experience of all who are familiar with inebriates, that, under the influence of alcohol, both powers of observation, and memory of occurrences, cannot be trusted, under any circumstances. It is

not necessary to be stupid, or wildly intoxicated, to have impaired senses and reason ; but the fact that he has used alcohol for a long time to his injury, manifest in conduct and reason, is sufficient to prove his incapacity to realize and remember accurately any class of occurrences. Hence, all practical observers will agree that the testimony of any one in regard to facts seen under the influence of alcohol, must never be taken in court, except to corroborate and supplement other evidence. The ability and desire of a man, under the influence of spirits, to realize and tell the truth, is impaired, and no matter what the conditions or circumstances are, his evidence of facts and occurrences, seen in this state, is open to so many sources of error as to be dangerous and practically worthless.

PERSONAL.

The moment this journal was started it was evident that its advanced position would not be sustained by any considerable audience. The strong impression of an early death was apparent in the compliments of the press. Moralists and temperance men denounced us, and credulous wonder-seekers praised us with enthusiasm. Eight years have passed, and the journal is not an experiment ; it has won its way, and become established as the exponent of a distinct field of science. Every now and then some new enthusiasts of temperance reform feel called upon to condemn us with great bitterness. Or some one older in experience, but more wary, gives us a kind of sneering praise, that is supposed to be very injurious. Fortunately THE JOURNAL OF INEBRIETY is not on trial before the shifting judgments of this century. Its managers and supporters are aware that its real work is gathering the evidence, and preparing the way for the universal acceptance of the truths which it represents in the twentieth century.

This journal can have no controversy with temperance reformers or clergymen ; its province is to gather and publish the facts, no matter what the consequences may be. If

the facts are true, the results cannot be wrong. This journal does not depend upon temperance movements, public opinion, or the criticism of the hour, for support. It trusts entirely to the truth of its position, which, if not recognized to-day, will be seen to-morrow, with the same certainty of the march of the seasons. The advanced position of the journal has drawn round it an increasing number of friends and supporters, and the growth of the principles which it has advocated has been steady and permanent. In this number it enters upon the ninth year of its existence, assured, beyond all doubt, of a large and rapidly increasing constituency in the near and far-away future.

THE RELATION OF LIFE INSURANCE TO INEBRIETY.

The importance of a knowledge of inebriety to life insurance, comes out prominently in a published list of some of the heavily-insured men of this country. This list comprises three hundred and thirteen men, whose aggregate insurance is over twenty-five million of dollars, an average of eighty thousand to each man. This, we are told, is only a partial list, and by no means comprises all the heavily-insured men of the country. If the medical examiners, who have been called to pronounce on these cases, have been guided concerning the character of inebriety by the teachings of moralists and temperance reformers, the companies may expect a shadowy, uncertain future. The medical officers who are in doubt as to the disease of inebriety, and fail to recognize in moderate or occasional use of alcohol anything more than a mere habit, or whimsical notion, that can be checked any moment, are preparing for a "Waterloo disaster" that is inevitable in the future. Shrewdness and skill of management may contest and compromise these claims, but loss is certain and sure to follow. The company may lay down rules and directions for its medical officers; but unless they have sound views on matters of science pertaining to disease, their ser-

vices are worse than useless. A noted company lately issued a ten-thousand-dollar policy on a man who had been twice under treatment for inebriety. The medical examiner considered inebriety a voluntary state, which the person could abstain from any time at will; hence, the risk was good, simply because he was then temperate, and otherwise seemed healthy. This case is insured in other companies for large amounts, and is a periodical inebriate, who will positively relapse in the future. It is evident that the medical examiners' views on this subject is a matter of vital interest to the companies, especially of this malady, which is the most insidious and dangerous, because it can be concealed, and is a disease of profound degeneration, more or less unknown. With the companies it is a mere question of business; but unless they conduct such business along some line of scientific teachings, or laws that are fixed and unchangeable, eventual failure will come with certainty. Inebriety is a disease, always and ever; and it is a matter of great pecuniary interest to every company to know and act upon this fact. Hence, the question of the disease of inebriety should be settled practically at the earliest moment.

COMMISSION ON ALCOHOL.

The bill to appoint a commission to investigate the use and abuse of alcohol has just passed the United States Senate for the fourth time. It will now go to the House, and with a considerable certainty of passing, and receiving the signature of the President at an early day. The value of this investigation will depend entirely on the men who are appointed. If its members represent any parties or sects, temperance or anti-temperance societies, but little can be expected. As a national inquiry into a most important subject, it should be conducted in the progressive spirit of scientific exactness, by thoroughly scientific men, who have only one object, and that to bring out the evidence and the facts, no matter what the conclusions may be. The following is an outline of the bill:

"It provides for the appointment of a commission of seven persons, not more than four of whom shall belong to the same political party, nor be advocates of prohibition. They are to serve without salary, but are to have their expenses paid. The work is not to occupy more than two years, and is to consist of an investigation of the relations of the liquor traffic 'to revenue and taxation, and its general economic, criminal, moral, and scientific aspects, in connection with pauperism, crime, social vice, the public health, and general welfare of the people.' They are also to inquire as to the practical results of license and prohibitory legislation in the several States. Ten thousand dollars are appropriated to cover the expenses of the commission."

STATE REFORMATORY FOR INEBRIATES.

The State Commissioners of Prisons, for Massachusetts, have set apart a separate department, in the prison building at Concord, for inebriates sentenced by the courts. They are to be gathered here, and given work, and treated by themselves, away from the criminal class, with which they have been associated before. The law makes the penalty for inebriety imprisonment for one year, if the prisoner has been arrested twice before on the same charge during the year. Good conduct will secure a release on a ticket-of-leave, under surveillance.

This is a step in the right direction ; but will be regarded in the future with surprise and wonder, that the intelligence of this generation should attempt such timid half-way measures. The State should provide separate and distinct hospitals for this class, whose term of confinement should be not less than one or two years. They should be made self-supporting, and every inebriate in the State promptly sent to them. As a measure of sanitary preventive medicine, every additional sentence for the same cause should be doubled and trebled. Good conduct should be rewarded by release on parole. These hospitals should be military work-houses,

where these defectives can be congregated and made producers, independent of the tax-payers. The practical character of this method of treating inebriety is assured beyond all doubt in many ways. If the earnest temperance reformers will press this method of suppressing inebriety on the authorities they will realize more practical results than can be obtained from a half a century of sermons and lectures.

“**I**NTEMPERANCE Cured by Limitation, with Strict Rational Supervision and Treatment by a Physician of considerable experience, who does not enforce total abstinence *in all cases*. Comfortable HOME in charming neighborhood. Apply Dr. M.”

This is a standing advertisement in a leading British journal. The physician is a man of reputation in the profession, and his theory and practice is to cure the victim of taking some one form of alcohol, and allow him to take another. Thus, the man who has taken beer, and finally used brandy or whisky, can be cured of the latter, and still use the former. This out-Herods the boldest American quacks, and puts to blush their wildest assertions.

In a memorial volume of the late Dr. T. L. Mason, who was for many years the president of the association, occurs the following: “The most important of the many philanthropic measures in which Dr. Mason was, from time to time, engaged, was one which did not enlist his energies until the closing years of life. Of him, it might truthfully be said, that his greatest work was also his last.” This refers to his work in behalf of the study of inebriety as a disease, and the rational treatment in asylums. Dr. Mason will go down into the future as a pioneer thinker and worker in this field. As the founder of Fort Hamilton Asylum, and the American Association for the Cure of Inebriates, and the author of many very excellent papers on inebriety, he has left a record that will not be forgotten. The author of this volume very truly remarks, “that the disease theory of inebriety, through the instrumentalities which he was among the foremost in

establishing, is gradually, yet surely, winning its way to the acceptance of the scientific and medical intelligence of the age."

It is always a pleasure to commend the *Sanitarian* and its most distinguished editor, Dr. Bell. No pioneer worker is entitled to more respect and confidence in matters of public health and sanitary science; but when he discusses inebriety, the reader is both pained and bewildered. The world moves, and it is more and more difficult to persuade men to go back to the dark ages for theories to explain the phenomena of body and mind. Clergymen and moralists may be satisfied with this, but students of exact science want facts and evidence before they can trust statements and theories.

Dr. Shepard's Turkish Baths, on Brooklyn Heights, N. Y., are undoubtedly the most perfect of the kind in the country. As a therapeutic measure in all conditions of nerve debility, and particularly in inebriety, they are to be commended for their great power and value. Dr. Shepard is a specialist in this field, and his skill and advice are daily sought for by persons from all over the country. The Turkish bath, in the hands of a scientific man, is a need which the medical public have long felt, and is now most thoroughly met in Dr. Shepard's Baths, on Brooklyn Heights, near Fulton Ferry, N. Y.

Dr. Shears, of Liverpool Eye and Ear Infirmary, reports forty cases of amaurosis from excessive use of tobacco. Of these fourteen recovered, and fourteen improved, and nine could not be traced, and the remaining three did not improve. Of these cases two would not diminish the use of tobacco, and the third was an inebriate, which finally became paraplegiac.

Clinical Notes and Comments.

OPIUM TREATMENT.

Dr. Lett, the well known superintendent of the Home-wood Retreat, Guelph, Ontario, in a recent paper on the opium habit, writes as follows :

“ Before treatment is commenced, however, it is necessary to inquire into the patient’s idiosyncrasies, as well as to ascertain whether he is the subject of any organic disease which, though held in abeyance by the opium, is sure to become active when that agent is withdrawn, and frustrate all probabilities of cure. Inquiry must also be made with reference to the existence of hereditary predisposition to insanity or other serious neuropathic disorder ; and lastly, in the case of females, assurance must be had that the patient is not pregnant—abortion would be sure to take place, accompanied by alarming hemorrhage, requiring most prompt and active measures to avert a fatal issue.

“ Having satisfactorily settled these points, the treatment may be commenced with every prospect of success, for neither does the quantity of the drug consumed, or the length of the time the drug has existed, form an insuperable barrier.

“ Comparatively easy victories have been obtained over the drug when it has been taken in large quantities, and when the habit had been of many years’ duration.

“ For the purpose of supplying the place of opium in the manner indicated, various agents have been used, but none seem to answer the purpose so well as large doses of quinine, or the best English extract of *cannabis indica*. During the course of treatment, other therapeutic agents are required.

“ The valerianates and chloral will be found useful to induce sleep, the compound tincture of cinchona and coca leaves, in depressed conditions. Hot-water baths can hardly be dispensed with. Their power of soothing and allaying nervous irritability, equalizing the circulation and inducing sleep, makes them one of the most valuable remedies at our command

“ To relieve constipation a good deal of fruit should enter into the diet. If this fails to produce the desired effect, copious enemata of castor oil will be required. During the

crisis which follows the withdrawal of the last infinitesimal dose of opium, ten drop doses of dilute phosphoric acid, repeated every half hour, exert a wonderful influence. In this we possess one of the most powerful of all drugs to combat and control the spasmodic twitching and nervous irritability incident to this stage of the case. It cannot, however, be continued beyond five or six doses, as its tendency to irritate the stomach prohibits its further exhibition. Musk, lime-water, mustard, friction, and electricity, are all useful in assisting to bridge the patient over the crisis."

MYELITIS FOLLOWING INEBRIETY.

Dr. Seeligmuller read a paper on the above subject before the psychological section of the German Society of Naturalists and Physicians at Magdeburg, recently. He said that the best authorities favored the view of a special lesion of the spinal cord following inebriety, although actual sections of that organ had hitherto failed to demonstrate it. The four cases described in the following report also failed to substantiate this view. Still Dr. Seeligmuller is convinced that the seat of this disease must be sought for in the spinal cord. He reported two cases where the symptoms were of a mild character which presented the following points: severe wandering pains in the extremities and the loins; weakness of the legs, which at times make walking or even standing an impossibility; associated with this was a sensation of burning and of numbness in the feet. After the entire withdrawal of alcohol these symptoms disappeared. Then two more severe cases. After the weakness in the legs had continued for some time, one day there was a sudden paralysis of both the upper and lower extremities. Accompanying this were severe pains in the extremities, which gradually subsided, but continued for some time as a hyperaesthesia of the parts, accompanied by a feeling of numbness in the hands and feet. Strong contractures were rapidly developed in the paralyzed extremities, clutching of the fingers, flexional contractures of the wrist and elbow, and a simulated talipes in the feet. The electric reaction of nerves and muscles was much diminished for both currents. Muscular atrophy soon followed. Bladder and alimentary canal intact. A temporary abstinence produced an improvement in the symptoms, especially the contractures. No discussion allowed.

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NATURE OF INEBRIETY.

BY J. T. SEARCY, M. D., TUSCALOOSA, ALABAMA.

Who is an *inebriate*? and, what is *inebriety*? are two very different questions. What kind of a man is he in society, who by his *external* character, conduct, and behavior ought to be styled an inebriate, is a much easier question answered than what is the real *internal* condition that makes him act in the way he does. Most intelligent and observing men are qualified to answer the first question, Who is an inebriate? The very etymological derivation of the word gives a significant clew to the answer, it being derived from the Latin word *inebriare* (*ebriare* to drink, and, *in*, intensive), so that, an inebriate may be said to be a person *very much* addicted to drink. Of late, the term has technically been limited to that class of persons, who at certain periods, the intervals being longer or shorter, take *irresistibly* to drink, who at times *cannot* control themselves so as to resist the temptation to drink. The *inability* to properly adjust conduct so as to resist the temptation to take alcoholic drinks, is the *differential point* in the diagnosis. Whether the man is so *capacitated* that he *can* control himself according to rules of propriety in this particular, and not resort to such drinks, or whether he is so

incapacitated that he *cannot* do so, is the question to be determined in every case of inebriety. The diagnosis rests on this.

It is not supposed, with the lights before us in modern society, we will find many intelligent men willing to deny the fact that *there are* persons, who are true inebriates in the above sense, who, at certain intervals (continuously in extreme cases), are so incapacitated, that it is impossible for them to adjust their conduct properly — who take to drink irresistibly — without ability to do otherwise. The time was, in the not very distant past, when the question of *incapacity* was never admitted in reference to any person: all men alike, whether sane or insane, were held responsible to the standards of propriety. Irresponsibility, because of incapacity, was *never* admitted. As knowledge has increased, the fact of incapacity has been more and more admitted; much more slowly though in reference to *inebriates* than any other class of insane persons. The reasons for this tardiness, or this conservatism, on the part of society in reference to the inebriate, I think I can show as we progress. But very few will be found nowadays, who will deny this condition in pronounced cases, though they may deny it in the doubtful ones.

In Inebriety, as in other forms of insanity, the marked cases are easily distinguished — the degree of their incapacity is plain to anyone. But, in these, as in all other cases of such incapacity, there are cases so near the border line between capacity and incapacity, that the question of their responsibility is hard to settle, and what makes the case of the inebriate a peculiar one, is that it is impossible to tell whether his incapacity *after* he has begun his drinking is due, *even in part*, to original incapacity, or is the incapacity produced *by the drug*. The question of incapacity, in determining inebriety, ought, I think, to be incapacity *before* the use of the drug is begun. This point will appear more distinctly as we proceed. Limiting our definition of inebriety to include only those incapacitated before any of the drug had been taken, and their peculiar form of incapacity to lie in the direction of

inability to resist the temptation to drink, we will still have a considerable number to include in the list; there are a much larger number of cases, however, who will fall on the incapacity side of the line as soon as even a small quantity of alcohol has been taken, when there is superimposed the effect of the drug to their original defectiveness in this particular.

With the above exposition of the meaning of the terms, our answer will hold good to the first question: That an inebriate is a person so incapacitated that he cannot adjust his conduct properly in reference to the use of alcoholic drinks, or rather, he *cannot resist* the temptation to take such drinks. Like in other forms of insanity this incapacity usually occurs at certain periods, after longer or shorter intervals of sufficient capacity.

In answering the second question, What is inebriety? that is, what is the matter with the man? what is the condition of the man? what is at fault in him, that makes him to be so incapacitated? there is much more involved. In the light of modern physiology, I think we can approach a correct answer with much more distinctness and definiteness than ever before, and as an attempt at this solution this paper is principally written.

Modern physiology declares the brain to be the organ which *adjusts* the man's external actions—those which go to make up his behavior, his conduct, his character—so that they will conform to the rules of right conduct, which he is expected by society to have capacity to receive, to know, and to observe.

The brain, an immense nerve center, at the summit of the nervous system, excessively complex in structure and in function, is the organ physiologically that feels and thinks—that receives and adjusts. A typical nerve center—any nerve center—can be shown to *adjust action*; to *adjust*, being a technical term of modern invention, embracing in the breadth of its signification the extremes of nerve-center functions in the nervous system, reaching and including the

simplest "*reflex*" function of a distant, least complex center, as well as the vastly complex intellectual functions of the high brain. *All* nerve centers *adjust* the actions *emitted* from and by them, along their efferent outgoing fibrils, to those *received* by them from their afferent, incoming fibrils.

The lower, simpler, less important portion of the nervous system is engaged in adjusting the *internal* actions of the man's body—adjusting the actions of the several organs to their limited surroundings—to each other; but by far the larger, the higher, the more complex portion is engaged in adjusting the man to his ever changing *externals*—his environment. The centralization of *external* adjusting power or function is concentrated in the proportionally immense and excessively complex high brain. It *receives* action (information) through the various afferent channels, through the sense organs, from the external world, and *emits* action (that goes to sum up the man's motions, deportment, conduct, and character), it also by an exceedingly complex line of conscious action (reasoning), at times deliberate, at times prompt, *adjusts* the emitted to the received actions.

In this aspect, *the receptive actions* of the high brain are the *sensations*, the emitted actions are the *volitions*, and between these two extremes lie all the varieties of cerebrations, called *thoughts or thinking*. The *broad sense* of all this circuit of action is *consciousness*—or rather, all this circuit of action occurs in a conscious organ—the *sensorium*.

We have not time to follow this line of thought any further, but the physiology of this portion of the nervous system is very essential to the proper consideration of our subject, so that I have, succinctly as possible, introduced it here.

The fact that the brain is the organ of all this high order of action—receptive, adjusting, and emissive thought—makes the maintenance of its integrity and its capacity for proper action, to be one of the most important and vital questions for the consideration of men. It is reasonable to suppose that when there is either original, inherited defect, or subsequent injury, it impairs this organ's capacity for functional work—

this supposition all experiment and pathological experience confirms as a fact, we only know of the receptive and adjusting capacities of another man's brain by his emitted actions, and when they are defective there is every reason to infer defect in its structure that occasions it. Defective conduct or character in the individual at once, in modern physiology, means impaired capacity in the high brain to perform its functions.

The faculty the high brain has of carrying on a deal of its abstract work independently of other actions of the body, has led to the belief that it is extra somatic or metaphysical; and too, this fact of *independent* work accounts for the fact that its functions can be *at times* suspended, or impaired, without apparent hurt to the functions of the lower organs.

The above physiology is very important to the proper study and appreciation of inebriety. In it, like in all insane incapacities, the defect is a brain defect or injury—functional capacity to properly act is impaired.

It may be styled a necessity of the times, in view of these modern physiological views of psychology, that it is no more nor less than *brain* defect and incapacity, that makes all insanity, the insanity of inebriety included.

The receptive faculties of the man's brain are not limited alone to his own sensations, his own experiences, but, particularly and principally by means of written and spoken language, there can be a transfer of the conceptions of experiences from one brain to another. The faculty of receiving in this way the sensations, the experiences, the imaginings, the reasonings, the generalizations, etc., of another brain or other brains, builds the receptive faculty of the man up high and higher, and also the adjusting faculty (reasoning, etc.) goes higher with the receptive, and so also does the emissive faculty. This makes man's peculiar excellence; and the difference in different men's brain capacities to do the different kinds of actions, makes the varieties of men, individuals and races. The capacity of the one man's brain to *perform* certain acts measures his capacity to receive and

appropriate the transferred acts of other brains. The rudimentary brain of an infant cannot be expected to perform the complicated brain acts of an adult. So that childish incapacity does not mean insanity, unless it occur in adults. The incapacity, therefore, that constitutes insanity must be a *loss* of capacity. The previous life and conduct must always be considered.

Although the localization of functions in the nervous system and brain has but very recently begun to be investigated or determined, still I think enough has been discovered, to warrant the assertion that the receptive channels, all the way up, lie *posteriorly*, and the *emissive* channels lie anteriorly. The afferent, centripetal (sensory), fibres of the cord and medulla lie posteriorly, the thalami are in function, and by position in the receptive channel and posterior to the corpora striata that are in the efferent emissive channels, and in the cortices, the visual, the auditory, the olfactory, the sensory tracts lie posterior to the motor tracts and to the speech centers, and descending, the corpora striata are anterior to the thalami, and the motor fibres in the medulla, and the cord are anterior. So that we are authorized, I believe, in saying that the (sensating, voluntary) hemispheres receive *posteriorly*, and emit *anteriorly*; while the whole cortices seem to be engaged in the adjusting reasoning actions. The two hemispheres, also, are in such intimate commissural connection, the one with the other, that any action in one is made the common property of both—they work, thereby, harmoniously and simultaneously, the one with the other. The anatomy seems so far to confirm the physiology and psychology—much is yet to be learned, however; we are but in the beginning of this work.

My object in the foregoing physiological exposition is to show more positively than is usually done, that *the brain* is the grand adjusting organ that adjusts the man to his ever changing environment, and that its integrity and capacity are essential for full, proper, and normal functional action; and when we witness defective, faulty, unusual, unexpected, emit-

ted actions in the man,—in his conduct, character, deportment, and behavior—we have every assurance that the incapacity that produces them lies *in his brain*—it is a defective and faulty organ to the extent of its witnessed and adjudged incapacity, and is perfect and efficient to the extent of its witnessed and adjudged capacity.

To return to the study of inebriety. A few words as to the physiological action of alcohol will be in place just here. The drinking man readily asserts, on being interrogated, that he takes his alcoholic drinks for their “effect on his feelings.” From the above physiology we know that this is brain effect. The sensating organ is the brain.

Abated, dulled, diminished sensation is a pleasant condition—and this is an effect of the administration of alcohol. It, like the other anaesthetics, begins upon the delicate structures of the high brain cells, and impairing their functions first, the lower orders of nerve centers and lower organs are not affected by the quantity that is diluted in the circulation, but the high brain is. No doubt there is often sufficient strength of solution in the stomach to act as an anaesthetic *locally* in that organ, which, I suppose in states of stomach discomfort, from excess of food or indigestion, is often one object in its use as a beverage, but its principal and most desired effect is upon the high brain, lessening capacity of its receptive, adjusting, and emissive functions. The object the man has in taking alcohol is its effect on his receptive faculties, making his brain less sensitive, but we witness also all three stages of brain action impaired; not only is the brain less sensitive, but the adjusting (reasoning), emissive (voluntary) actions become defective and faulty also. For instance. 1st. It is almost impossible to *teach* a drinking man, while he is under the effect of the alcohol. His receptive faculties are impaired so that high thought, or new ideas, or complicated abstract conceptions cannot be conveyed to him. Even while he is under the effect of a “*moderate*” dose his best acuteness of reception is impaired. Under a full dose he is entirely oblivious to all afferent action

from his sense organs—is anaesthetized. His receptive faculties are evidently blunted, dulled, or entirely suspended according to the quantity in contact and chemical union with his delicate brain cells. The *receptive* faculty of man's brain is impaired by alcohol. 2d. His adjusting (reasoning) faculties are also incapacitated, evidenced by his faulty judgment in every particular, under the influence of small doses; in the most delicate, most complex adjustments this is the case, but when the quantity is increased, like the receptive, the adjusting faculties are more and more incapacitated, until, in the extreme, they are entirely suspended.

Finally, faulty, emissive faculties are shown in defective utterance and speech, in faulty, voluntary actions and motions, the faultiness varying in proportion to the amount of the one in the circulation. Evidently, the man, with alcohol in his circulation and in chemical contact and union with his brain cells, for which it has a "special *affinity*," is more or less *incapacitated*, in brain functions, while the alcohol is in the circulation; but, what is the result when the alcohol is thrown off, and gotten rid off? We then find his brain *over* sensitive, hyperaesthetic, he is still not capable of the nicest adjustment and most acute reasoning, and his emissions are tremulous and faulty. Evidently some (more or less) incapacity *follows* its use.

The sequel to a single acute "attack" of "alcoholism" on an injured, impaired brain, can be recovered from by the ordinary reparative processes in sufficient time. The length of time usually depends upon the general *tone* of cellular reparative power of the man's system, and upon the degree of the injury done. It is notorious, though, that as soon as sufficient time has elapsed to suppose all the alcohol to be removed from the circulation, or from union with the brain cells, the man *wants more*. Why? He will tell you he "feels bad," and must have more to relieve his "bad feelings;" a very correct answer.

The chemical injury of the drug upon these high sensat-
ing structures is to render them *more sensitive*, and adjusting

capacity being injured at the same time, he yields,—his emitted conduct is in accordance with this *incapacity*.

The course of the man from a single spell of acute alcoholism into a chronic and severer one, is by the very nature of the case made more and more easy. The *facilis decensus* runs with increasing momentum. The facts in the case in this malady are peculiar; when there is injury to other organs in the body, the *adjusting organ* is usually intact, and capable to shape conduct, to avert or thwart the harm done, but here, it is the adjusting organ *itself*, that is impaired, and its incapacity favors its own extinction.

The grand sequel to a continued spell of alcoholism is usually and very naturally acute mania. It is a little singular to note the symptoms of *mania a potu*. They are due to the *injury* done to the high brain, and are not the primary effects of the alcohol.

While the man was under the anaesthetic effect of the drug in the first of his spree, his delusions were all of a grandiloquent, good-feeling sort, he was oblivious to discomfort or worry, mock courage and hilarious exultation characterized him—but, now that the *injury* of the drug is producing the symptoms, his delusions are of the very opposite kind, over sensitiveness takes the place of dulled sensations, and cringing terrorism, of his mock courage. The delusions of the one condition are the opposite of the other.

It is not necessary, I judge, for me to proceed further in proof of the fact, that the action of alcohol produces brain incapacity. The primary effects of the drug, while it is in the circulation, are of this character, and the symptoms that follow its use, show that this organ has been injured in direct proportion to the quantity of the drug taken, and the length of time its use has been continued.

The man, though, can pass through a debauch of considerable length, his incompetency during the use of the drug being due to its direct chemical effect on his sensating, consciously-acting high brain cells, and the symptoms of incompetency immediately following its use be due to the

injury done these high structures, but after a longer or shorter time he will recover and will not fill the requirements of the definition laid down in the first of this paper of *inebriety*. I stipulated then that the incompetency be not the immediate result of the alcohol on his brain, but that after intervals of sufficient time for recovery, or *ab initio*, the man will become incompetent to resist the drink habit; *before* he has taken any alcohol, he is incompetent.

I stated that I did not think it necessary to enter into the proof that there are such persons in society, at times incompetent in this particular, and their incompetency not due to the immediate effect of the drug. Brain capacity or competency in its adjusting functions, means the man's brain capacity to receive and use his own experiences, or to receive and use the formulated experiences of others, in the adjustment of his conduct. The modicum of this capacity varies with different persons, all are not alike. This *capacity* is largely inherited, transmitted through a line of ancestry practiced in it, and it is strengthened or weakened by the practice or non-practice of it in the life of the individual. So that for the question of insanity to be admitted in the incompetency of the individual, it is necessary that there be a sudden or unusual exhibition of failure of the expected or the customary degree of competency that belongs to him. In insanity the adjusting organ holds up to its ordinary work, running a longer or shorter period when there occurs a loss of its usual capacity, and the person does unusual things, below the ordinary standard that is expected of him. Such kind of conduct characterizes the inebriate. At intervals he fails in his capacity to adjust according to his former good resolutions, or rules of propriety, and the intervals usually grow shorter and shorter of his sanity, and his periods of incompetency last longer and longer. That under our stringent definition of the inebriate, we rule out a great many, and limit the number to a few, is a fact—but just as soon as we allow, in this particular, that the alcohol itself makes incompetency, we find very many more who enter the list as

soon as they take *any* of the drug, and the more they take the more incompetent they become, and the longer the period of incompetency from the injury lasts. Those persons, who are strictly *inebrates*, take the drink because, like all other insane, they have intervals of sanity, and periods of insanity, but their peculiarity is just as soon as the agent is in the circulation, and produces its effect on the brain cells; at once there is superimposed the *additional incompetency* due to the drug.

Whether the use of the drug during one period, it may be the first one, will injure the brain so that it will not entirely recover, but be more liable again and repeatedly to fall into its periods of incompetency—this exposition of the action of the drug would lead us to expect—and all experience confirms this expectation.

The next step in this discussion is to consider the causes that conspire to produce a state of incapacity, to injure the functional action of this high, adjusting organ—before there is any direct effect of the drug, so that after an interval of competency the incompetency sets in. I might say that they are the same causes in the complexity of brain actions that produce the returns to periods of incompetency in other forms of insanity after intervals of sanity. When a brain has a special weakness or defect, inherited or acquired, that is overcome or corrected during intervals of the best sanitation or sanation, when the tone of cellular action runs best; when the functional disintegration accompanying functional action is followed by prompt functional reintegration (nutrition good) the symptoms of defect or weakness are not exhibited, but let there occur anything to lower this healthy condition, then the symptoms of defect show themselves.

So that during the healthy interval in brain action the deficiency is not shown. This defect may be, as I say, inherited or acquired. It is very reasonable to suppose that the injury to a *parent's brain* from the continued effect of alcohol will be repeated in the brain of his offspring, and the child's brain be specially deficient in the very way or line of

the parent's injury. So that a temporarily injured brain in the parent can descend as a permanently injured one in the child. Experience confirms this proposition also. Many varieties of incompetency, or insanity, are legacies in the brains of descendants from alcoholism in the parent, but particularly, and very reasonably, the special line of weakness in the parent will descend, and the insanity in the child take the shape of incompetency in the use of alcoholics.

Brain tire or straightforward brain overwork, when the functional disintegration is more than the functional reintegrating capacity, will bring out or produce a special defect, or make incompetency. Excessive action of any kind, excitement, grief, worry, anger, an outside blow, or an internal injury to the head, may precipitate such a condition, especially, as I say, if at the time there is original inherited defect, or the result of a former injury. Let any such person take at such a time a dose or two of an alcoholic, the pleasure it gives, due to its hardening, coagulating, dulling, benumbing effect, cutting off all brain sense of discomfort or fatigue, is very apt to lead him to its continued use. The injury of the drug is then superimposed on that of the original injured condition, and increased incompetency ensues. If the original defect is a serious one, so as to have already transferred the brain condition across the border line between competency and incompetency, the action of the drug heightens it.

In all this discussion, of course, I am not meaning to imply that there is not a place among our remedial agents for alcohol. It ought to be classed among the other anodynes and anæsthetics, that are usually given and taken for their specific effect of dulling or suspending the brain faculty of sensation, and are excellent in their places, given with *expert* judgment. There are other secondary effects seen in its administration, but its brain effect is the one dwelt upon and insisted upon in this paper.

Heaviness in the heart of man maketh it stoop: but a good word maketh it glad.

THE TREATMENT OF OPIUM ADDICTION.

BY DR. J. B. MATTISON, BROOKLYN, N. Y.*

Another bromide symptom refers to a peculiar form of aphasia, as shown by using one word for another: Brown for Jones, cake for comb, etc. This may persist for several days. Dr. Clarke refers to such instances, and says: "they are hints of a distinct organ of language, and suggest the notion that, inasmuch as the drug we are considering paralyzes reflex before it does general sensibility, language may be the expression or correlation of a peculiar reflex power."

Another symptom is an odd effect on the memory—the loss of a word or a sentence, and entire inability to regain them at the time, so that the train of thought is abruptly ended. These are sometimes quite annoying to the patient, but possess no other importance and soon pass away.

We must again insist upon the fact that all cases of opium addiction do not require the bromide alike. This is a point of prime importance, and failure to put it in practice, is, doubtless, often the main secret of ill-success or unpleasant results in its use. The patient, as well as his disease, must be treated, and he who uses the bromide, as Fothergill asserts Opie mixed his colors—"with brains"—will accomplish far more than the tyro who sets himself up in the treatment of this or any other disorder and fails to be guided by good judgment. To follow a mere routine giving of the bromide, or any other remedy, unvaried by individual condition, is a sorry showing of professional incapacity. We have lately learned of a case of this kind, presenting a lamentable lack of discretion. The patient, a medical man, addicted to

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morphia, having decided upon self-treatment, began a plan of operations with the bromide, taking it himself for several days, and then its hypnotic effect asserting itself, he gave orders that it should be given him some days longer, and this senseless advice being blindly followed by his attendant, he sank into a stupor which persisted for more than a fortnight. This illustrates anew, in another sense, the truth of that trite legal proverb as to the mental status of the individual who is both lawyer and client. Let it be distinctly understood that some cases of opium addiction are ineligible for the bromide treatment. Those complicated with serious lesion of the heart or lungs should be excluded, and those in which there is marked general debility should always be accorded a previous tonic course. Lastly, as before asserted, *in each and every case where it is given, the extent of its continuance is to be governed entirely by individual peculiarities as indicated both before and during treatment.*

Another point, which our experience has convinced us is of value, refers to the treatment just after the habitual hypodermic or other opiate is abandoned. Supposing a case where at the end of five to seven days, as individual peculiarity may determine, the desired sedation is secured, and the usual opiate reduced to a minimum—say one-sixth to one-half grain each dose—instead of an entire discontinuance, we change the order of affairs and make a break in upon the routine taking, by giving one full dose, per mouth, in the evening. This ensures a sound night's sleep from which the patient awakes greatly refreshed, and often surprised at his good condition, which usually persists during the day. The next evening at about the same hour, the maximum bromide dose and two-thirds of the previous opiate are given. The third evening the same amount of bromide and one-third the first evening's opiate. This ends both opiate and bromide. Exceptionally, the full single dose of opium and sodium is given only one or two evenings. During the following day, if the patient is quiet, nothing is given. Should there be minor discomfort, one-half ounce doses of fluid ex-

tract coca, every second hour, have a good effect. Cases, occasionally, require nothing else. If, however, the characteristic restlessness sets in, we give full doses of fluid extract *cannabis indica*, and repeat it every hour, second hour, or less often, as may be required. When the disquiet is not marked, this will control. If more decided measures be called for, we use hot baths, temperature 105 to 112, of ten to twenty minutes duration, and repeated as required. A short shower or douche of cold water often adds to their value. Nothing equals them for this purpose. Warm baths are worthless. The water must be *hot* as one can bear. We have repeatedly known a patient to fall asleep while in the bath.

As to "full doses" of hemp, the dose of the books is useless. As before stated, addiction to opium begets a peculiar tolerance of other nervines, and they must be more robustly given. We give sixty minims Squibbs' fluid extract, repeated as mentioned, and have never noticed unpleasant results. Small doses are stimulant and exciting, large ones sedative and quieting, hence the latter are seldom followed by the peculiar *haschish* intoxication. Lest some timid reader should regard this as reckless dosing, we may say that the toxic power of hemp is feeble, and that these doses are the result of an experience of the drug in many cases, in which smaller ones have failed of the desired effect.

At this writing, two lady convalescents, still insomniac, are nightly taking these full doses with good effect in securing sleep. One recent lady patient, who did not lose a single night's slumber during treatment, and whose need for a soporific ended in eight days, took no other hypnotic whatever. We have used it of late more largely than ever, and with growing confidence in its sleep-giving power, taking, in this regard, almost exclusively, the place of chloral.

Regarding this insomnia, Levinstein and other German writers assert that it will "resist every treatment the first three or four days." This may be true of them, considering their method, and is, of itself, added proof that they are lamentably lacking in the therapeutics of this disease. Under

the plan we pursue, no such sleepless state is noted, and in ordinary uncomplicated cases, patients can usually be promised recovery without the loss of a single entire night's slumber.

Chloral, during the first four or five nights of opium abstinence, fails as a soporific, often causing a peculiar excitement or intoxication—patients talking, getting out of bed, and wandering about the room—followed, it may be, after several hours, by partial sleep. Later, in full doses of forty-five grains at once, rather than three fifteen-grain doses—alone or with a bromide—it can be relied on as a hypnotic; but we have thought that in some cases where it secured sleep, patients, the next morning, felt a certain languor, of which it was largely the cause. Some who use the hemp mention a feeling of fullness about the head and eyes, with occasional confusion of thought, but seldom complain of pain.

The bromide, baths, hemp, and coca, with or without capicum, are therefore the main remedies for the restlessness and insomnia, which, with sneezing, are invariable sequelae of opium withdrawal, and, wanting, the patient is surely deceiving his physician.

For relief of neuralgic pains, which sometimes occur, varied measures suffice. At the head of the list are electricity and the local application of ether. As to the value of the galvanic current in neuralgic headache—so common in opium habitues—and the manner of using it, the reader is referred to a paper on "The Prevention of Opium Addiction," in the *Louisville Medical News*, February 13, 1884. The same agent is effective in relieving limb and lumbar pains, though a much stronger current is required than can be used with safety about the head. Sometimes a strong faradic acts well, and where one fails trial should always be made of the other. Local hot baths—sitz or pediluvium—are of great service for this purpose. Chloroform, locally, relieves, also massage.

Regarding the ether, those who have never employed it will be surprised at its pain-easing power. It matters not how it be applied—spray, drop, or lavement—it is potent for good.

These three—electricity, ether, hot water—are our main anodynes, and one special point in their favor is entire freedom from unpleasant gastric or other results.

For relief of minor neuralgic pains other remedies at times suffice. Croton chloral, in five grain doses every hour, is sometimes quite effective in tri-facial disorder. Tonga, in one drachm doses of fluid extract every hour, is often a reliable anodyne. Its value in some cases seems increased by combining it with the salicylates.

Externally, menthol, in solution, two drachms to the ounce of alcohol, used with a brush, as a spray, or the menthol cone, is sometimes of service; also the well known camphor and chloral combination.

Under this plan of treatment disorder of the stomach or bowels is rare. Our rule is to give an active mercurial or other cathartic in the outset, if there be evidence of alvine disorder, and then secure regular action by such laxative as is found most agreeable. If the latter be found so relaxed as to require restraint, thirty minim doses of fluid extract coto, or sixty grain doses of sub-nitrate bismuth, every two or four hours often serve a good purpose. They are best given in capsule. If, however, the diarrhœa persists more than twenty-four hours, the most effective measure is to give a full opiate, tincture opium, per mouth or rectum, preferred at bed time. This promptly controls, gives a full night's sleep, and the trouble seldom returns. Fear of an untoward effect on convalescence is unfounded. With our experience the assertion of one writer that, "it is impossible to cure the 'opium habit,' and bridge the patient over the crisis, without having the bowels freely relaxed," seems quite absurd. We have again and again seen patients recover who had only two, three, or four movements daily. One such, lately dismissed, was a hypodermic taker of twenty grains morphia daily, and had been addicted for several years. Others have required a laxative enema in less than a week after opiate withdrawal.

Formerly, an exclusive milk and lime-water diet during the first two or three days of opium abstinence was deemed

advisable. This regime is not now imposed, as some patients are able to do dietic duty, and the rule is to make no restrictions unless the exceptionally occurring stomach or bowel trouble seems to require. More than one patient, habitues for years, did not vomit once. The excessive vomiting mentioned by Levinstein and Obersteiner—they practice abrupt disuse—we have never noted. The former thinks the collapse—which we have never seen—observed in several of his cases, was due to the vomiting and purging. Probably the largest factor in causing it was the exhausting general mental and physical suffering which his monstrous method entails.

If the stomach rebels, entire rest, abstinence from solid food, or all food, for a time, milk and lime-water, kumyss or Murdoch's food, in small amount, often does well. If more active measures be required, sinapisms, ether, faradism externally, and, internally, bismuth, chloroform, menth. pip., ice, are of value. If all fail, a full opiate, hypodermic, will promptly suffice.

Having thus crossed the opiate rubicon, treatment relates largely to the debility and insomnia. For the former, of internal tonic-stimulants, coca leads the list. But our experience does not warrant Morse's assertion—"coca cures the 'opium habit.'" That is a mistake. While it is of great value in relieving the varied symptoms of lessened nerve tone, it is *not a specific*. Patients, long used to opium, cannot abandon it and trust to coca alone to carry them over the crisis. This, save in mild cases, it will not do, but, conjoined with other measures, it is strong for good. Of a reliable fluid extract, we give it, sometimes before, and always after the acute restlessness, in four to eight drachm doses, every two hours, or less often, as required, and continue in these full doses, at increasing intervals, for several days. As need for it lessens, we decrease the dose to one or two drachms, and this amount, *ter die*, combined with other tonics, may sometimes be continued with advantage for weeks. As a rule, however, its use is quite abandoned within a fortnight.

Its effect, while noted in from three to twenty minutes, seldom persists more than two or three hours, so that, when the demand for it is active, it is best given at this interval. To remove the mental and physical depression, the minor neuralgiae, and the occasionally occurring desire for stimulants observed in these cases, nothing equals it—being, in this regard, more nearly a specific than any drug at command; and capsicum, in doses of one-half to one drachm of tincture, with the coca often adds to its value. For details of this drug and its uses, see “A Case of Coca Addiction,” reprint of which can be had of the writer.

Another agent of much service is general faradization, twenty-six minute seances, daily, the feet on a plate to which the negative pole is attached, while the other electrode, encased in a large sponge well wet with warm water, is applied to the entire surface, with a current strong enough to be thoroughly felt, but not painful. This imparts a grateful sense of exhilarating comfort, and is the most effective tonic at command. Thus applied or with anode to cervical spine it may be used daily so long as indicated, taking care not to overdo, for a current too strong or prolonged works mischief, overstimulating and exhausting to the extent, it may be, of several days discomfort, which nothing but time will remove. Very exceptionally, faradism disagrees and has to be abandoned.

Alternating with or following we may use the galvanic current. This is a general tonic of special value in these cases. Our method is: positive pole to nape of neck, and negative to epigastrium for five minutes; then the former behind the angle of each jaw for one or two minutes, making the entire seance of seven to nine minutes.

Next to the electric tonic ranks the cold shower bath. It certainly is a great invigorator, and many a patient who dreads it at first, soon comes to appreciate it most highly. If agreeing it should always be taken. With some it acts as a hypnotic. We recall one instance, in particular, of a medical gentleman, who, still somewhat insomniac, after sleeping two or three hours, and awaking with no prospect of further

sleep, would take a shower, followed by vigorous rubbing, and soon fall into a refreshing slumber lasting until morning.

Internal tonics, of course, have a place in the roborant regime, varied as the case may demand. In some cases we employ them from the outset, and the use of Tinct. Ferr. Mur. in large doses, fifteen to twenty minutes thrice daily, has seemed in virtue of its tonic-astringent effect to serve a doubly good purpose in lessening the tendency to alvine relaxation. After the opiate disuse, an excellent combination is Fld. Ext. Coca with Syr. Hypophosphites Iron. Strichnine and quinine, two drachms of each, after meals. Another, Fowler's solution or Tinct. Nux Vomica with dilute phosphoric acid or acid phosphate. If anemic, ferric tincture or Blanchard's pills. Digitalis is often useful. In many cases, cod-oil is of value, and may be continued for months. We make choice, as required, of emulsion with pepsin and quinine. Emulsion with phosphates or plain oil.

Some degree of anorexia is always present, yet may not prevent the regular meal, and need never occasion anxiety, for, probably, it will soon give place to a well-marked reverse condition, which may be encouraged to fullest feeding short of digestive disaster. The appetite often becomes enormous, and sometimes restraint and digestive aid are demanded. If it be slow in returning, rousing measures will suggest themselves. In such cases it has seemed a good plan to stir up the alvine system, once or twice a week, for a time, with a mild cathartic at bed-time, or a full morning dose of hunyadi.

One result of the opiate quitting, and the regime noted, is, often, a greatly improved nutrition as shown by a notable increase in weight. One physician, not long ago since dismissed, gained a pound a day, and another convalescent has been lately been adding to his avoirdupois at the rate of twelve pounds a fortnight.

Rev. Dr. Pieper of Mayland, Prussia, has published a work On American Inebriate Asylums, that will be of great interest to all our readers.

INFLUENCE OF INEBRIETY ON THE VOICE.

BY LENNOX BROWNE, F. R. C. S., SURGEON TO THE ROYAL
SOCIETY OF MUSICIANS, ETC., ETC.

After giving an abstract of the very scant literature that already existed on the subject, he pointed out that the habitual misuse or abuse of alcohol was one of the primary causes which combined to generate several forms of throat disease, especially a chronic form of inflammation of both the pharynx and larynx. It was no argument to say, with Cohen, that "the free use of alcohol is not an essential factor in exciting these complaints, because they are encountered in a marked degree in individuals altogether unaccustomed to the use of stimulants." But it was certainly true that where alcoholism existed, such cases would in the early stages recover with but little medication, either constitutional or topical, provided abstinence were enforced. On the other hand, without such restriction, recovery was incomplete or chronicity much more firmly established. That there was a special form of consumption, affecting both the throat and lungs, dependent upon inebriety, was clearly shown as early as 1835 by Forbes, Tweedy, and Conolly, and later by Edward Smith and Richardson. But in addition to these grave disorders, those who have to use their voice in the exercise of their profession, especially as actors and singers, are very liable to functional disorder if they indulge in the use of stimulants to an extent that would be considered by most people quite moderate in relation to ordinary life. Such persons are not only very sensitive to any change of atmosphere and other circumstances influencing the voice, but they are liable to uncertainty of intonation, the tendency being to sing flat, and to a want of precision in both verbal and vocal utterance. A chronic dryness of the throat,

especially when called upon for functional exercise, is frequently complained of; and this symptom, although the cause of a bad habit, is often urged as an excuse for its continuance. The lecturer warned voice-users that the "taking a hair of the dog that bit them" is an especially fatal practice in their case.

He illustrated by a valuable series of statistics, based on the replies of 380 professional male vocalists, some new facts on this subject. Of this number of professionals it was found that 254, exactly two-thirds, acknowledged to the habit of taking alcoholic stimulants, and 126, one-third, to rarely or ever so indulging. Of this last number, 26.58 per cent. claimed to be total abstainers, and amongst them were some of the most eminent singers in our cathedrals and chapels royal.

Of the non-abstainers, one-third took ale or stout, and three-fourths took malt liquors in combination with either spirits or wine. Regarding the time of taking stimulants, of the 279 non-abstainers, 23.25 per cent. took them at meals only, and the same number at the end of the day; 9.3 per cent. at supper only; 16.8 per cent. at meals and end of the day. The remaining 22.9 per cent. acknowledged to taking stimulants at all times, according to pleasure and opportunity.

Regarding the important question as to taking stimulants either immediately before or during use of the voice as an aid to its exercise, replies from the whole 380 showed that 75 per cent. never did so, 20 per cent. more or less habitually, the remaining five per cent. reporting that they only took stimulants either before voice-use, or at an interval in long periods of vocal exercise. The evidence of many eminent singers as to the advantages and disadvantages of the practice was quoted at length.

The nature of the stimulant taken as an aid to voice-use was not stated by 95 who employed it, but of the 70 who specified its nature over one-third were believers in the value of stout, and nearly one-fourth in that of port wine. Predilection for the latter was accounted for by the fact that

more than half of the port wine drinkers held positions in cathedral and collegiate choirs, in the precincts of whose venerable walls the value of port may be considered almost an article of faith. The author suggested that the large amount of confidence bestowed on stout might be due to the tradition that this was the cause of vocal excellence in the highly-gifted but very short-lived Malibran, and also the habitual drink of Titiens and other celebrated artists. He had the honor several times to treat Madame Titiens for throat affection, and the idea that she took malt liquor to benefit her voice or for any other purpose was quite unfounded. He had never seen her drink porter between the acts of an opera. He had frequently been in her society, and if ever she took anything it was weak claret-and-water.

Malibran was born in Paris or Turin in 1808, and died at Manchester on September 23, 1836. There was little doubt as to her indulgence in drink. She constantly burnt the candle at both ends, and her premature decease was undoubtedly due to the unhygienic condition in which she lived. She died at the age of twenty-eight. He would only give one anecdote with respect to her porter-drinking habits, as related by Mr. Alfred Bunn. The painful details of her life and death were relieved by the author by an allusion to her thrilling and never-to-be-forgotten rendering of the *finale* in the "Maid of Artois." He had had occasion during the rehearsal of this opera to express himself strongly as to her having kept the whole of the rehearsal waiting while she was away earning £25 at a morning concert, when he was paying her five times as much for singing at his theater, and the whole success of the opera was placed in jeopardy. "She had been borne along the first two acts on the first night of performance in such a flood of triumph, as if she were bent by some almost superhuman effort to maintain its glory to the final fall of the curtain. I went into her dressing-room previous to the commencement of the third act to ask how she felt, and she replied, 'Very tired, but—' and here her eye of fire suddenly lighted up, 'you angry devil, if

you will contrive to get me a pint of porter in the desert scene you shall have an encore to your *finale*.' Had I been dealing with any other performer I should have hesitated in complying with a request that might have been dangerous in itself in its application at the moment, but to check her powers was to annihilate them, and I therefore arranged that behind the pile of drifting sand on which she falls in a state of exhaustion towards the close of the desert scene, a small aperture should be made in the stage; and it is a fact that from underneath the stage, through the aperture, a pint of porter in pewter was conveyed to the parched lips of this rare child of song, which so revived her after the terrible exertion the scene led to that she electrified the audience, and had to repeat the charm of the *finale* to the 'Maid of Artois.' The novelty of that circumstance so tickled her fancy, and the draught itself was so extremely refreshing, that it was arranged during the subsequent run of the opera for the negro slave at the head of the governor's procession to have in the gourd suspended round his neck the same quantity of the same beverage, to be applied to her lips on his first beholding the apparently dying Isolene."

In conclusion Dr. Brown advised all to abstain from stimulants. The duties of many actors and singers carried them late into the night hours, and healthy voice-use always resulted in a desire for food, so that it was necessary for them to have late suppers; the bulk of which would, in proportion to their needs, seriously interfere with their sleep.

The question of tobacco was treated with brevity. Of the 380 singers from whom the above statistics had been taken, it was shown that 47.3 per cent. were smokers; sixteen per cent. were non-smokers; 11.6 per cent. indulged in tobacco but rarely; and ten per cent. practiced the habit with "great moderation." Of the 101 abstainers, twenty per cent. were smokers, sixty-six per cent. were non-smokers, and fifteen per cent. acknowledged to occasionally smoking. The excuse for tobacco was thought to be less reasonable even than that for alcohol, and this article was, as a rule, decidedly per-

nicious to the throat and voice. The atmosphere of smoke had been proved to be susceptible of exciting to considerable functional discomfort and physical disorder of the throat, and on this account "smoking concerts," which were always "drinking concerts," also were to be discouraged.

In the discussion which followed the reading of this paper, Dr. Kerr remarked: From his professional experience, he felt certain that those who drank as an aid to vocalization, simply used it as a stimulant or a sedative when suffering from deep exhaustion of nervous strength. He could assure all such, however, that beef-tea, or coffee, or tea, or cocoa, or other allied agent, would be found as efficacious, and less risky, even in exhaustion. In his acquaintance with musical and dramatic *artistes*, he could definitely state that he had never known strong drink useful in a single instance; while he had known actors and vocalists of great promise ruined in voice and wrecked in reputation by drinking. One celebrated singer whom he had known he had seen die in a work-house from this cause. The disastrous effect of drinking on the vocal organs was seen in the huskiness of the toper. In his observation the members of the dramatic and musical professions were remarkably temperate in their habits, the former especially. He could, as a medical man, conscientiously advise no *artiste* to drink, however moderately. In the past, music by its alliance with drinking had helped to train inebriates, and to bind more closely the chains of inebriety around the victims of alcohol; but the considerable proportion of vocalists who were now abstainers was an augury of a happier future, of a good time coming, when music would fulfill its lofty mission as an efficient auxiliary to the cure of the inebriate.

Prof. Gilbert said that Mario, who was a heavy smoker, lost his voice when he was comparatively young. Very few of the present generation had heard Mario sing as he could sing at one time. Braham rarely took intoxicating drinks, and at eighty-three his voice was good.

Mr. Hogg said his views were much in accordance with

those of Mr. Browne. A great change had been coming over the public mind in regard to the use of alcohol, in which no doubt singers had shared. In his early days he mixed a good deal with operatic people, and then it was the fashion to indulge greatly in drink. He remembered Malibran taking a quart jug of porter before she could go on the stage. Singers had great difficulty in finding a drink that would quench thirst and at the same time be nourishing. The Italian singers, accustomed to the wines of their own country, were not prepared for the fortified wines of this country. He was acquainted with an eminent Italian singer who gave him an interesting account of how he was enabled to get on well and preserve his voice under the varying conditions of our climate by abstaining altogether from alcohol, by taking a steak early in the day, having a sleep afterwards, and then taking strong coffee before he went on the stage. He would repeat the coffee during the performance, and found it such an admirable substitute that he became a changed man. The man who wished to preserve his voice should not be a consumer of alcohol at all. He had met with one or two cases in the profession of alcoholic paralysis both of the throat and of the sight. One man thus suffering said he could take twenty-six glasses of brandy-and-water a day. But he was never drunk.

Dr. Martin said alcohol was often adopted as an aid to calming trepidation. A substitute would be found in coffee, for he thought that beverage gave the most tone and the most self-possession. It had been said that expectoration in smoking was injurious, but those who expectorated got rid of a good deal of the toxical agent. It was not so detrimental as in the case of those who never expectorated.

Mr. Collette said he thought they might take this as established, that the sole excuse for the use of alcohol at the time of performance had nothing whatever to do with any good effects it could have upon the voice itself. It could only be defended on the ground of excessive fatigue. In the case of Madame Malibran—he recollected her performing through two operas in one night, the whole of *Sonnambula* and the

whole of *Fidelio*—the fatigue required an extra stimulus, which doubtless would be injurious to the person ultimately, whatever might be the effect at the moment.

Mr. Vezin, the tragedian, was asked to say a few words from the theatrical point of view. He said he was not a teetotaler, nor an indulger in alcoholic drinks. He did not take these drinks as a stimulant whilst acting. He once experienced a most reviving feeling in the middle of a tragedy from a cup of tea, but though he had tried the same beverage since it had never again had the same effect. He had never tried coffee, because it kept him awake all night. After the first night of a piece, and during its run, he never drank anything between the acts. He could therefore give no opinion, but stimulants he fully believed to be quite unnecessary. The late Charles Kean was asked once in his presence whether he ever drank any brandy-and-water when he had a heavy part to take, and he said he liked to have a glass of warm brandy-and-water before the last act of *Sir Giles Overreach*, but when he was forbidden to take stimulants he acted better without it. It was a tradition in the profession that an actor who began by taking stimulants in order to work up fictitious excitement gradually found that the same quantity had not the same effect. Edmund Kean died at the age of forty, and no doubt the last part of his career was ruined by habits of intoxication, although in early life he was very abstemious. The instances of actors given to excess in drink were rare, because their professional life depended upon their sobriety. The moment an actor was not dependable that moment he felt his livelihood going away from him. The discipline of the theater was very strict. If an actor were known to occasionally break out, and to come to the theater incapable, he ceased to be engaged by anybody. Necessarily they were obliged to keep sober—even actors who were inclined to drink; and he was not one of those. He smoked about a dozen cigarettes a day, but had not found it affect his voice. He came here quite expecting to be chidden for his only vice,

and he could but regret that time had not permitted the author to read his observations upon the subject of tobacco.

Dr. Browne, in conclusion, said he certainly saw no good in smoking, and, personally, when he smoked he simply did it because he liked it. To take stimulants to relieve the dryness of the throat was very dangerous. As to the question of the best form of food as a direct voice-aid, he had not gone into that. He considered a raw egg a better form of food, but it should not be taken beaten up, because in the other way it better cleansed the throat. It was quickly absorbed and quickly digested. American singers he found very temperate, and, when ill, exceedingly obedient to the doctor's orders. Many of the Italian singers were grossly ignorant and intemperate, both in eating and drinking. He had himself been surprised to find so many abstainers amongst the musical profession.

Dr. Krücke of Marbach, gives the following description of the pseudo-ataxy of inebriety: The disease, he says, is more apt to appear in people of the upper classes, who are seldom steady drinkers, but rather belong to the impulsive and irregular class of inebriates. The initiatory symptoms are very like those of a true ataxy, even to the similar loss of coördination of the muscular movements. The tendon reflex is also often absent. There is a loss of the sense of weight and of the temperature sense. There is great loss of reaction to the faradic current, only very moderate muscular contractions being excited by it. The ophthalmoscopic examination reveals oftentimes a blanched condition of the retina, and the temperature curve shows a great variation at different times of the same day. The treatment, of course, consists mainly in withdrawal of alcohol.—W. H. V.

The consumption of coffee in the United States for 1884 amounted to over twelve pounds per year to every man, woman, and child. There has been a steady, rapid increase of the amount used in this country, far beyond the increase of population.

INEBRIATE ASYLUMS AS THEY RELATE TO
QUESTIONS OF SOCIAL AND POLITICAL
ECONOMY.

BY ALBERT DAY, M.D., SUPT. WASHINGTONIAN HOME,
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All students of social science agree in the declaration, that the real wealth of society and the state consists in the producing power of the individuals composing it. Therefore it is, and should be, the aim of political economists to eradicate and remove whatever element deteriorates or destroys the productive capacity of the brains and muscles, by whose combined action the sources of social and national prosperity are developed.

It is in this principle that we find an explanation of the historical fact, that while the various means of intoxication have multiplied in number, and increased step by step with the progress of civilization, there have been in all countries, at all epochs of the world's history, advocates of temperance; men denouncing the evil which was producing such pernicious results.

The best elements of our civilization have declared, after due deliberation and ages of intelligent observation, that total and universal abstinence from alcoholic liquors and intoxicating beverages of all sorts would greatly contribute to the wealth, prosperity, and the happiness of the human race.

As long as temperance was supposed to consist in moderate indulgence only—that men could play with fire and not be burned themselves—the friends of temperance, in its now accepted meaning, that is, total abstinence, could not effect much toward the permanent cure of victims to intemperance. When, however, it was perceived that total abstinence was the *only* true temperance platform, and by that, and that alone, could the inebriate be cured and acquire and

retain a mastery of his appetite, then the efforts of philanthropists were directed with increased energy and hope to extend every facility and render all practical assistance to those struggling by total abstinence to throw off the demon who had held them in subjection during long years of wretchedness.

It was with such a beneficent purpose that, in the summer of 1857, a small number of gentlemen in this city, comprehending the extent of the evil, and perceiving the remedy, formed an association, and thus laid the foundation of the Washingtonian Home, which afterwards resulted in the establishment of several inebriate asylums, under various names, in several parts of our country, the results of nearly all of which have been satisfactory to those who have become familiar with them.

One of the earliest results of the establishment of these asylums, after a few years of observation, was that inebriety is *disease* rather than vice, and as this disease began to be pathologically studied, and its symptoms became better understood, the proper remedies were discovered and suitable medicines administered, so that, at the present time, inebriate asylums have become institutions where the exhausted and diseased physical system of the patient is treated medicinally, and the appropriate remedies are applied to restore his bodily health.

Not a little confusion obtains in the public mind relating to inebriety as a sin instead of a disease. This is occasioned by failing to distinguish between intemperance in the form of any sensuous excess, and intemperance in the restricted and special sense of a craving for, and addiction to, intoxicating drinks. There are no doubt features of resemblance both in cause and consequence of all sensual indulgences, as there are marks of similarity between all forms of disease; yet, just as to treat all diseases as one in origin and character is the height of charlatanism, so to regard alcoholic intemperance as identical with sensual intemperance in general is an error equally gross and pernicious. The distinction is

profound and essential. Sensual excess is the inordinate gratification of natural appetite,—a perversion by exaggeration of instincts necessary to the existence of the individual or the race; an intemperance, therefore, which must find its correction in the subjection of the animal to the moral nature in man, so that while the physical appetite is gratified, the super-sensuous powers may be developed, and the life of earth be made a fitting prelude to a life of future happiness. But the species of intemperance of which we are now speaking is not the outgrowth or illicit gratification of any natural appetite; it proceeds, on the contrary, from the creation of an artificial appetite; and, therefore, if it is to be cured and prevented—i. e., entirely eradicated from among men—something more and different must be done than is necessary for the subjugation and control of natural desire. An analogy is presented in the distinction between two classes of disease. In the one class, disease arises from non-nutrition, or some defect in the due separation of tissue and the enriching of the blood; in the other class, called zymotic or fermentative, the diseased action is set up by the introduction from without of certain organic germs, which rapidly multiply in the system, more particularly in the blood, and by their effects on the circulation and nervous centers weaken the vital processes, and often their functions at once cease. These latter diseases frequently become epidemical, as in the case of cholera and other plagues or pestilences.

Now, it is of the utmost importance to settle in the mind whether alcoholic intemperance, as a personal and social disease, is produced by a perversion of natural function, or by the infusion of a foreign element into the system. If the former, the remedy must be sought in a readjustment of natural powers, by educational, moral, and religious means, operating within; if the latter, no real remedy can exist which does not aim at excluding the *virus* already imbibed and preventing its further reception. In cholera, fever, and plague, there is no cure till the patient ejects the virulent matter, and could the entrance of that matter be entirely

prevented, the existence of these diseases would, under the ordinary laws of nature, be strictly impossible.

Now, an examination of alcoholic intemperance in its origin can only terminate in one result — that is, in the conviction that it belongs, both physically and morally, to the class of *fermentative*, or *zymotic* diseases. No mere deprivation of natural appetite will produce it; never does it exhibit itself till alcohol has been consumed; and what is especially to be remarked is, that alcohol acts, in the production of the intemperate habit, by poisoning the blood and arresting the healthy operation of the nervous system. It attacks the higher faculties; those qualities which give a moral tone and leads man up to true happiness and a virtuous life. It dethrones reason, and retrogrades its victim to a level of the brute.

In this manner and in no other the craving for alcoholic drinks is produced — which is always a physical malady in its inception — until by continuous indulgence, it takes a settled and chronic form, leading its victim through the stages of *mania a potu*, *dipsomania*, *epilepsy*, and numerous forms of mental and physical depravity.

Whenever an inebriate under treatment begins to make his own case a study, and tries to give an explanation for every symptom, real or imaginary, it is evident that a very dangerous delusion is coming on. When this delusion is referred to causes within, mental failure of a serious nature is present; but when it finds causes without in the surroundings, a less serious state of debility is present.

An inebriate is one who, from the continuous, periodic, or occasional use of alcoholic compounds, injures his health, perils his business, and shows signs of change of character, conduct, and motive, and who neglects the ordinary interests of his family and the community in which he lives. Such a man has passed the border-line on the descending scale.

Abstracts and Reviews.

CHLOROFORM INEBRIETY.

In the Detroit *Lancet*, Dr. Conner gives the personal experience of a physician who used this drug and came under his care for treatment. This experience is so graphic and full of psychological suggestions that we give full extracts.

He says: "With me the chloroform infatuation was a case of love at first sight. I had been always temperate, almost a total abstainer from stimulants of all kinds. Once or twice I had smelled chloroform, and thought its odor pleasant. I was a young man just finishing my education, and fond of study. I had had some curiosity to know what it was like to be put to sleep with chloroform, and one night I happened to see a one-ounce bottle of chloroform which was bought for the toothache. I took the bottle home with me, and when I went to bed put a little of the chloroform on a handkerchief, and for the first time felt the delightful sensation of being wafted through an enchanted land into Nirvana. Those who know nothing of intoxication, except in the vulgar form produced by whisky, have yet to learn what power there can be in a poison to create in a moment an Elysium of delight. It is a heaven of chaste pleasures. What I most remember is the vivid pictures that would seem to pass before my eyes — creations of marvelous beauty — every image distinct in outline, perfect in symmetry, and brilliant in coloring. The enjoyment is purely passive; you have only to watch vision after vision; but why each vision seems more wonderful and charming than the last you cannot tell, and you do not stop to question.

"I suppose that it was an unfortunate circumstance for me that I had never been drunk before in my life, and I never thought of comparing my blissful condition with that of the

wretches I had sometimes seen staggering through the streets. I had made a great discovery. I had found a golden gate into dreamland—dangerous indeed to approach, I knew that, but who would heed any danger where the prize to be obtained was so great?—and guarding jealously my secret, I took care night after night to have by me the key to that golden gate. Probably I inhaled from half a drachm to a drachm or two each time. Generally I did not waken again until morning, and my sleep seemed to be just as refreshing as usual, only now and then I would wake with a trifling headache and feel disposed to lie a little longer in bed than common. My bodily condition did not seem to suffer in the least, and my faculties all seemed as keen as ever. I felt no craving for my pet intoxicant during the day—did not give it a thought often until bed-time came, and then it would occur to me for a moment to try and see how it would seem to go to sleep in the ordinary way, the conclusion always being that—to-morrow night I would make the experiment. So, before I knew it, I was a slave. I would say to myself, ‘It does not hurt me; it seems to have no more effect than the cigar my friend smokes after dinner. Really I believe it is a positive benefit. It seems to keep my bowels regular, and it certainly makes me sleep soundly all night.’

“But after a while I found that I was using a larger quantity of chloroform than at first. I would take a two-ounce bottle half-full of the stuff to bed with me, and inhaling directly from the bottle would forget at last to cork it, and in the morning it would be empty. Sometimes I would wake after midnight, or partially wake, to take another dose. I found that there was a bad taste in my mouth all the time, keeping me in mind of chloroform. I was often nauseated in the morning, and sometimes at intervals during the day. I began to feel a longing for chloroform whenever I had a little headache, or was dispirited from any cause, and I sometimes yielded to what I already knew was a morbid craving. I began to be indifferent to the things that personally had interested me, avoided society, and became depressed in

spirits. My complexion became sallow, whites of the eyes yellow, the bowels sometimes windy and unnaturally loose, skin dry and seemingly bloodless, and injuries of the skin did not heal rapidly. In winter there was a tendency to chapping, that had not before been noticed.

“Meanwhile I had ceased to have visions, or they came rarely. I began to realize that my pet habit was becoming my tyrannical master. I had no special cares to drown, but it became my insane pleasure to draw over my senses the veil of oblivion. I loved the valley of the shadow of death. I knew there was danger that some night I should pass over the line, into a sleep from which there would be no waking; but death had no terrors for me. Nay, to bring all my faculties and powers and ambitions into the sweet oblivion of transient death was the one pleasure for which I cared to live. I was conscious of a profound moral deterioration; I became materialist; I had no soul; immortality was a dream of the ignorant; I, who had a thousand times annihilated my own soul with my senses, knew that the dream had no corresponding reality.

“Yet all this time I continued faithful in my daily duties, and resisted successfully the temptation to hurry through my evening so as to get the sooner to my chloroform. I did not admit to myself that I was a slave to the habit, or even that the habit was an injury to me, as yet; but I began to be afraid, and the more when I found, when I resolved (as often I did), to omit my nightly indulgence just for a week, how impotent my will was in the matter.

“This was my condition at the end of two years. I was still only using a moderate quantity of chloroform, about three drachms daily, exceeding that quantity only by accident. An opportunity offered for a change of occupation and surroundings, which I eagerly seized in the hope that it might enable me to break my fetters. For about three months, under the new surroundings, I abstained from chloroform, and found it really not difficult to do so. I began to think that I had greatly over-rated the power of the habit. At all

events, after the first week I had no craving for the stimulant. But one day I came across a bottle of chloroform. When I saw it I smiled to myself to think that I had imagined myself a slave of any such thing. Night came, and when I was ready for bed the devil of appetite gave me his commands, and I obeyed. Just one smell to see whether I really wanted it; I would not take the bottle to bed with me. So I inhaled, standing, directly from the bottle — a full pound of chloroform — and with the first breath of the vapor came back, with renewed force, all the old appetite, keener than ever from long abstinence. Once more I saw the old time visions, as beautiful and as vivid as at first. One peculiarity of these visions I may speak of right here. Objects would appear with wonderful sharpness of outline just as they would be seen with the eyes, only reduced to microscopic size like objects seen through an inverted microscope.

“To go on with my story. What happened after I got the bottle in my hands I do not know. The next morning I found the bottle corked and in its place, but only half full of chloroform, and I was told that I had been found lying in some kind of a fit; some thought I was drunk — as indeed I was. From this time I realized myself a slave, but not now a willing one. I did not again commence at once the use of the chloroform, but at intervals of from three to eight weeks would indulge in a regular spree, lasting from one to three days, during which I would keep myself as nearly as possible dead drunk, and would consume from four to eight ounces of chloroform. All this time I kept my habit a secret, and continued to do my ordinary work with the usual zest in the intervals between my sprees. At last discovery came. You well remember how I was found apparently lifeless, and how by the active use of restoratives you brought me to myself. How my moral perceptions were quickened the moment I saw myself through the eyes of another!

“You know that it was not in a week or a year that I was placed morally on a firm foothold again. Indeed, you did not know how often, after I had given you and myself my

word and pledge to abstain wholly from chloroform, I relapsed, taken unawares by the tempter. For more than two years I kept up the conflict, too often thinking the final victory won, only to find there was one imperative command it was useless for me to attempt to disobey, and that command came to me whenever the least whiff of chloroform entered my nostrils. Once or twice I tried the expedient of returning to my first practice of a regular moderate use of the stimulant, but I found that moderation was now almost impossible. If I went to sleep under the influence I would awake again, and find myself then unable to sleep, distressingly wide awake and nervous, until I courted again my 'dearest foe.' Symptoms like those of delirium tremens several times developed. I saw 'things,' not now beautiful visions, but shadowy images, that filled me with nameless, irrational horror. Appetite was capricious. I was frequently nauseated, but food seemed to relieve this condition; vitality was low, the blood ran sluggishly in my veins, and seemed especially to desert the surface of the body. I suffered particularly in cold weather, and it was during cold weather in winter, especially, that I found it almost impossible to resist my besetting temptation.

"At last I prevailed by sheer force of will. I had recovered enough faith in the soul to assert my freedom, and I now look back upon those years of conflict with a kind of self-pity, to think I could have been so weak. But I do not today court temptation. I am not conscious of a lurking appetite, but I dare not put my virtue to any severe test. I am sure, however, that the chloroform habit is one that can be broken by steady determination. I have no faith in any process of tapering off. It is just as easy to quit once for all as to prolong the agony, and the suffering is often purely imaginary. It took many months for me to recover. If doctors only knew the fascination of this drug, they would seldom or never prescribe it. The danger of the wine cup is nothing to that of the chloroform bottle."

THE PHYSIOLOGICAL ACTION OF ALCOHOL IN THE RELIEF OF PAIN.

Dr. Carpenter, in the Huntorian Lecture on Alcohol, remarked as follows :

“Alcohol may relieve pain for the time being ; but the pain will recur with greater force when its paralyzing effect has passed away. Pain is the manifestation of interference with the nerve battery, by the aid of which nutrition and the removal of the consequences of life are regulated. The pain is proof that action in the nerve cell, or current through nerve tissue, is interfered with. There can be no pain if nerves of sensation be destroyed. There will be no pain if the current of blood be arrested, so that vital action be arrested in the cell for the moment. It follows, therefore, that there are cases in which arrest of circulation, by diminishing an onward current, giving rise to a general languor, arrests the chemical changes that are taking place in the nerve cell, and ease results.

“There is no agonizing nerve force produced ; arrest of action means arrest of change. Action of a nerve cell is produced by oxidation of some of the contents of the cell. If those contents be not in perfect accord with the requirements, pain is felt until the oxidation is completed, and the result of the action taken away by proper vessels. These actions cannot be complete in every cell whilst the patient is under the influence of alcohol. There is arrest of oxidation ; there is arrest of the cleansing process, which the nervous and absorbent systems have to perform, and, as a consequence, waste material is kept *in situ*—that is, in the nerve cell, or in the capillary supplying it. As soon as the narcotizing effect of the alcohol is exhausted, there is recurrence of the pain by a renewal of oxidation, the matter to be oxidized being abnormal ; the longer the interval before the pain recurs, the more severe it will become, because the waste matter must be oxidized before it can be removed ; and length of interval corresponds with greater activity when it arises.

The arrest is only attended by an increase in the quantity of oxidizable matter in the peccant nerve cell.

“If pain do not recur, it is because the faculty of that cell is destroyed, and there is a commencement of disease in that organ. The use of alcohol for the relief of pain is perfectly certain (if it be continued for any time) to set up disease in the nerve battery, which regulates the vital actions of the part in which the pain is felt.

“The use of alcohol for such purposes intensifies the succeeding pain first, and then sets up an irremediable disease. It may bring renown to the physician to relieve pain, to destroy the particular nerve cell which gives rise to it; but it is not a rightful proceeding to lay down the first stones as a basis for disease which has a natural tendency to increase. I have now, for thirty years, made close observations upon this point; and looking back upon the history of my neuralgic cases, and other painful diseases, I see this set out as a broad fact, that those who have taken alcohol as a narcotic have suffered a hundred times more intensely than those who have never touched it, or have had their end hastened by its use, because a kind of enthausia has been set up, which is promoted by some among us. I have now, for many years, warned those who have consulted me as to the danger of subcutaneous injections for the relief of pain; It may be pecuniarily profitable to inject morphia five hundred times in one patient, but I am sure it is immoral. I have urged upon those suffering to have patience (I prefer another class of remedies, namely, those which assist oxidation): to bear with the pain until the process which causes it is completed, when the pain will cease forever.”

The temperance agitation of to-day is the superstitious stage of the epidemiology of inebriety,—the very infancy of the subject, where extravagant credulity passes for fact, and conclusions are reached by inspiration and consciousness, rather than by actual observation and study of facts.

TRANCE STATE IN INEBRIETY.

Prof. Mierzejewski of St. Petersburg, Russia, in a recent work on contributions to the study of alcoholism, makes the following reference to a subject that has been disputed by some neurologists :

“There sometimes appears in inebriates a condition which reminds one of psychic epilepsy, and which is called alcoholic somnambulism, and is very interesting in many respects. This condition has of late attracted greater attention than ever before. A short time ago Dr. Crothers described it under the name “Trance State.” (The Trance State in Inebriety. Hartford, 1882.) The characteristic symptom of such a somnambulistic alcohol attack is a total *amnesia*. In an attack of delirium the patient retains the memory of what has gone on just previous to it, and after the attack is over he can recall some of the most prominent features of his delirium, even though the recollection be indistinct.

“One absolute amnesia does not accompany delirium tremens. Cases, however, of attacks of epilepsy in amnesia patients, associated with an attack of delirium, have been more or less frequently described, and, in fact, have been observed several times by the author. Alcoholic somnambulism is, however, entirely unrelated to this form of trouble, and is a separate and distinct disease, and one which possesses a high degree of interest, from a legal point of view. As an example of this somnambulant “Trance State,” which developed itself without any symptoms of delirium, the author cites a case which demands the attention of the profession.

“A young man acting in the capacity of chief of police in the town of Tschita, in Transbaikalieu, an old drinker, committed a whole list of misdemeanors, while in one of these somnambulant states, without being able afterwards to recall the slightest circumstance connected with them. Amongst other things he attacked his own private secretary, struck him over the head several times, and knocked him

against the wall. Then he caused the arrest of two people, entire strangers to him, ordered a gallows to be erected (which order was obeyed by his subordinates during the night), and then ordered them executed. His orders were carried out, but in such a manner that the two victims were supported by the executioners until they were cut down, and so escaped unhurt. Immediately afterward he seized the house of a tailor, maltreated the inmates, etc., etc. Two days later a medical commission sat on his case and clearly made out an attack of delirium. The patient had no recollection whatever of what had taken place. He was, of course, discharged.

GENERAL PRINCIPLES IN THE TREATMENT OF INEBRIETY.

Dr. Everts, the well-known superintendent of the Cincinnati Sanitarium, made a report on the treatment of the insane, to the Superintendents of Insane Asylums Association, that is exceedingly suggestive, and will amply repay a very careful study. The following passages are given, as most accurately describing the general principles governing the treatment of inebriety. The word inebriety is placed after the word insane, to show how clearly one description would apply to the other.

“The most prominent of all methods may be mentioned—restraint. Restraint, that falls upon the patient as he approaches the hospital, as the shadows fall from its façades and towers upon the lawn beneath. Restraint, that becomes more appreciable when expressed by the attitude of persons in authority, superintendents and subordinates, physicians, attendants, nurses, and others acting under orders, whereby the patient is placed at once and unequivocally upon the footing of a person laboring under some kind of disability, as requiring care and treatment, as an invalid, as insane (inebriate). A whole system of restraint making it possible to secure for the benefit of the insane (inebriate), more or less

perfectly, by general and special means, persuasive or coercive, (*a*) regularity of habits, including eating, drinking, bathing, exercise, and rest, and (*b*) an abandonment of pernicious practices. All of which, to an intelligent observer familiar with the homes and habits of our people—the assumptious intolerance of environments, insubordination towards authority, and indifference of conduct characteristic of the insane (inebriate), and attitude of concession, evasion, and downright lying generally occupied by relatives, friends, and physicians towards the patient, justifies the presumption in favor of hospital over home treatment.”

“The insane (inebriate) are for the most part true egoists, in the technical sense of the word. Suffering deterioration of the highest and most complex capabilities, in accordance with the law of retrogressive order, soon or late they fall below, if indeed they ever occupied, the true plane of altruistic perceptions, and hence become comparatively incapable of present forbearance, subordination, or self-sacrifice for the good of others, or of self prospectively. Children or savages, according to the degree of deterioration effected by disease or the violence of activities manifested, are the insane (inebriate). As children or savages, according to conditions, tenderly or rigidly, they must be treated for their own good and the welfare of society.”

On the question of cure, Dr. Everts thinks a small per cent. only can be permanently restored to active life again. He says: “Are there not, also, reconstructive activities and processes? May not destruction be arrested? May not injured structures be repaired? Arrested? Yes. Repaired? Yes. Restored? Never. Destructive processes are only arrested by an interposition of more stable, hence less complex, structures; accomplished by reconstructive activities, never by reproduction of original tissues, however slight the deterioration. The ratio of stability of all organized bodies is inverse to that of their complexity. Therapeutically we may modify physical activities to a limited and always uncertain degree by affecting states, but we cannot divert natural

processes by any possibility from lines established by material conditions. If we were more accurately informed respecting the relations of structure to activities of phenomena, and the definite relation of drug force to constructive, destructive, and reconstructive activities, we might hope to effect much more by medication of the insane (inebriates) than is now possible."

STATE CONTROL FOR CHRONIC INEBRIATES.

In the section of Public Health of the Academy of Medicine in Dublin, Ireland, at the February meeting, Dr. Tweedy read a paper on the above topic, from which the following is an extract :

"The question of the care of inebriates has been steadily gaining ground since it was first mooted in 1855. The subject, he said, was beset with difficulties, there being in the minds of many a deeply-rooted prejudice against any measures that would interfere with the liberty of the subject, or afford unprincipled persons an opportunity of putting troublesome relations out of the way. In answer to the first objection, it was urged that the rights of individuals should occupy a secondary place in reference to the peace and well-being of the community. Dipsomania was a form of insanity, as evidenced by the utter absence of moral sense, self-control, and self-respect combined; while duplicity and cunning characterized the diseased. The process of self-destruction was slow but sure, and practically might be considered as a species of suicide. In answer to the second objection, he submitted there was no greater danger of unjust detention for the inebriate than for the lunatic. It was exceedingly improbable that two medical men of integrity would lend themselves as accomplices to such a fraud. An act partly permissive and partly compulsory would be more likely than the present to effect good, as many patients would voluntarily submit to treatment if the threat of compulsion were held over them *in terrorem*. Unnecessary publicity would be avoided by the

appointment of a committee consisting of the nearest of kin, two physicians, and a magistrate with summary jurisdiction. Early treatment, so essential for cure, could thus be secured as well as by three convictions for drunkenness within six months, proposed by the late Dr. Dalrymple. Detention should be 'until cured,' or for a period of at least twelve months.

"In the discussion which followed, Dr. Duffey said the real defect in the act was its limitation to ten years; for it would be absurd to suppose any one would spend money in starting an institution on the probability of the measure being renewed by Parliament. That was why Dr. Cameron and others had started the Dalrymple Home. If the 'Homes' could be placed under the same management as existing institutions for lunatics, they would probably be sufficiently numerous throughout the kingdom.

"Dr. Henry Kennedy remarked that in the results reported from America he did not hear of many cases that were really cured, and he invited explanation as to whether or not there had been any absolute cures after a year's confinement. The association of inebriates with the inmates of a general lunatic asylum would have a prejudicial effect, as people would not go into a place where there were lunatics. Medical men in practice knew that the number addicted to drink was exceedingly great, and it was lamentable to see persons likely to be benefited allowed to follow their own vicious instincts. He had seen men recover, but in no case a woman who had fallen into the degrading vice. The subject of their treatment was, however, surrounded with considerable difficulty.

"Dr. Cameron agreed that every facility should be given for the reclamation of the habitual drunkard, but there had been a little exaggeration of the results of habitual drinking. Dr. Tweedy had represented an authority as stating that 75 per cent. of the crime committed by the prisoners in a certain gaol was due to intemperance. No doubt it often happened that drunkards were thieves and robbers and murder-

ers, but it was simply a coincidence that a man who was a robber, a burglar, or a murderer should also be a drunkard. That 75 per cent. of the persons committed to prison drank was highly probable; but it was equally probable that 75 per cent. of the persons not committed to prison drank too. Were it not so, how could the public-houses be kept? With regard to the numerous plans proposed for the cure of intemperance, he did not think that the voluntary system would have the desired result.

“The President, in confirmation of Dr. Duffey’s remarks, said the great success of some of the institutions in America was due to the fact that compulsory and voluntary seclusion were combined. Those who did not choose to go in ran the chance of being put in by their people. As a member of the commission on prison dietary, he visited a great number of prisons in Ireland, and he was astonished at the number of persons confined for crimes which had been produced directly or indirectly by drink. Touching the question of compulsory confinement for drunken habits, he saw in a gaol in the north of Ireland a woman who was in for the two hundred and thirty-fifth time merely for drunkenness. She was a ‘bail prisoner,’ that is, imprisoned in default of finding bail for good behavior. Instead of imposing the smaller penalties incurred on conviction for drunkenness, this was the side-wind adopted by the Belfast magistrates for keeping drunkards under control. The woman in question was a lunatic, and ought to be treated as such. She herself said she was sure to get drunk when she went out, and her great desire was to stay in prison. Though not under a sentence compelling her to work, she worked as a matter of liking, and kept herself neat and tidy. It was an outrageous state of the law that she should be treated as a criminal when she was really a lunatic. Having given an example of a dipsomaniac in the upper ranks of life, he said unless means were taken to deal with the disease, the number of dipsomaniacs would steadily increase, believing, as he did, in hereditary dipsomania.

“Dr. Tweedy, in reply, said he had not alluded to the voluntary system as a defect, but he meant to convey that the voluntary system, unbacked by any system of compulsion, was a radical defect in the act. Of course, the limitation of the operation of the act to ten years was a great objection. It was desirable to have retreats for dipsomaniacs, and he advocated the utilization of lunatic asylums on the principle of using existing means until better were provided. Dr. Kennedy had rightly concluded that the number of cures in America was inconsiderable. In his own experience of individuals with this form of insanity, he saw no permanent cure, except where very early treatment was adopted; but there were no means of keeping dipsomaniacs under control for a proper period. Even supposing they were not perfectly cured, it would be important to get dipsomaniacs into an establishment where they would be improved. He agreed with Dr. Cameron that the individuals included in the 75 per cent. were guilty of a great number of other crimes besides drunkenness. In reference to the retreat at Kent, and the surreptitious introduction there of drink, Mr. Hoffman, in his second report in 1881, had mentioned that public-houses in the vicinity of retreats did not cease to give serious trouble to licensees whose establishments were without grounds to confine the inmates within bounds, or where they had not a trustworthy staff to prevent the introduction of drink.”

BRANDY IN EMERGENCIES.

Dr. Allbutt of London, writes as follows on that topic:

“What are the cases of illness which, in popular opinion, require the administration of brandy, and which are most likely to occur when the sufferers are at some distance from home or medical advice? They are the following: apoplexy, epileptic fits, bleeding from ruptured lung vessels, syncope or fainting. Take them in order, I may remark that in each of these cases brandy or other alcoholic preparations are highly dangerous—in apoplexy, because, a blood vessel having

ruptured in the brain, blood is being poured out in or upon the brain, causing pressure and consequently the apoplectic fit. Nature endeavors to repair the mischief in her own way by sealing up the rupture in the vessel by means of a plug of coagulated blood. Now, suppose some brandy is administered; the heart is made to beat faster, blood is sent quicker and with more force to the vessels of the brain, the plug of coagulum is forced out, more blood is pumped out upon the surface of the brain, and the patient either dies without recovering consciousness, or only recovers partially, remaining paralyzed on one side for life.

“Epileptic fits frequently depend upon a condition of engorgement or fullness of the blood vessels of the spinal cord. Alcohol, by increasing the heart’s action, sends more blood to the already engorged vessels; it also acts specially on the nerves which control the size or calibre of the blood-vessels. The alcohol paralyzes such nerves (vaso motor nerves), and consequently, the blood vessels, not being kept under control as regards size, expand and admit more blood,—which blood, owing to the diminished contractile force of the blood-vessels, becomes sluggish in the vessels, causing a condition of greater engorgement than previously existed. Hence brandy is the worst remedy in epilepsy.

“In bleeding from the lungs, the same argument holds good as in apoplexy. Nature endeavors to plug the ruptured vessel with a clot of blood. Alcohol displaces this clot by causing the heart to send more blood with more force to the blood-vessels of the lungs.

“Syncope, or fainting, may depend upon a variety of causes. In elderly persons it is often associated with a fatty condition of the muscular tissue of the heart and coats of the blood-vessels. Alcohol administered often causes a rupture of some softened vessel, or a tearing of some of the soft, fatty tissue of the diseased heart. Syncope may also arise from excess of heat (sun-stroke), or from severe cold. If from the former, the already engorged condition of the blood-vessels of the brain are still further engorged by the admin-

istration of alcohol. If from the latter (cold), alcohol, by lowering the temperature of the body (as can be proved by the thermometer), makes recovery far more tedious and difficult, if it does not even turn the scale toward death. Syncope from hysteria, excitement, etc., requires no alcohol, as the subjects attacked can be quickly restored by throwing a little cold water over the face and chest."

PEPTO-QUININE IN INEBRIETY.—Quinine has been used with excellent results in cases of inebriety, at the beginning of treatment, where alcohol was discontinued at once. In large doses it has been found a sedative and stomach tonic. Recently, I have found pepto-quinine a much better remedy. This is a combination of pepsin with quinine, made by the Pennsylvania Chemical Manufacturing Company of Philadelphia, and put up in compressed tablets and powder. In ten cases I have found doses of this remedy of half the size of the usual dose of quinine to have more pronounced effects. The very common irritation of the stomach is more quickly allayed by this remedy than by quinine alone. Also the sedative effect follows from a smaller dose and more rapidly, than from quinine. It is evident that pepto-quinine will become an almost indispensable remedy in inebriety, and take the place of quinine wherever the latter is used alone.

In some cases of inebriety a most remarkable exaltation of memory is apparent, which begins after the use of alcohol and grows very intense for a long time, then gradually fades away. Sometimes these memories concern events which have been unpleasant, and make vivid the wrongs, real or imaginary; or they are of a more pleasing nature, in which the happy events of life are lived over with great intensity. In one case a patient gives this as a reason for the use of alcohol, by which he could live over the golden hours of the past. These changes of memory are of great diagnostic interest, and should be studied in every case.

Editorial.

CENTENNIAL OF DR. RUSH'S STUDIES OF INEBRIETY.

The National Temperance Society are to hold a centennial celebration next September, in which they request all friends of temperance everywhere to unite. The following is one resolution which describes the occasion for this meeting:

WHEREAS, "The celebrated essay of Dr. Benjamin Rush of Philadelphia, entitled: *An Inquiry into the Effects of Ardent Spirits upon the Human Body and Mind*, first published in 1785, was largely instrumental in awakening attention, and stimulating to action, the early temperance reformers, and was the introduction of literature as an educator upon the subject of temperance."

Our temperance friends should not overlook the fact that Dr. Rush taught distinctly that inebriety was a disease; and urged repeatedly that hospitals should be established for its exclusive treatment, in all the principal cities of the land. In the work noted in the resolution, he both affirms the disease of intemperance, and divides it into acute and chronic forms, describing each in most graphic terms. The heredity is noted, and the liability to die of other disease, and the nature and character of these diseases are mentioned.

Post mortem appearances, and remedies to be used in the different forms of disease, are described at some length.

In the later works of Dr. Rush, these views are elaborated with singular clearness and accuracy. It is apparent that whatever Dr. Rush wrote on the moral side of inebriety was merely a repetition of that which had been said over and over again before, but his recognition of the disease of

inebriety, and its treatment in special hospitals, was a revolution in science, upon which his future reputation will rest. This notion of disease and its remedy had been mentioned from time to time, for twenty centuries, but Dr. Rush was the first to organize it into a practical study, and urge its application in the solution of the temperance problem. He saw with the eye of an expert, the application of these facts, in the same way that Franklin, Jenner, Morse, and a host of others, realized, formulated, and vitalized, truths of nature and science, which had been waiting for ages for birth and recognition. His moralizing was welcomed, but his outline of the great facts of science was unwelcomed, and consigned to that eternal round of evolution, where all new truths are regarded first with indifference, then with fierce denial, and finally accepted. His statements of disease were for over half a century regarded with indifference. When in 1855, they were recognized and advocated, and then began the stage of contradiction and denial, not yet passed, but most happily drawing to a close. Thus Dr. Rush's little work, which it is proposed to make the subject of a centennial celebration, was not only far in advance of that generation, but still beyond the comprehension of a large number of enthusiastic reformers and temperance advocates of to-day. The centennial of Dr. Rush's writings should be something more than a recognition of the evils of inebriety, and its remedy by moral means. Unless the physical nature of inebriety be noted, and the remedy by physical means be fully recognized, this centennial will be a spectacular farce.

Every scientist in the country will welcome this celebration of the writings of a great man. Welcome the spirit and impulse that actuates so many to signalize this event, in the effort to comprehend inebriety and its remedies; but they ask that it be from no narrow, half-sided view, or imperfect conceptions of his works.

The intelligence of this age demands something more than vague statements and vaguer theories, and moral remedies, based on mediæval conceptions of mind and body. It

demands an intelligent answer to the question, What is inebriety, and what is the remedy? A century ago, Dr. Rush answered this in part. Will our temperance friends complete this answer, in this centennial? Will they point out the facts which the teachings of science, and the best experience of the age confirms? If this centennial celebration does that, it will mark an epoch in the evolutionary progress of social science.

INEBRIETY COMING FROM HEART DISEASE.

In the study of the early history of cases of inebriety, it not unfrequently appears that some supposed heart disease existed long before alcohol was first used, which disappeared after inebriety began. Often in the progress of the case a sudden, violent beating of the heart will ensue, and pass away as quickly as it begun. The patient will refer this to the former disease of the heart. When this early heart trouble is studied, it will be found to have appeared suddenly, and been noted by great difficulty of breathing and general precordial distress. In one case it began soon after a violent effort to reach the depot to catch a train. In another case severe exertion in rowing a boat to escape a coming storm produced it. In each case sudden great trembling and agitation of the heart followed, which was relieved by alcohol, and when spirits was used steadily it disappeared. In a third case this history of a fluttering heart followed great grief, and was relieved by opium. To break away from the opium, alcohol was used, and inebriety followed. In these cases, without doubt, some form of acute asystolism or muscular heart-strain was present. This is farther confirmed by the history of conditions most favorable to this disorder, of which might be mentioned excitement, irregularities of work and living, great extremes of emotion, care, and anxiety. In such conditions, where a sudden trembling heart, and general nervousness, with heart distress, comes on, this state of heart-strain may be most reasonably inferred.

It seems clear, from the frequency in which these histories of heart-strain appear, that they are followed by some peculiar state of nerve exhaustion that merges rapidly into inebriety. It is also evident that inebriety produces some state of the nerve centers that predispose to heart-strain, and, finally, organic disease. Cases with the following histories are illustrations:

An inebriate will engage in some severe physical exertion, or will be thrown down, or suffer from violent agitation, and soon after have palpitating heart, and later have marked organic disease. Why this is not more common is probably owing to the general anæsthezied state of the inebriate, who suffers less from the shock of any injury, either to the mind or body, than one who had not used alcohol. In other cases some disease or condition of debility is followed by heart trouble, called functional because of its transient nature and intermittent character. Where alcohol is given as a remedy, inebriety is very apt to follow in these cases. In some cases of functional heart-trouble spirits are not tolerated, but in others its sedative action is marked, and its value most enthusiastically defended. The conclusion forces itself on the minds of the observer that inebriety is most likely to follow heart-strain or other functional disorders of this organ, and alcohol should never be given in those cases as a medicine.

Where neurasthenia and other states of debility are present, these cardiac strains are easily provoked by alcohol, and may go on to inebriety and serious organic disease. Alcohol, in all cases, produces alteration and exhaustion of the myocardium, with final dilatation, where it is used continually or in excess.

The presence of any form of heart trouble increases the complexity of the case of inebriety. If it began before inebriety appeared, and has been held in abeyance by the use of alcohol since, a more profound form of degeneration has come on. If organic lesion is present, which has come on from use of alcohol, it is equally doubtful in prognosis. It is

evident that all forms of heart-trouble may both precede and follow inebriety; also, that in each case there are lines of causes from which the progress and prognosis of the case may be predicted with more or less certainty.

EDUCATION IN INEBRIETY.

Dr. Wright of Clarksville, Tenn., has, in a report on School Hygiene to the State Board of Health, pointed out many of the conditions of nervous exhaustion which precede inebriety. Without doubt inebriety begins in the defects and strains of school life as positively as from the saloons. The results of bad air, long confinement, over-crowding, mental strain and excitement in classes, want of proper exercise, and other unsanitary states, are fatal to the future of the child. In after life this is seen in the nervous, hysterical women, the feeble, irritable men, who become inebriates or insane.

Education applied without regard to surroundings and natural capacity, and along unphysiological lines, unfits and destroys every victim of a bad heritage. Down in the common schools, the subjects taught and the methods of teaching, in the most unsanitary surroundings, are the active factors to lay the foundations for inebriety. This is seen in the perverted tastes, feeble will-power, headaches, chorea, sleepless nights, increased nervousness. Later, inordinate self-esteem, excentricities, and general perversions, which point to a mental and physical dyspepsia that ends in inebriety. A writer has said, "that profound ignorance has more promise for the longevity of the race than the highest culture of modern times." Dr. Wright enters an earnest protest against the routine methods and bad surroundings of the school systems of to-day, in which brain force is centered and turned in certain directions, no matter what the capacity or quality may be. Brain-tire and nervous exhaustion in childhood always leaves a defect which is most likely to culminate in inebriety from the slightest exposure in after life.

School hygiene is a neglected field for the study of the early stages of inebriety, insanity, and idiocy. True education of the future will turn on the study and avoidance of these defects, that are slowly and surely preparing the ground and building up an army of inebriates and insane for to-morrow.

INTOXICATIONS MORE FREQUENT AT CERTAIN TIMES OF THE DAY.

The records of police courts and accident hospitals indicate that intoxication from alcohol is more frequent for a period of two hours before and two hours after midnight. English physicians have noted and commented on this fact, but no reasons have been given why it is so. In periodic inebriates, as a rule, the drink paroxysm comes on more frequently at night than in the day time. In two cases under my observation, if intoxication did not come on before midnight they would remain in the same state until the next night. In another case a drinking man avoids intoxication by going to bed before ten in the evening. If he remains up, although he may not drink, he will be intoxicated at midnight. In club houses, among those who drink regularly, a degree of intoxication is noted at midnight not seen at any other time. Cases have been noted where the drinker has used only soda or acid drinks for many hours before, but at midnight becomes intoxicated without any special exciting cause.

The cumulative action of alcohol on the brain-centers has never been studied, but a little observation will show that it exists more generally than is supposed. Take the common observation of men who drink regularly through the day, and seem not to be much worse for it, but late at night are intoxicated, although they have not used any spirits during the evening.

It appears that alcohol, like bromide, may remain in the system to some extent without producing any marked action, then suddenly, from some unknown cause, burst into great

activity, producing profound intoxication. That this occurs most frequently at or about midnight seems to be indicated by a variety of facts. The causes are both physiological and psychological, and probably also due to climatic conditions, etc., etc. This is an unknown field of the greatest practical interest, and we trust some one will study the facts and show their real meaning.

SOME STATISTICAL FACTS.

From the last census it appears that insanity increased one hundred per cent. from 1870 to 1880. This was not the actual increase of insanity, but represented in part the more perfect registration of cases. The whole number of insane in the United States were estimated at one hundred thousand, approximately, the actual number would be more, if a perfect record of all the insane could be made. For the treatment of these unfortunates the country have provided eighty different State asylums, and forty private asylums, with a capacity for forty thousand inmates. In reality fifty-three thousand insane are cared for in these asylums, leaving forty-seven thousand outside, uncared for, and without treatment.

There are approximately five hundred thousand inebriates in the United States, suicidal maniacs, unknown and unrecognized. There are only twenty-one asylums and homes for their cure and treatment. In these places less than four hundred cases are being cared for. The State punishes by fine and imprisonment not less than sixty thousand of this number every year, with no other result than to precipitate them into more incurable conditions. The efforts of moralists of necessity fail, because founded on a wrong conception of the nature of inebriety. The mortality of inebriates exceed that of the insane, and has been estimated at from fifty to sixty thousand a year. The average duration after inebriety has appeared is ten years. The best and most accurate statistics of experts in the study

and treatment of inebriates indicate that from thirty to fifty per cent. are curable. Inebriety is without doubt increasing. Some authorities estimate this increase at fifty per cent., others less, but all agree that it is far beyond the ratio of increase of the population.

CONSUMPTION OF ALCOHOL.

Some idea may be obtained of amount of alcohol used, from the last report of the Bureau of Statistics, No. 3, 1883-84. The past eight years were divided into two periods of four years, and an average of each was made with the following result. From 1876 to 1880, the average gallons of distilled spirits used per year were 56,413,606. Of wines for this period 22,169,804 gallons. Of malt liquors it was 318,959,473 gallons per year. For the second period from 1880 to 1884, the average yearly consumption of distilled spirits was 71,535,859 gallons. Of wines 25,955,893 gallons. Of malt liquors 487,052,413 gallons a year. The increase per cent. was for distilled spirits $27\frac{1}{2}$, for wines $12\frac{1}{2}$, for malt liquors $51\frac{1}{2}$ per cent. The increase of population for the past four years has been twelve per cent., keeping pace with the increase in wine drinking. The increase of spirit drinking has exceeded the growth of population, as two to one, and the beer consumption as four to one. The revenue from distilled liquors has gone from five millions in 1863, to seventy-five millions in 1884. During this time the revenue from fermented liquors has increased from one million in 1863, to seventeen millions in 1884. In 1884, 20,837 gallons of spirits were used for scientific purposes, as in colleges, chemical laboratories, and by the government in the preservation of specimens of natural history. For medical, chemical, and trade purposes, 3,841,902 gallons were used, and for export 9,800,788 gallons. Thus for legitimate purposes 13,663,527 gallons were consumed. Over ninety-two million gallons were withdrawn from bond last year. Of this the thirteen millions and more used in the arts, and a

wasture by casualties, leakage, etc., of over four million gallons, would leave over seventy-six million gallons to be consumed as a beverage. Among the many curious facts are the following: The exports of whiskys during 1884 was an increase of three million gallons over the year before. Six hundred and seventy-two thousand gallons of New England rum was shipped to the coast of Africa during the year. The demand for rum is increasing from the west coast of Africa. One firm at Cambridge, Mass., sent one hundred and fifty thousand gallons at one shipment last year. The importation of foreign wines have fallen off about four million gallons during the year past. The importation of malt liquors have increased nearly three hundred thousand gallons. To the student of science these figures have a psychological significance and meaning, that invite the most careful study and examination.

Many persons are confident that drugs may be found which act directly on the nerve centers and assist in the restoration of healthy nutrition of the brain. But a careful study will show that the difficulty of adjusting the dose and regulating the intensity and direction of the drug action cannot be overcome. Also the collateral disadvantages caused by the disorders of assimilation and nutrition coming from these drugs often more than counterbalance the good that may be produced from the direct action of them.

To all our numerous consultants and correspondents who ask to have line of treatment designated by which they can treat themselves, we would say, take a Turkish bath twice a week. If weak and sleepless, take an electro-thermal bath once a week. These baths are given at Dr. Shepard's, on Brooklyn Heights, Brooklyn, N. Y., in the most thoroughly scientific manner, and under the charge of one of the greatest Turkish bath specialists in this country.

Clinical Notes and Comments.

CONTAGION OF INEBRIETY.

Dr. Ray, Professor of Materia Medica in the Southern Medical College, Atlanta, Ga., writes in a late number of *Medical and Surgical Reporter* concerning the contagion of the disease of inebriety, mentioned by Dr. Crothers in the *Alienist and Neurologist* for October, 1884:

“Quite a large experience and very careful observations with this class of unfortunate persons, compel me to the belief that with many inebriety is a disease, apparently inherited and likewise contagious, and where this inherited predisposition exists resistance to the contagion is almost beyond the power of the victim. This is true in relation to other diseases, and why may not inebriety be controlled by the operations of the same law. A very striking incident is given of a gentleman who never drank or had any desire to drink at home or in his own neighborhood, but when he passed over into another country he could not resist the impulse to drink. He inherited the desire to drink, and his system was ripe for the contagion, which came on from some mysterious influence, affecting him when he reached a certain section of country. In a second case a lady, born with this same inheritance, through the influence of her husband drank to excess with him, but when he was away could abstain. Her brother could remain at home on the plantation perfectly sober, but when he went away would inevitably drink to intoxication.”

He concludes that inebriety is a terrible disease, and its victims should be pitied rather than condemned and despised.

INDICATIONS OF TREATMENT IN DELIRIUM TREMENS.

We have depression of the organic functions, and an enfeebled, exhausted condition of the nerve centers; the cells of the gray matter of the brain are, moreover, under the influence of a poison whose expression is an erethism, determining constant, irregular discharges of nerve force while denying repose. There is more or less gastric irritability and catarrh; a languid, systemic circulation; the blood vessels of the pia mater are engorged. The leading indications then are: first, to promote elimination of the toxic agent. This indication, however, must be kept in abeyance for a time by the second, which is the most urgent, for the rapid expenditure of nerve force threatens to wear out the patient. The second indication is to calm the excited brain and stop the destructive waste going on in the nerve centers till reparation shall have been fairly instituted. This should be accomplished by some medicament that will have the minimum of congestioning action, while suspending cerebral activity in a manner analogous to natural sleep, "tired nature's sweet restorer." Third, the system should be supported by suitable nutrients and stimulants. I believe that we have in capsicum the typical stimulant, in chloral the typical hypnotic, and in beef-peptones the typical nutrient—in delirium tremens. The latter should be given in the form of broth or beef-tea continuously during the attack, and to the extent of the tolerance of the stomach.—DR. HURD *in Gazette*.

RESULTS OF LEGAL CARE AND TREATMENT OF INEBRIATES.

The following records show how positively the legal methods of treatment of inebriety by fine and imprisonment both pauperize and criminalize its victims.

In the county prison of Perth, Scotland, in 1872, there were nineteen inebriates under sentence, with the following history: One had been in prison for the same offense one

hundred and thirty-seven times, and one a hundred and two times; three over sixty times, and three over fifty times, and four over forty times, and seven over twenty times. In the Albany Penitentiary, in 1877, five inebriates were confined who had been sentenced to prison for inebriety from fifty to sixty-four times before. In the prison on Blackwell's Island in 1881, forty-one of its inmates confined for inebriety, had a record of having been in prison for the same offense from twenty to seventy-eight times. There is probably not a prison or jail in this country in which more or less of these incurables are found. Cases that might have been saved had their maladies been recognized and properly treated, but regarded as criminals and treated as such, has precipitated them into incurable conditions. The State has made them or educated them, and in this way it actually is producing inebriates and criminals in its efforts to check and suppress them.

"*Misdea*," by Prof. Lombroso E. Bianchi. The author, the distinguished founder of criminal anthropology in Italy, and one of his students, have made a voluminous study of the celebrated case of "*Misdea*." *Misdea*, a young soldier, was known without provocation to have shot several of his comrades and subordinate officers inside of a few minutes, while in a room together. Shortly afterwards he was undoubtedly suffering from acute alcoholism. They show that without doubt the man, who was extremely excitable and heavily burdened by bad heritages, was also a great drinker, and a sufferer from epilepsy, especially from extremely frequent and well-marked attacks of epileptic vertigo; also that he committed these apparently objectless murders during an attack of what may be regarded as insanity. There were abnormalities and a symmetry of the skull, and many other symptoms, which entitled him to be classed among the "*delinquente nate*." The heredity of *Misdea*, regarded from a psychopathic point of view, is unique. Notwithstanding these facts, he was condemned and executed.

J. W. V.

The Foundation of Death ; a Study of the Drink Question, is the title of a work by Axel Gustafson, published by Ginn, Heath & Co., Boston, Mass. The idea of this book, to gather and group all the facts that are well established, was a good one ; but in the execution of it the author has most painfully failed. Five hundred pages of statements are given that are worthless as facts, because so mixed with religious dogmatisms and assumptions. Even the bibliography, which should have been discriminating and reasonably accurate, gives a large place to trashy sermons, and omits the best scientific publication on this subject. Such books as this simply mark the stage of empiricism and agitation, in which superstition, fact, and fiction, are served up in a spectacular medley. If the author had made a study of the history and character of a few inebriates, he would never have examined three thousand works on this subject, or considered the world literature on alcohol enormous. Or even would he have dared to venture on a book particularly made up from statements of non-experts largely. *The Foundation of Death, or a Study of the Drink Question*, brings no additional light on the subject, and leaves the reader more hopelessly confused than before.

The Illustrated Medical Journal Co. have published lists of *Perforated Adhesive Medical Journal Labels*, containing the names of all the journals on medicine, pharmacy, and hygiene in this country and Canada. They are just what every physician needs for addressing his reprints, and medical colleges and asylums who send out circulars. Four complete sets will be mailed postpaid for fifty cents, by addressing the publishers above named.

The *Popular Science Monthly* are publishing a most valuable series of papers on cholera, by Dr. Pettenkofer. The March and April numbers contain some very important papers on the brain and nervous system, which should be read by every student of science. No other journal published has a greater variety of scientific matter that is so trustworthy.

Insanity and Allied Neuroses, by Geo. H. Savage, M D., Physician and Superintendent of Bethlehem Royal Hospital, etc. Lea Brothers, Publishers, Philadelphia, Pa., 1884. pp. 544. This is a book of most excellent common-sense views of insanity and its treatment. Its clinical character and clear brevity are rare merits in books on this subject, and the student of inebriety will find many most valuable and suggestive pages. The chapter on the causation is the best in the English language, and the cases given to illustrate the different phases of insanity are more suggestive than any lengthy description could be. The author's large experience and most thorough knowledge of the subject is apparent on nearly every page. We most heartily commend this book to all our readers. The publishers have brought out an attractive volume, which must have a large sale.

Psychiatry; Clinic of the Affections of the Prosencephalon, by Dr. Megnert, professor of nervous diseases, etc., Vienna. This is the title of a large treatise, which G. P. Putnam's Sons of New York are publishing. The first volume is an explanation of his doctrine, that the pathology of insanity is a chapter in the anatomy of the prosencephalon. It discusses the relation of the facts of consciousness to cerebral anatomy, the chemistry of the brain, and makes three divisions: *First*, of those which are based on anatomical changes. *Second*, those from nutritive affections. *Third*, those depending on toxic states. The review of these divisions are exceedingly clear and able, and so far this work promises to be the greatest work ever published in the English language.

Babyhood is the name of a monthly published in New York under the care of Dr. Gale and Marion Harland. Its purpose is to give parents and others correct knowledge upon the care and training of infants. The first two numbers are very attractive, and we commend this journal to all our readers. The subscription is only \$1.50 per year.

The *Scientific American* brings weekly a most suggestive table of contents of equal and greater interest than that of the daily paper.

The *Public Herald* of Philadelphia, edited by Lum Smith, Esq., is waging a furious crusade against frauds of all kinds, and particularly those advertised in the newspapers. We notice with pleasure the exposure of some of the alcoholic and opium specifics. The religious and temperance papers who admit these frauds in their pages may expect heavy weather when Mr. Smith turns his attention to these swindlers and their consorts.

The *Homiletic Review* for March and April are most excellent numbers of a large monthly, which presents the latest and best theological thought of the day, in the form of sermons and papers. It is published by the enterprising firm of Funk & Wagnalls, 10 and 12 Dey Street, New York City. \$3.00 per year; 30 cents per single number.

The *Electrical Engineer* grows in interest with each number. No other subject of practical science is attracting more interest in the world to-day, and more talked about, and less known than electricity.

The *American Inventor*, a monthly, should always be included in the list of journals that are indispensable for the library.

The *Medal of Superiority* has again been awarded in 1884 by the American Institute to the Jerome Kidder Mfg. Co., 820 Broadway, New York, for their Superior Electro-Medical Apparatuses. In 1883 this company received the Medal of Superiority over *three* competitors. For many years their appliances have been before the public, and at all the principal exhibitions held in this country since 1872, including the Centennial Exhibition at Philadelphia in 1876, they have been awarded the highest premiums for their superior productions. On receipt of stamp they will mail a copy of their *Electro-Allotropic Physiology*, which has been revised and enlarged, and contains much new and valuable information.

Fellows' Hypo-phosphites is a remedy now used very extensively in Europe and this country, particularly in mental and nerve affections. In inebriety from opium and alcohol it is indispensable, and is both prescribed by physicians and purchased over the counters by patients. Its popularity and demand are increasing every day.

Cocaine and its preparations, as advertised in our journal by Parke, Davis & Co. of Detroit, Mich., are most remarkable anaesthetics, and we urge our readers to test them in the varied neuralgias seen in inebriates and opium cases. Dr. Wood reports some excellent results from the use of Hyoscine Hydrobromate, the alkaloid from hyoscyamus, in delirium of insanity. It should be tried in those intractable deliriums of inebriety, so difficult to control. Parke, Davis & Co. prepare and sell this alkaloid.

The Anglo-Swiss Condensed Milk which is being advertised in this journal, has won the highest encomiums from the most competent authorities as the best food made for infants and invalids. A treatise on this all-important topic will be mailed, free of cost, to all applicants by the Anglo-Swiss Condensed Milk Co., 86 Hudson street, New York city, or can be procured of druggists.

Dr. F. O. Young of Lexington, Ky., says: "I have used *Papine* in my practice, and I have taken considerable pains to test it and watch its action. I think it superior to any preparation I ever saw used containing opium. It is safe and pleasant, and in no case did it ever produce the least nausea."

Horsford Acid Phosphate fully merits all that can be said of its value as a brain and nerve tonic. In the anaemia and exhaustion from opium inebriety it is without a rival in therapeutics.

Lacto-peptine should be used in all cases where digestion is impaired. It is commended by many of the most distinguished medical men in the country.

Judge Moran of Tennessee, declared in a late address: "Of the crimes of adults that I have noted professionally, seventy-five per cent. are chargeable to the immoderate use of alcohol. Of the crimes of children, fully ninety per cent. can be traced to drink and inebriate parents."

It is a fact not well understood that inebriates, under the influences of spirits, are especially prone to heat, apoplexy, and cerebral congestion. In most cases it may be safely assumed that sunstroke is provoked by the use of alcohol, and where a case is found in the streets suffering from *coup de soleil*, he is both a neurotic and alcoholic. Hence the use of alcohol where the person is exposed to the sun is a source of great danger.—*Dr. Christie.*

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THE READING AND RECITATION TERM will commence September 27, 1882, and close at the beginning of the Regular Term:

THE REGULAR TERM will open January 24, 1883, and continue five months.

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ALCOHOLIC TRANCE STATE. A MEDICO-LEGAL STUDY.

BY T. D. CROTHERS, M.D., SUPT. WALNUT LODGE, HARTFORD, CONN.*

THIS case presents exceptionally clear evidence of an alcoholic trance state, and a degree of irresponsibility that should have been recognized by both judge and jury.

Libby, aged 45, was tried for the murder of a woman named Snow, at the January, 1885, term of the Superior Court of Portland, Me., Judge Bonney presiding. The testimony showed that Libby was a hotel keeper, born near Portland, Me., brought up on a farm, and carefully and religiously trained. On his father's side consumption and eccentricity were present. One uncle was a monomaniac. His father was temperate and died at sixty-five. His mother died soon after his birth, and was a very nervous woman. In early life Libby suffered from fainting fits, and did not work much, was easily affected by the heat, and was considered nervous and weak. He entered the army when twenty-two, and was

*I am indebted to Hon. A. T. Moulton of Portland, Me., counsel of the prisoner, for the testimony and history of this case. It is a pleasure to add that he fully recognized its character, and made every possible endeavor to place the facts fully before the judge and jury.

detailed as a clerk for a long time ; finally he went to his regiment, and was taken prisoner, and confined in Salisbury prison. He was liberated after six months' confinement, very much shattered in both body and mind, and for nearly two years after was unable to work or do anything.

Soon after entering the army he began to use spirits regularly, and has drank more or less up to the present time. For the past six years he has used spirits excessively. It appeared that these fainting fits of early life continued up to the time of enlistment in the army, at greater or less intervals. From his statement they were preceded by dizzy sensations and blanks of consciousness, during which he would fall and remain like a dead person. During his army life these fits continued, particularly after being released from the rebel prison. From that time on they came on apparently the result of severe drinking, and were marked by strangeness of manner and conduct, and yet an apparent full consciousness of himself and surroundings, but really a perfect blank of memory. He would start to visit some place or perform a certain work, and do it in a wild, impulsive manner, and later have no recollection after a certain point where he had been or what he had done. As he was a man of very quiet habits, boisterous, impulsive conduct attracted great attention from those who knew him. He did not have the appearance of an intoxicated man, although he used spirits constantly, yet he was not stupid or helplessly drunk, and seemed always conscious of his surroundings.

His wife, a very intelligent woman, described these blanks as periods of great nervousness and crazy agitations, which seemed to come from alcohol. One distinct blank and stupor appeared from the history during the period from convalescence after his sufferings in the rebel prison. In this case he fell on the sands of a bay near the ocean when the tide was going out, and was awakened hours after by the incoming tide. All other blanks were marked by great agitation and strange, unusual conduct, that finally ended in sleep and recovery, leaving distinct periods of time in which mem-

ory made no registration of passing events. These events increased, and the blank intervals lengthened, coming on suddenly when away from home, and seemed to follow excessive drinking or a temporary absence from it. They were known to his friends and wife, and regarded as crazy spells due to spirits.

Many events and circumstances occurring at these times showed clearly that his claim of no recollection was literally true. When sober he was absent minded, could not recall late events, and was recognized as breaking down. One night he seized his wife in a very threatening manner, and could not believe he had done it, it was so foreign to his thoughts. During the past summer he had drank regularly over half a pint of whisky a day, attended to his business, and was not thought to be different or changed in manner or conduct, excepting when suffering from these blanks of memory, and even then he seemed fully conscious of the surroundings. A week before the tragedy he made a great effort to stop the use of spirits, so that he could be admitted to membership with the Knights of Pythias. Severe gastric irritation followed, and he vomited nearly everything he drank; much trembling and nervous prostration was present. He was sleepless for two nights before the murder, drinking from time to time during the day, and frequently vomiting.

On the day of the murder, September 5th, he went to Portland to transact some business and remain through the evening, attending the lodge meeting of the Knights of Pythias. His unsteady hand and walk, and haggard appearance was noticed before starting. He drank before leaving home and vomited as before. At one P. M. he reached Portland, transacted some business at the bank, where nothing unusual was noticed by the clerk. He went to a barber's, was shaved and shampooed, complained of feeling badly, had no appearance of drinking, was advised to take some spirits, which he did only to vomit it soon after. He then went to the stable where his horse was placed, and from that time all was blank.

His next recollection was being in a room in company

with men who had elaborate regalias. One, an acquaintance, said to him, "that he never saw him this way before ;" nothing more was remembered except that he went out or was put out. He next recovered his senses in jail the following day, and all the interval had been a perfect blank, he could not tell why he was confined or what had happened.

It was ascertained that after the approach of the blank at the stable, he spent some time looking over and talking about trading carriages; arranged to come in next week, and did not in any way seem drunk or unusual in conduct. From there he went to a hotel and took dinner; then went to a barber shop and had his head shampooed again, saying "he thought his head would burst;" talked incoherently, repeating the same question a number of times. His nervous, excitable manner attracted attention. The barber's wife saw him passing a half an hour later swinging his arms and talking loudly to himself. He went to a dry-goods store, paid a bill, according to a previous agreement, exciting no attention. Next he was seen at an oyster-house, where he talked of taking a degree at the lodge, and seemed excited. Another barber testified that he shampooed his head about this time; that he looked wild, and started from the chair whenever spoken to.

He was next seen in a music store looking at some band instruments, playing part of a tune; then he was at a blacksmith shop, acting strange, talking of going home, and not knowing how to get there. He was thought to be drunk, but as he had no smell of spirits about him, it was thought he was suffering from the heat. At another oyster-house, where he called for oysters, and did not eat them, he was thought to be out of his head. Somewhere about this time he met the woman whom he afterwards shot. She was a bad character, who had formerly worked at his hotel. At about seven in the evening he appeared at the stable and called for his horse, and seemed in no way unusual. This woman was with him. He drove out to the place where the lodge met, leaving his horse and the woman at a house near by, and appeared at the Pythian Hall. This was a strange act, for he was well

known at this place, and his association with this woman would be noticed and excite comment. His appearance was strange and unusual, and although he was not thought drunk, yet he was deemed unfit to be taken into the lodge. He urged that he was well and wanted them to feel of his pulse, but did not seem to be angry when advised to go away and come again when stronger. He then drove back to Portland, put up his horse at the same stable, and with this woman took a room at the City Hotel. The clerk at the hotel thought his appearance was strange and odd. Voices were heard in the room during the night. Libby called for spirits, and as the bar was closed he was given a glass of water, and seemed quiet and not unusual in any way. At about eight the next morning the clerk went to the room to answer a bell call; found Libby in bed staring up to ceiling, with revolver in his hand. The woman was dressed, and asked the clerk if he could not take away that pistol, as Libby would do some mischief with it. Libby pointed the pistol at the clerk, muttering something. The clerk jumped back, telling the woman she "had better get away from that." The clerk went away, and a few moments later three shots were heard in rapid succession, and a scream, then a fourth shot. The police were called. The room door was locked; the woman was found dead, and had evidently been killed in trying to get out of the room. Libby was lying on the side of the bed, apparently dead. A ball had penetrated his skull, behind the ear, and is still lodged there. He had shot the woman, then tried to kill himself; but the ball had glanced, and, although still in the skull or brain, seems not in any way to disturb his mind or general health.

In the afternoon of the day of the murder he became rational, and thought he had been hurt from a fall, and for a long time could not be made to believe that he had committed a crime. No possible motive could be found to commit the murder, and his claim of no memory of the event or circumstances other than narrated was confirmed by many events. The defense was insanity and irresponsibility from alcoholic trance. It was shown:

1. That Libby was a man of good character, and of quiet, peaceable disposition.
2. That the homicide was entirely without motive.
3. That for eighteen hours before the tragedy he was an insane automaton, going about without consciousness or memory of surroundings or events.
4. That for six years past he had drunk to great excess, and at this time was in a maniacal state bordering on delirium tremens.
5. That the history of these fainting spells, and latterly blanks of memory, pointed to an epileptic tendency or predisposition, in addition to the trance state.

Dr. Gordon, as an expert for the defense, asserted that the alcoholic trance state was recognized by the highest authorities; and Dr. Harlan, late superintendent of the insane asylum, corroborated this view, and gave it as his opinion that it was a condition of epilepsy, and both agreed upon the total irresponsibility and insanity of the victim of this condition. The judge charged the jury in both the letter and spirit of the old English law, reiterating the legal fiction, that drunkenness is no excuse for crime, and does not relieve a man from criminal responsibility; also that absolutely false statement, that capacity to distinguish between right and wrong is the test of his sanity and responsibility. The jury found a verdict of murder in the second degree, and he was sentenced to prison for life.

A review of the testimony indicates that the following facts were well established:

1. That Libby inherited a nervous diathesis and some congenital brain defect, apparent in early fainting fits and inability to bear heat or much work.
2. That the hardship and suffering of prison life, together with the free use of alcohol, still further increased the original defect, developing into inebriety and brain exhaustion, for which alcohol was both the cause and means of relief.

3. From the time of discharge from the army the continuous use of alcohol and the blanks of memory were unmistakable signs of brain degeneration, and of course increasing irresponsibility, liable any time to merge into varied forms of mania.

4. This was verified by the changes in manner and conduct, and the more distinct character of the memory blanks, following excesses of alcohol, pointing to alcoholic trance conditions.

5. The circumstances preceding the crime, its motiveless character and suicidal efforts, were the acts of an irresponsible, unconscious automaton, suffering from alcoholic trance.

6. Lucid intervals and rational, consistent acts, both before and during these states of unconsciousness, did not change the fact of disease, but was additional confirmation of profound brain disturbance, more dangerous because masked and not readily seen.

7. To assume that drunkenness in this case was voluntary, and the crime which apparently grew out of it was a consequence for which the prisoner was responsible, and could have prevented, is to practically deny all teachings of science and conclusions of modern investigation.

8. In this case alcoholic trance was clearly the result of the toxic use of spirits, growing out of brain and nerve defects, beginning before the suffering in prison, and by this event developed into activity.

9. In this state, a paralysis of some brain centers was present, and an unconsciousness of the nature and character of his acts existed. He was literally insane, and without any motive or plan of action, likely any moment to become homicidal or suicidal—a waif drifted with every wind of influence or internal impulse.

10. It was clear that the acts and general conduct of this man was not that of a sane man; that at times his higher brain centers were incapable of realizing or directing the events of his life; that the crime was committed in one of

these periods. Hence, the act was unavoidable, and he was not a subject for punishment.

11. The object of the law, to reform the offender and deter others from a like commission of crime, has utterly failed in this case; and a sick, diseased man has been consigned to a living tomb, hopeless, a burden to the world, and another victim of the ignorance of the age.

12. A clearer knowledge of justice and right would have acquitted Libby, and consigned him to an asylum under active treatment, where in the course of time he should be restored, and live to repair much of the injury he has inflicted on his family and the world.

The *Electrical Engineer* is a journal which brings monthly a record of the new discoveries concerning the nature and power of electricity. Its value to all who would keep up with the times is indispensable.

The *Phrenological Journal* grows in interest yearly, and from its pages many very suggestive facts throw new light on inebriety and its problems.

The *Homiletic Review* for May, June, and July, are most excellent numbers, containing the best theological thought of the day. The papers and essays in this journal exhibit a breadth and originality that is very pleasing, and of interest to scholars everywhere. The enterprising firm of Funk & Wagnals publish it, at 10 Day street, New York city. Three dollars a year.

Laws of Life is published at Danville, N. Y. It is edited by the physicians of one of the most complete health hospitals in this country. It is a popular health journal, well edited, and very suggestive.

THE PRACTICAL TREATMENT OF DIPSOMANIA.

BY STEPHEN S. ALFORD, F. R. C. S.*

To prevent relapses, a life-long abstinence from alcohol is absolutely necessary. In America it is estimated that one-third of the inebriates under judicious treatment recover, a third are restored for a time, and the remaining third are unaffected by treatment. My experience convinces me that if the care and treatment of inebriates were more generally recognized, and effectual opportunities existed for their treatment in the early stages, a much larger proportion might be recovered. As it is, the percentage of recoveries will bear comparison with those from other diseases. In this country for instance, it is estimated that only ten per cent. of those under treatment for insanity are restored to health. Recognizing the fact that cravings for alcohol will arise from time to time, it is important to remove every opportunity of temptation; therefore, no inmate of an inebriate asylum should be allowed to possess money or any valuables, without the express permission of the superintendent. As soon as they are able the patients should join in systematic occupations and amusements, for which purpose every inebriate home should have work-shops and opportunities for games and sports, and these, as far as possible, should be systematically arranged. Much of the benefit of hydropathic establishments depends on the systematic bathings and exercises. Before considering the practical treatment of dipsomania, I will make a few remarks upon its predisposing and exciting causes, since no disease can be intelligently treated unless these are ascertained.

True, dipsomania is undoubtedly a disordered condition

* The author of this was killed by a railroad accident, and this was the last paper that he wrote on this subject.

of the nervous system, manifesting itself at first by functional derangements. Dipsomania must not be confused with mere drunkenness, for it soon becomes irresistible and beyond the control of the ordinary will, often quite unconnected with temptation, and arising from a special individual condition whereas drunkenness depends to some extent on accidental outside allurements. Dipsomania may be hereditary, or the result of an inherited nervous temperament, and transmitted like other family diseases. It is allied to such nervous complaints as insanity, hay-fever, or sick-headache ; and like them is periodic in its attacks, and often accompanied by hallucinations, delusions, sleeplessness, tremors, and nervous exhaustion.

Civilization tends to produce this condition by causing nerve-power to be prematurely used up. Among savage and half-civilized communities, though excessive drinking is often prevalent, the disease of inebriety has scarcely been manifested.

The exciting causes may be purely accidental ; as from brain exhaustion following loss of property or bereavement, or from physical injury, as in the case of sunstroke, or railway accident. The attack may be suddenly induced by certain climatic conditions, such as sea air, east wind, dryness of the atmosphere, extremes of heat or cold, or in fact by anything disturbing the harmony of the organization, and thus arousing a hitherto dormant hereditary tendency. It may also be inadvertently lapsed into by a frequent resort to alcohol to sustain exhausted energy, and restore used-up nerve-power. All diseases, whether of a local or constitutional character, which affect the system by perverting or lowering healthy nerve-power, are liable to re-act in inebriety. The effort to relieve exhaustion, and remove a miserable desponding condition, leads to a craving for alcohol which at the time cannot be restrained.

The successful treatment of dipsomania depends on a clear estimation of all circumstances and conditions connected with the case ; as family antecedents, temperament, and

personal history. Hereditary inebriety is difficult to control. The paroxysmal craving is never completely lost, and can only be kept under by constant watchfulness, and rigid abstinence from all alcoholic drinks.

Voluntary efforts on the part of the individual is necessary for the successful treatment of this class of inebriates, and they are generally anxious to conquer their inherited infatuation for alcohol, and will readily co-operate in any plan likely to ensure their emancipation.

Those who unwittingly lapse into inebriety, and whose susceptible nervous temperament has an intolerance of alcoholic drinks, if they really wish to conquer this habit can easily be treated successfully; especially if taken in an early stage. This class is not, however, so eager for recovery as the class in which inebriety is hereditary, since the nerve exhaustion is greater, and the will power is held in abeyance, as if paralyzed.

But even these, when, after a few weeks of kind and judicious treatment, the immediate effect of the alcohol has passed off, gratefully consent to assist the efforts made to restore them, and willingly submit to all necessary restrictions. It is for this class particularly that compulsory powers are required to place them under control from the first, for while still suffering from the miseries of alcoholic depression they are unwilling to abandon its use.

When inebriety arises from external causes, such as accidents, sunstroke, shocks, etc., the maniacal condition is most marked. Patients thus attacked are incapable of acting and judging for themselves, and need early restraint, not only for their own safety, but also that of those associated with them. This unfortunate class of inebriates, as well as those whose disposition when under the influence of alcohol is naturally fierce, are not responsible for their actions; their natural uncontrollable ferocity making them dangerous to themselves and others. Much of the quarreling and violence in this country arises from persons highly susceptible and easily made incapable by alcohol, and really in an irresponsi-

ble state. Instead of punishing such for so-called crimes, a paternal government should take care of them, and protect the community from the disastrous effects of their wild actions.

Those who have become inebriates from companionship and the habits of society, are allied to the mere drunkard, and are seldom willing to stop their drunken career unless compelled; disease, the result of their intemperance, may arrest their course, but often too late to restore what might have been a useful life. In all cases there must be the power of restraining the inebriate from alcohol, otherwise all efforts are futile.

The want of this power has balked medical men in their efforts to treat inebriates; the infatuation is so intense, and the cunning efforts to obtain alcohol so persistent, that, without positive power of control, it is impossible to keep them from it. Hence, to secure success, individual liberty of action must, for the time, be sacrificed.

The imperfect "Habitual Drunkards Act," of 1879, permits this power to be exercised, provided the inebriate consents voluntarily before two justices to submit himself to be placed under control in a licensed house, subject to government inspection. Most hereditary inebriates will do this, as will also some from all classes of inebriates; but many are left uncared for and allowed to ruin their families and destroy themselves.

These, in their mad paroxysms, commit, unconsciously, all kinds of so-called crimes, including murder; and, if in this country, they are liable to suffer capital punishment.

What is needed is to obtain sufficient legislative power to commit all such incapable dipsomaniacs to a well-managed home. As soon as an inebriate is received into such a home, and until the alcoholic effects have passed off, he should be kept in bed under medical treatment. All alcoholic drinks should be at once withheld. No harm will result from this total and sudden suspension of stimulants, not even in delirium tremens. The letting-down system, by gradually discon-

tinuing alcohol, is unwise, as it feeds the craving and hinders recovery.

The morbid craving will soon abate; but to relieve the intolerable sinking and nervous prostration, acidulated drinks, barley water, buttermilk, and such like diluents, should be freely given for a few days; even if sickness occurs, these drinks should be persevered with, for the sickness will tend to cleanse the stomach. These drinks also act freely on the skin and kidneys, and thus have a beneficial effect on the secretions. Russian vapor-baths, if they can be obtained, will promote this, and tend to soothe and allay the distressing restlessness, and to divert and occupy the attention. After a few days a little light, solid food can be given, such as toast with beef tea, or some farinaceous preparation; but butchers' meat should be for a time avoided. It would, perhaps, be better for confirmed inebriates only to take butchers' meat moderately, since it taxes the stomach and creates a sinking feeling. Liebig considers that vegetarians, from chemical and physiological causes, would necessarily dislike and avoid alcohol.

During the early stage of treatment, if accompanied by wakefulness and delusions, bromide of potassium in large doses, with capsicum, frequently repeated, has a beneficial effect. The bromide soothes the agitated nervous system, and the capsicum allays the gastric craving. The ordinary anodynes, especially chloral hydrate, should be avoided.

As soon as the alcoholic contamination has passed off, which it will require fully three or four weeks to effect, exercise and light occupation will be beneficial. At this stage general moral treatment must be brought to bear. Harshness will cause sullenness and obstinacy; kindness and sympathy must therefore be shown, and an effort made to arouse the better feelings, create a desire for recovery, and inspire a confidence that they can be restored if they will exert themselves and second the efforts made on their behalf. The better part of the man being thus aroused, the alcoholic contamination eradicated, and the nervous system rallied, the

influence of restored inmates, with whom they should now be allowed to associate, will be useful in helping to confirm a determination to throw off the old habits. By degrees full liberty can be allowed the patients to go about as they like, at first only in company with a tried inmate, but on parole as regards alcoholic drinks. The habit of self-denial under temptation is thus practiced and becomes confirmed, and so valuable lives may be restored to their families and to society. Such I believe to be the most successful plan for the treatment of the inebriate.

To carry this out it is absolutely necessary to have sufficient power of restraint during a paroxysm, as well as from the first, to put the inebriate under control, voluntarily or otherwise. No one will be more thankful afterwards for this suspension of his mad career. During convalescence, red cinchona bark strengthens and sustains nerve power; when attacks of exhaustion and sinking arise, caffeine or coca generally afford relief; various nerve tonics, as quinine, arsenic, and strychnine, may also be given with benefit. The preparations of iron are not adapted for these cases, except where there is anæmia.

It is important that the treatment of inebriety should be commenced before the habit becomes too confirmed and the physical and moral natures thoroughly contaminated. If compulsory powers of control existed, it would lead many, voluntarily, to place themselves under restraint. These, knowing their inability to overcome their habit of inebriety, and that sooner or later they must submit to restraint, would adopt the more private plan of voluntary submission, rather than run the risk of public exposure, particularly when they knew that at the most the restraint could not exist for more than twelve months. In America, ninety-four per cent. of the inmates of inebriate homes have thus voluntarily given up their liberty. No doubt in many cases the knowledge of the compulsory powers possessed by the State has led to this. But even in this country many have voluntarily submitted to control, recognizing their inability to manage themselves;

well-managed homes find no difficulty in obtaining inmates, although they often have no legal power of detention.

Yet thousands, not having the means to pay high terms, are left uncared for. Many clergymen and other professional men have applied to me for the opportunity of being admitted into a licensed inebriate home at a moderate charge. There is still a lower class, the source of most of the misery we find amongst us, who fill our work-houses, prisons, and to recover whom such persevering efforts are being made by temperance advocates. Are they to be left to destroy our country, and spread around them misery and distress, which a kind, firm control might prevent? What is needed is to disprove by a practical demonstration the erroneous opinion held by many that inebriety is not a disease amenable to treatment. For this purpose efforts are being made to establish in this country a model inebriate home, at a moderate charge to the inmates, so that while restoring many of the neglected class the public may be convinced that inebriety *is* a diseased condition, from which recovery can be obtained under proper management.

The *Quarterly Journal of Science*, declares that inebriety belongs to the class of fermentative or zymotic diseases. It comes from alcohol, which acts on the blood, poisoning it and arresting the nutrition of the nervous system. From this it attacks all the higher faculties, etc. In this way the craving for alcohol is produced. It is always a physical malady in its inception. Later, by continuous indulgence, it takes a settled chronic form, leading to the various stages of *mania a potu*, dipsomania, epilepsy, and other forms of mental and physical depravity.

THE TREATMENT OF OPIUM ADDICTION.*

BY DR. J. B. MATTISON, BROOKLYN, N. Y.

Regarding the insomnia, Levinstein says:—"Sleeplessness, which is generally protracted up into the fourth week, is very distressing." For reasons before given, his assertion is not surprising. Our record differs. Wakefulness is an invariable sequel and requires soporifics for a time, but is not so prolonged and does not resist treatment. We have known a patient able to dispense with hypnotics in five days; others in eight, and nearly all within a fortnight. Sometimes, they are longer required. Two patients, both physicians, during the last year, did not regain their natural sleep for three or four weeks, but this is quite exceptional.

This insomnia is of two kinds. Most patients, after the acute stage has been passed, soon secure sleep on retiring, but waken early—two or three o'clock—and fail to get more. Others remain awake nearly all night before slumber comes, and these are the ones who usually use soporifics the longer.

For relief of this, cannabis indica or chloral with bromide, in full doses serve our purpose. If, as rarely happens, the wakeful state is so pronounced or prolonged, despite treatment, as to distress the patient, we never hesitate to give a full opiate, *sub rosa*, and always with good result. In all cases, drugs should be dropped soon as possible, and sleep secured by a fatiguing walk, or other exercise, an electric seance, a Turkish or half hours' warm bath with cold douche or shower, a light meal or a glass or two of hot milk, one or more of these, before retiring.

Patients whose slumbers end early, often note a peculiar

* Read before the American Association for the Cure of Inebriates, Oct. 22, 1884. Continued from p. 84, April Number.

depression on waking, and when such is the case, a lunch — milk, coffee, coca, or Murdoch's liquid food — should be at their command.

It may be well, in passing, to refer to certain minor sequelae and their treatment. Occasionally a patient complains of dyspnoea, or palpitation. We have never noted them but twice, both ladies. A stimulant, coca with capsicum, or Hoffman's anodyne with aromat. spts. ammonia, will promptly control.

Some patients are, at times, annoyed by aching pains in the gastrocnemii, that may recur during several days. Fluid Extract Gelsemium, in full doses, strong galvanic or faradic currents, massage, local hot baths, and topical use of chloroform or ether, will relieve.

Others mention a peculiar burning in the soles of the feet which mustardized pediluvia and full doses of quinine usually control.

Sometimes, a dry, hacking, paroxysmal cough, more marked at night, may discomfort a patient for a time. It can be relieved by nitrate of silver spray, ten to twenty grains to the ounce; a bromide of sodium gargle, sixty grains to the ounce, or a small blister to the sternum.

Returning sexual activity, as shown by nocturnal emissions and erections, as a rule, requires no attention. We once noted, however, a case where the awakened virile vigor was so marked that repressive measures were demanded.

The periodical function of females, which is usually irregular or suspended, has, so far as we have observed, required no special after treatment.

Along with what has been suggested, should be such other general hygienic measures as will add to the good secured. Patients *must* be given attractive surroundings, cheerful society, diverting occupation and amusement, and freedom from care or worry of body and mind, in fact, anything, everything, that will aid in the effort to secure a return to pristine health and vigor. That the management of these cases *subsequent* to the need of *active* professional care, is of great importance, enlarged experience increasingly convinces.

Neurotic or other disorders noted prior to addiction, whether genetic or not, must be relieved or removed. So too, those that may first appear after the opiate disusing; and when none of these are met, when there is merely a lessened power of brain and brawn, ample time, months or years, if need be, must be taken in which to get thoroughly well, if the chance of a relapse would be brought to a minimum.

It is not to be supposed that a system shattered by opiate excess will regain its normal status, within a week or a month, nor that a premature return to mental or physical labor will not imperil the prospect of permanent cure. The importance of this must be insisted upon. To medical men, who compose, so largely, the better class of habitues, it is especially commended. Professional work must not be resumed too soon. The frequency of a narcotic return is in reverse relation to the length of the opiate abstinence, and, as favoring this abstinence, prolonged rest, change of scene, foreign travel, sea voyages, all have much promise of good.

The absence of reference to certain remedies which have been mentioned by some as specially useful in the treatment of this neurosis may be briefly noted. Belladonna has been supposed to have a special value. We once used it to the extent of dry mouth and disturbed vision during the opiate withdrawal, but have quite abandoned it for the simple reason that we found, on trial, patients did fully as well without it, and the freedom from its peculiar effect certainly added to their comfort. Whatever its antagonistic influence in acute opium taking, we do not believe it possesses any such virtue in the chronic form.

Quinine in large doses, from the outset, or grains two to four, increasing with the opiate reduction, has been thought to have special value. We have failed to note it, though as a tonic it is well adapted to all cases, and, in some patients, twenty-grain doses as an anodyne or soporific, act well.

Strychnine is another valued tonic, especially in a very gradual opiate decrease, or at weekly or fortnightly reductions. It has no other claim.

Hydrocyanic acid, dilute, aconite and veratrum viride have been suggested. Why, we fail to understand.

Jamaica dogwood has been commended as an opiate substitute, and Morse lauds it extravagantly. He, however, is an enthusiast, and as such, goes quite too far.

Regarding its use, he says:—"Coca cures the 'opium habit.' Jamaica dogwood does more than this, it is prophylactic of this disorder. By its use the baneful habit is forbidden the system." This, we think, is nonsense, and have no hesitation in declaring our belief that it is a most mistaken opinion.

And again—"As an hypnotic, opium is not of greater worth;" and "As an anodyne, opium is its only peer." Our experience is entirely contrary to any such assertions. We have made frequent trials of it. The results were uneven. In a few cases, the minority, as an anodyne, it seemed efficient. As a hypnotic, it always failed. Morse puts the dose at "Fld. Ext., dose min. v.—xv." Our ill result, certainly, was not due to the limited quantity, for we usually gave it in *two-drachm* doses. More recent trials have proved utter failures. One, as an anodyne, in neuralgia: four one-drachm doses, half-hour interval, no relief whatever. Another, as a soporific: six one-drachm doses, same interval; no sleep. It is a nauseous drug, and the aversion to continuing it may sometimes account for its failure. Our patients, too, may be peculiar, but, be that as it may, we have little faith in its value, and now seldom employ it.

Avena sativa has been largely lauded. We have given it again and again, in doses large and small, in water hot and cold, at intervals short and long, and always found it *worthless, absolutely good for nothing*. Bottle after bottle has been left with us by those who made trial of it in vain, and their experience accords with many who have written us, some of whom have taken the drug in *ounce* doses several times daily, and used *pounds* of it in the trial, without good! Let no one be beguiled into the belief that oats fills the "long felt want." Correspondence has furnished material for a paper which will, we think, quite disprove its vaunted virtue.

Hyoscyama is a powerful drug, and in some cases, may be of service. We once used it, but the need for it now seldom arises. Its employment should be limited to patients in good general condition, in whom the opiate disusing is attended with unusual insomnia and motor activity. In such instances its good effect is sometimes surprising, bringing quiet and sleep with a promptness and power almost startling. We use Merck's Amorphous: dose 1-12 to 1-6 of a grain hypodermically. This, in these patients may be deemed the usual dose. With some, however, this causes a mild delirium without sleep, and in such cases, the dose must be increased. Regarding its safety, Dr. John C. Shaw, Superintendent of the King's County Insane Asylum, has assured us that it is largely given in that institution with as little fear of ill effects as would attend the use of morphia.

The new alkaloid of Indian Hemp, Tannate of Cannabin, commended by German authority, proved an entire failure in our hands. In ordinary insomnia, however, it may act well.

The latest claimant for professional favor, as a soporific, is paraldehyde. Dujardin Beaumetz lauds it, and claims special value in these cases. Our experience does not warrant such a statement. In full doses, 4 to 8 grammes, 60 to 120 minims, it sometimes brings sleep. Unlike chloral, in the early nights of the opium abstinence, it does not excite. In most cases both are inferior to Indian Hemp. It is best given in one-half to one ounce of syrup, flavored with peppermint, ginger, or vanilla, and then added to a wine-glass full or two of ice-water, or in capsule.

Non-mention of alcoholic stimulants has, perhaps, been noted. We rarely use them. The reason is varied. They are seldom called for. Very exceptionally champagne, milk punch, or ale may be indicated, but our rule is, *never to use any form unless imperatively demanded*; and the advice of Levinstein that "those who have an intense craving for alcoholic beverages may be allowed to drink wine in unlimited quantities," is, we think, *positively pernicious*. As Bartholow

says: "When the nervous system is losing the loved morphia impression it will take kindly to alcohol," and he adds, "I especially warn the practitioner against a procedure which the patient will be inclined to adopt; that is, to take sufficient alcohol to cause a distinct impression on the nervous system in place of the morphia. This must result disastrously, for when the alcohol influence expires there will occur such a condition of depression that more alcohol will be necessary."

With these opinions we are quite in accord. The fact must not be forgotten that some habitues have used alcohol with morphia, others have taken morphia after addiction to the former; and, in general, habituation to any stimulant or narcotic begets a liability to take to another in case the original one is abandoned. As a factor in relapse alcohol taking ranks to a re-use of opium. The risk then is obvious, and let the physician beware lest, in the effort to aid his patient in escaping one peril, he but involves him in another yet greater.

Some details of treatment apart from the strictly remedial, may be of interest. Our rule in making the opiate decrease is not to inform the patient as to its progress, nor the actual time when it is ended. Better tell him when days have elapsed since the last dose, and then the assurance that so long a time has gone by since his enemy was routed will, of itself, be an aid in finishing the good work. The incredulous surprise with which this knowledge is received by some patients who have made frequent but futile efforts to escape, is quite notable.

As regards the manner of taking, a radical change is made. If hypodermically, the syringe is at once discarded and a sufficient amount of morphia or opium, *per os*, given. In many cases resort to the morphia or opium can be made at once. If so, it should be done. If not, their use giving rise to nausea, vomiting, or headache, as exceptionally they may, the usual method can be resumed for two or three days, and then the bromide influence having been secured in part, the syringe may be put aside and the opiate used without unpleasant effect.

A German writer sometime ago asserted that many patients taking more than four grains, 25 to 30 grammes hypodermically, daily, will get along fairly well with the same amount of morphia by the mouth. We have not always found this to be the case. On the other hand, three times the subcutaneous supply, as advised by Bartholow, is more than enough. An increase of one-half or double the amount will usually suffice.

Patients may demur to the change, but it should be insisted on, for experience has proven many points in its favor. In the first place we believe there is, with some, a certain fascination about the syringe, which once ended, makes an advance towards success in treatment. Many patients come to think that the injections are absolutely essential, and to convince them to the contrary, as the change in taking will, inspires a feeling of gladsome relief and larger confidence in a happy result.

Again, the *staying* power, so to speak, of morphia or opium per mouth is much greater than by subcutaneous taking; of this there is no question. Morphia, hypodermically, is more quickly followed by the peculiar effect of the drug, which, too, is more decided, but earlier subsides—a higher acme, reached sooner, to decline more rapidly—whereas, by the mouth or in the form of opium, the rousing effect is more slowly developed, but it is on an even plane, and more persistent. Patients accustomed to four to eight injections daily will do well on two to three doses by mouth. One medical gentleman now under treatment, who had been taking six injections daily, is doing perfectly well on one dose of opium by the mouth, night and morning.

As a rule, too, the change in taking brings about a marked improvement in the patient's condition. We have known them, after using the new method a few days, to declare that they felt better than for years. In many ways, notably increased appetite and improved alvine action, is the change for good.

Still more those who quit the syringe, and take morphia

or opium usually cross the rubicon of their opiate disusing with withdrawal symptoms so largely lessened as to make this result, alone, ample reason for the course we commend.

During the decrease patients are permitted, if desired, to continue their frequency of taking. As a rule, however, by reason of the greater sustaining power of morphia or opium by the mouth, it is not required.

The only restriction imposed is that a certain amount shall suffice for twenty-four hours' supply, and this is daily decreased according to individual need, at such rate as will least likely conflict with their comfort. Patients, moreover, are always instructed that if the amount allowed does not suffice they are to apply for and will be given more. Such being the case no proper motive exists for secret taking, and if despite this liberal proviso, it is indulged in, professional relations are suspended.

This being our plan, it will be inferred — and rightly — that we do not subject patients to such surveillance as compels their taking a bath, during which search is made for contraband morphia. Nor do we have an attendant "dogging" their steps during the decreasing regime. No patient with proper self-respect would submit to such treatment without resenting it; and it is not likely to strengthen the confidence that should always exist between patient and physician, and which, with us, is asked for and given. Very seldom is it violated. Patients come to us for relief: they are willing to aid in the effort to secure it — those who are not we decline to accept — and the result is, success.

It is sometimes asserted that all opium habitues are liars, and that on presenting themselves for treatment they are always equipped with a syringe and supply. Such a sweeping assertion we do not believe — *we know it is not true.* Why, then, should we humiliate them after such a fashion — degrade them by imposing such detective surroundings? Others may; we will not, and as yet we have no reason to doubt the reason of our course.

Clandestine taking, either before or after withdrawal, can

always be detected. The absence of certain invariable sequelæ of an honest quitting is positive proof of deception ; while the presence of morphia in the urine after the time when it should disappear, along with other symptoms, furnish added evidence beyond dispute.

It will again be inferred, and also aright, that we do not practice any such plan as Levinstein advises when he says : "As soon as the patient has consented to give up his personal liberty and the treatment is about to commence, he is to be shown into the room set apart for him for the period of eight to fourteen days, all opportunities for attempting suicide having been removed from them. Doors and windows must not move on hinges, but on pivots ; must have neither handles, nor bolts, nor keys, being so constructed that the patients can neither open nor shut them. Hooks for looking-glasses, for clothes and curtains, must be removed. The bed-room for the sake of control, is to have only the most necessary furniture ; a bed devoid of protruding bed-posts, a couch, an open wash-stand, a table furnished with alcoholic stimulants — champagne, port wine, brandy — ice in small pieces, and a tea urn with the necessary implements. In the room which is to serve as a residence for the medical attendant for the first three days, the following drugs are to be kept under lock and key : a solution of morphia of two per cent. chloroform, ether, ammonia, liquid ammonia, mustard, an ice bag, and an electric induction apparatus. A bath-room may adjoin these two apartments. During the first four or five days of the abstinence the patient must be constantly watched by two female nurses."

Now, what means this vigorous regime? First, that the lack of efficient medical measures essentiates physical force. Second, that the method employed entails such distress of mind and body as to risk a suicidal ending ; and that a great calamity always impends — collapse, that threatens life and demands that the doctor be closely at hand to avert the threatened danger.

In strong contrast with what has been quoted, during our

opiate withdrawal patients are not only permitted but encouraged to go out and about, attend entertainments, and engage in social domestic pleasures; and this is continued throughout the treatment, save a transient suspension following the first twenty-four hours of opium abstinence. After the first day of opiate disusing patients are, for a time, under careful attention, and, if required, an attendant is with them, but the need for services of this sort is, usually, quite limited, and in some instances entirely dispensed with. Again and again have patients presented, who fully expected the rigorous regime imposed by Levinstein, but who were happily surprised to find it was not demanded, and who were fully convinced, before their treatment ended, that it was not at all essential.

As between this method and the barbarous plan of those who counsel and compel heroic withdrawal, "comparison is odious." In this day of advanced therapeutics, the writer holds radical opinions as to the *utter inexcusability*, the *positive malpractice* of subjecting patients of this class to that torture of mind and body the German method entails. It is wrong, grievously wrong; it is more, it is *cruel* to demand that they shall run the gauntlet of such suffering.

In various papers we have expressed our view on this important part of the subject, and enlarged experience tends only to confirm them. More and more pronounced is our belief that "no physician is warranted, save under circumstances peculiar and beyond control, in subjecting his patient to the torturing ordeal of abrupt withdrawal. We are well aware that it has the sanction of men otherwise eminent in the profession, but we venture to suggest, with no lack of respect to these gentlemen, that, like a somewhat famous nautical individual, "they mean well, but they don't know." Theory is one thing, practice another; and we are quite certain, were *they* compelled to undergo the trial, there would be a rapid and radical change of opinion. We regard it as cruel, barbarous — "*utterly unworthy the healing art.*"

We care not who advocates it, but speak feelingly,

emphatically, and advisedly on this point, for the simple reason that our experience, again and again repeated, proves beyond all dispute, that the opium habitue can be brought out of his bondage without any such crucial suffering as this method of treatment entails.

Bartholow says: "Having had one experience of this kind, I shall not be again induced to repeat it, if for no other, for strictly humanitarian reasons, since the mental and physical sufferings are truly horrible."

For proof of this and more in detail, the reader is referred to papers by the writer,— "Clinical Notes on Opium Addiction," Cincinnati *Lancet and Clinic*, March 3, 1883; "Neurotic Pyrexia with Special Reference to Opium Addiction," *New England Medical Monthly*, June, 1883; "The Treatment of Opium Addiction," St. Louis *Courier of Medicine*, June, 1883; and "A Personal Narrative of Opium Addiction," *New York Medical Gazette*, July 7, 1883,—reprints of which can be had if desired.

More: many, unaware that a more humane method is at command, and dreading the ordeal of abrupt disusing, refuse to accept it, and, continuing their narcotic, bind all the more closely "the web that holds them fast as fate." During the past year a medical gentleman, nine years addicted to morphia, came under our care. Six years ago he first consulted us. During this time he had read Levinstein's book, and the dread of such suffering as that author's patients underwent was, he avowed, the reason for his delay in making an effort to quit the morphia. Finally, summoning sufficient courage, though not without much apprehension, the trial was made, and with the most gratifying success; for, greatly to his surprise and pleasure, he made a notably good recovery, with so little nervous disturbance that not a single bath was called for, and with such freedom from pain that not once was an anodyne demanded, and who was dismissed on the twenty-sixth day of his treatment.

Commenting on his case, he declared the manner of his recovery seemed almost miraculous, and asserted that, "had

he ever thought so much could be accomplished at so little cost of time and discomfort, his effort years earlier would have been made," and in a recent letter he wrote: "My own swift and easy passage of that 'one more river to cross' is an ever-recurring source of wonder and astonishment to me, and not a day passes, not a morning comes, without a keen sense of exultation at my escape from the old slavery, a blessed freedom from the old self-accusing conscience, and a return of the old instinctive habit of looking every man straight in the eyes! I think I shall never entirely get rid of a certain 'shadow of the past'; nearly nine years of mental distress, which I thought well-nigh hopeless, must leave a deep and ugly scar at my time of life; but thank God that I have *only* the scar to trouble my memory, and not the festering, corroding, ever-present ulcer which made me unspeakably wretched, and kept me in continual fear of discovery."

Reference to this is made simply to support our statement, and convince, it may be, some, hoping, yet dreading, that scientific treatment has much to promise for their relief.

Before closing, let it be noted that this, beyond question, is a vincible disease, and reassert — *vide* "Opium Addiction Among Medical Men" — that "repeated experience warrants the assertion that every case of opium addiction free from organic disease, and in which there is an earnest desire to recover — be the extent and duration what it may — admits of prompt and positive relief."

The Popular Science Monthly needs no comment to scientific men. Its table of contents for June and July indicates a field of thought that is a very large factor in shaping the destinies of civilization. Such journals are great teachers, whose influence is almost boundless. Not to read this journal is to lose a great individual power essential to success.

SOLITARY MIDNIGHT INEBRIATES.

BY JOSEPH PARRISH, M.D., BURLINGTON, N. J.

CASE I. A clergyman, aged forty-six; drinking habitually for six years; neuraesthenic melancholy, with hallucinations. This is a representative case. A gentleman in the prime of life. His profession an accepted warrant for uprightness and probity. A victim of neuraesthesia—nervous exhaustion. Worn and debilitated by pulpit and pastoral labors, he had expended more force than he could afford to spend. He sought to replenish his wasted energy in the retirement of his own study. His calling forbade the public use of intoxicants. He never entered a saloon, and if wine was offered at social gatherings he forced himself to refuse it. He was an ardent student, and in the silence of the long night hours, while his family slept, he was found in his lonely study.

There, with his bottle and his books, his wearied nerves contested with his conscience for the right to forget his cares and invite his slumbers by the free use of the bottle. At first the conflict was severe; there was no localized distress, and yet every nerve tendril seemed to throb and yearn for repose. A sort of moral mirage enveloped him, and his thoughts lost themselves in the mist. Then he emptied the bottle, and the sleep of intoxication put an end to thought.

The following day brought with it a parched mouth, a dry tongue, headache, irresolute purpose, and remorse. Is it any wonder that season of melancholy sometimes comes, to bow the spirit with forebodings of coming evil, and that countless spectres of unreal things should float in the atmosphere of such a mind?

I can scarcely conceive of a state more miserable. Secret intoxication, lasting only for a night, to be followed in the

morning by the semblance of normal life, visiting and counseling, holding meetings and conducting public worship, and all the while, behind the invisible mask, the memory of the closet debauch stinging the spirit, with no other relief than in its repetition. Carrying with him the image of the scene he cannot forget, and yet wishing the hours to hasten on, that he may cast aside the mask, and, behind the locked door, the bottle, the drink, and the narcotism, may rest him again for another day.

This is no fancy sketch. Many an eye may rest on this page that has witnessed similar struggles, and fallen into the same forgetfulness. There are many such men—men of learning, integrity, and piety. They are solitary, night inebriates, who avoid alike the glittering saloon and the giddy circles of social revelry, but who almost nightly retire to their secluded Gethsemanes, where they may commune with the profoundest needs of their nature, and know not how else to supply and satisfy them. The world does not know their frailty, much less the means they take for relief. To this class belong orators and literary men—men of genius. Such cases are apt to terminate in some form of chronic alcoholism, the evidence of which becomes apparent in local paralysis, or some similar neurotic or brain disorders. Dr. David Skae, an eminent alienist of Great Britain, and a physician in the Royal Edinburg Asylum, says that "there is a regular drunkard who keeps sober during the day and gets drunk at night, and attends to his business regularly during the day. Such men carry on for years without injury to themselves or others. I know one case, where a gentleman was carried to bed drunk every night for fifty years, and yet he made a large fortune, and was in the market every morning attending to his business. Many of them, I know, live to a great age. I have known men upwards of eighty who have been drunkards of that kind."

The craving for liquor in these cases is different from the craving in some other forms of the disease. There are no long intervals of sobriety which are suddenly interrupted by an

unexpected outbreak of a passion for drink. The craving takes the form of a habit, more like that for a night meal after a long interval of privation of food, but it is nevertheless positive in character, and regular as to time of occurrence.

That they sometimes terminate in paralysis, is illustrated by the following:—

CASE II. Age 73. Retired gentleman; has been drinking regularly for forty years. Loss of memory, partial paralysis, etc. Such is the abstract of the entry made on his coming under my care. Forty years drinking, but not often what is called drunk. Solitary night drinker. Attended to business during the day, took part in public affairs, was reported to be a man of experience and judgment, and well esteemed as a good citizen. One feature of his drinking was that his potations were not always excessive, and failing to sleep soundly, he would rise from his bed, appear on the street during the night, call at the houses of friends, and finding them closed, would return, without confusion or embarrassment, to his home, in a sort of semi-conscious, bewildered state, go to bed, and be refreshed by sleep. With the return of morning, however, he failed to recall any of the transactions of the previous night. Following this mode of life in a short time partial paralysis succeeded the loss of memory, and motorial functions being on this account interfered with, the night walks were discontinued, and exercise of any kind becoming difficult, he slowly yielded to the progress of parietic disorder, and "death from dementia" was the final verdict of his medical attendant.

Solitary or secret drinkers are found in almost every community. Some of them will never come to the surface. Perhaps the majority of them are able to conceal their disorder and it may never be known. They are generally men of mark and of work—intellectual work—men of genius often, men whose habits, aside of the use of intoxication, incline them to late hours, to study and seclusion. And we know not how many effusions of poetic genius, or how many discoveries in the realm of science or philosophy, have been evolved from amid the fumes of the bowl.

For it is certainly true, that the impression made upon the human constitution by such beverages, both hinder and quicken brain forces, so that under its influence a certain degree of brilliancy may be imparted to mental operations of some persons, while in others, the consequence of its use may be confusion and incoherency. In these secret and night-drinkers, the craving which constitutes the morbid desire does not manifest itself, as it does in persons of a different temperament and habit. It is a neurasthenia, but it is associated with the idea of privacy, secrecy, concealment. Drinking is not spoken of. It is regarded as a practice not to be made known. For such a person to visit a public saloon and drink, would be as unusual and repulsive to the moral sense, as in the case of a temperance advocate. It does however, happen, that there may be a divergence of this impulse into other lines: like a current of electricity that follows a single line to a point where the line is connected with several others, this current will separate into many, and flow in each. So a certain constitution may, up to a certain point, be direct in its leadings, and then from age, difference in condition or circumstances, exhibit other tastes and follow other pursuits, in which case the craving will be modified as to time of appearance and the character of its demands.

The Alienist and Neurologist, edited by Dr. Hughes, has taken high rank as a quarterly representing the best thought from the very front line of research in the field of mind and matter. The editorials by Dr. Hughes are really famous for the wide circulation they receive in the daily press; an unmistakable proof of their excellence.

The Scientific American, published by Munn & Co., New York, brings weekly the news from the van of scientific progress.

The American Inventor comes monthly, and we turn its pages with a fascinating interest, to see where the restless mind of man seizes the secrets of nature and turns them to do his bidding.

Abstracts and Reviews.

ALCOHOLIC ANÆSTHESIA. A MEDICO-LEGAL CASE.

Dr. Wright in the Detroit *Lancet* gives the following case and notes:

In the earlier periods of a drinking bout, thoughts may seem to flow readily, and with many pleasing changes. But very shortly, if the drinking is heavy, the state of anæsthesia supervenes. In this stage of inebriation the fixedness of the ideas may be readily perceived in the actions of the individual. He is pertinacious in demanding audience. For hours together he will reiterate some imbecile incongruity of mental associations, to all who will listen, mistaking it for wit. He will search for a particular thing or person with unflagging assiduity, during periods of time greatly in excess of the requirements of good sense or sober judgment. The leading idea in the mind is not readily changed or abandoned, because the facilities for the introduction of new conceptions are confined and injured by reason of the prevailing difficulty of producing perceptions for rational contemplation.

It is known that in a subsequent stage of intoxication the brain becomes poisoned and distressed, through the accumulation in the circulation of carbonic acid, urea, and other noxious substances. The disposition is then wholly changed. Ideas are no longer agreeable or frivolous; and the feelings cease to be generous and playful, yet the tactile anæsthesia remains, and the dormant ideas are still fixed and sluggish; and they are not readily abandoned or modified. The cephalic pain now engenders a sudden disposition; and hate, rage, and revenge color the leading thoughts and feelings. It has been said that "rage is a brief insanity."

The law recognizes the insanity of rage when it materi-

ally reduces the responsibility for acts committed in a sudden passion. But the mind, driven to fury while under the influence of alcohol, occupies a very peculiar position. It is possessed with madness, indeed, but not brief in duration. It is a madness that, from the nature of anæsthesia and of alcohol, the mind is powerless to arrange or overcome with ordinary facility, or in a reasonable time.

In illustration, I will relate the following: One H—, a young man of my acquaintance, shot and killed a person with whom he had been quarreling. Both parties had been drinking heavily for a number of hours. Had H— perpetrated the crime in the midst of dispute the law would have exonerated him, in a considerable measure, from responsibility. But it so happened that there was a lull in the quarrel before the final catastrophe. The actors had become separated. H— went out and walked around two or three squares, during which time a companion placed in his hands a revolver. Soon after he returned to the presence of his enemy, and shot him down, firing twice. There was no new controversy indulged in; and the man who was fatally hurt seemed desirous to get away.

H— was indicted for murder in the first degree. In consideration of the time consumed by him in walking the street, and away from his antagonist, it is the opinion of many that he was guilty of premeditated murder.

If it is true that the law is right, in that it would hold H— guilty of manslaughter only, if he had killed his opponent at the moment when he first left him, then it is also true that the law is wrong and unjust in holding him guilty of a greater offense for committing the crime immediately upon his return to the scene of the original trouble. The reason for the conclusion is, he came back in precisely the same state of mind as that in which he departed.

Let us explain a little more particularly the elements of this case. When H— went out upon the street, and away from his opponent, he was, without doubt, under the influence of alcoholic anæsthesia. His motives, thoughts and ideas

were, to a considerable degree, fixed and established, and without the possession of any natural and rational power of modification or change. Besides this toxic disability, the entire functions of the venous system were under the predominant control of alcohol. Every expression of the countenance was alcoholic. The movements of the eyelids, the crooking of the fingers, the changing positions of the limbs, were all alcoholic, and by no exertion of the will or of automatism could the motor functions be brought into a semblance of a normal and reasonable appearance. They were all *alcoholic*.

In a parallel way alcohol assumed, with irresistible power, the control of reason and morality. Reasoning, motives, judgments, and mental decisions were alcoholic; and by no process of the intellectual powers could they be brought into a natural exhibition of the normal and healthy state. Every nervous function, motor, rational, moral, and volitional, was inexorably alcoholic.

The time that elapsed between the separation of the two men, and the return of H—, could not have exceeded half an hour. It was probably about twenty minutes. When H— returned, his anæsthesia still prevailed. His ideas and intentions were most likely still fixed and unaltered; alcohol was still surging and raging through the capillaries of his brain; compelling all his powers mental and moral to bow to its supremacy. It is not preposterous to claim that, under such circumstances, a mind may "cool down," and its responsibilities become radically changed in a few minutes?

The exigency of expediency may possibly excuse the law as it is applied to the responsibility belonging to the drunken state; but equity never will. If common anger is a brief insanity invoking the merciful consideration of the law, I cannot perceive any just reason why the settled fury attending the advanced stage of drunkenness should not be entitled to a similar consideration.

In the latter case, the will is innocent of the inception of the madness; and the mind is also incapable, in consequence

of the toxic condition of the body, of righting the wrong state of motive and disposition. In the heat of passion, it is claimed justly, that there is no opportunity for reflection, and the calm and rational consideration of consequences. In a state of mind when passion is morbidly continuous, there is also no available point where cool reflection can be introduced, or the consequences of conduct calmly canvassed.

In true insanity from undoubted brain disease, a long and fixed hatred or rage is esteemed to be good reason for an abatement of responsibility, or an entire release from it. The belief is reasonable that functional incapacity of the brain, as from alcoholic anæsthesia, may present the same symptoms and disabilities, as structural lesions; and, as long as it remains, it should receive similar privileges and exemptions.

DIPSOMANIA.

The following extract from Dr. Clouston's late work of "Lectures on Mental Disease," noticed in this Journal, will be of great interest as the views of a leading specialist, in striking contrast with some opinions expressed in this country.

"What is meant by dipsomania is a morbid, uncontrollable craving for alcohol and other stimulants. What we really want is a good word to express the cravings for all sorts of neurine stimulants and sedatives, as well as alcohol. The confirmed opium eater, the inveterate haschish chewer, the abandoned tobacco smoker, are all in a certain category. No medical man who has been long in practice can doubt for a moment that there are persons whose cravings for these things are uncontrollable, and who have therefore a disease allied to all the other psychokinesiaæ. Particularly the morbid craving for alcohol is common, and so intense that men who labor under it will gratify it without regard to health, their wealth, their honor, their wives, their children, or their souls' salvation. Certain causes predisposed to it. They are, (1) hered-

ity to drunkenness, to insanity, or the neuroses ; (2) excessive use of alcohol, particularly in childhood and youth ; (3) highly nervous diathesis and disposition combined with weak nutritive energy ; (4) slight mental weakness congenitally, not amounting to congenital imbecility, and chiefly affecting the volitional and resistive faculties ; (5) injuries to the head, gross diseases of the brain, and sunstroke ; (6) great bodily weakness and anaemia of any kind, particularly during convalescence of exhausting diseases ; (7) the nervous disturbances of menstruation, parturition, lactation, and the climacteric period ; (8) particularly exciting or exhausting employments, bad hygienic conditions, bad air, working in unventilated shops, mines, etc. ; (9) the want of those normal and physiological brain stimuli that are demanded by almost all brains, such as amusements, social intercourse, and family life ; (10) a want of educational development of the faculty and power of self-control in childhood and youth ; (11) the occasion of the recurrences of altering insanity or the beginning of ordinary insanity, being co-incident in a few of these cases with periods of depression, but mostly with the beginning of the periods of exaltation ; (12) the brain weakness resulting from senile degeneration. More than one of these causes may, and often do, exist in the same case.

“The neurine-stimulant craving is nearly always associated with impulses or weakness of control in other directions in by far the majority of the cases, while there may be no insane delusion. Yet all the faculties and powers we call moral are gone, at all events for the time the craving is on. The patients lie ; they have no sense of self-respect or honor ; they are weak and fawning ; they cannot resist temptation in any form ; they are erotic, especially at the beginning of an attack ; they will steal ; the affection for those formerly dearest is suspended ; they have no resolution, and no rudiments of conscience in any direction. The common objection to reckoning such persons among the really insane is that, though they have brains predisposed by heredity, they have often brought this condition on themselves by not exer-

cising self-control at a period when they had power so to do, but this applies to many cases of ordinary insanity. Another is, that, when deprived of their stimuli for a short time, they are sane enough in everything except resolutions not to take them again.

The effect of the excessive use for a long period of nerve stimuli of all kinds, is to diminish the controlling power of the brain in all directions, and to lower its highest qualities and finest points. The brain tissue is always so fine, so delicate and so subtle working, its functions are so inconceivably varied and high, that under the most favorable circumstances it runs many risks of disturbances of its higher functions. But when we have a bad heredity, a bad education, and a continuous poisoning with any substance that disturbs its circulation and paralyzes its capillaries, that excites morbidly its cells, that proliferates its neuroglia, thickens its delicate membranes, that poisons its pure embedding neuroglia cerebro-spinal fluid, we cannot wonder that its functions become impaired and are not fully or readily resumed in all things. The unfortunate peculiarity is, that while we may restore the bodily and even the nervous tone so far as muscularity, sleep, and sensory functions are concerned, we have the utmost difficulty in restoring the higher functions of self-control and morals in some cases.

A dipsomania when at his worst is readily recognized to be so really insane as to be in a fit state to be placed under the control of others for proper care.

ACTION OF ALCOHOL ON THE BODY. BY ALFRED CARPENTER, M.D., M.R.C.P.

The following is a quotation from the Hunterian lecture on the place which alcoholic drinks should occupy :

Take another class. There is no possible chance of relief to those who are inclined to the lithic acid diathesis if they arrest oxidation by the use of stimulants or narcotics of any kind. Have patience with the pain, and it will cease as soon

as the oxidation in the nerve cell is complete, and the nerve cell has recovered its healthy state. Arrest that oxidation by the use of alcohol, and you add to the amount of unhealthy waste which has to be removed, and hasten the rise of degenerative disease in that particular organ, or in the nerve battery which regulates its function. Patience with pain in this class of cases, is the right doctrine to preach to our patients. Gain time, let the oxidation be perfected, and healthy nerve tissue results; or, in the case of cancer, the nerve current is cut off; in either case, the total quantity of pain is not a tithe of that which the habitual indulger in alcohol or opium will really suffer. I need not urge this line of action in the treatment of those hysterically inclined, because I hope none here present will ever support the notion that a hysterical patient ought to be treated in any way by alcohol or narcotics even if they be anemic. An empty house is better than a bad tenant. Any form of lithic acid deposit in any tissue is a bad tenant. It can only be removed by oxidation. Yet, for the purpose of temporary relief, if we use alcoholic drinks, we advise the use of remedies which only add to the amount of morbid tissue in the blood. Let us help to remove the waste matter from the system; but do not let us be inconsistent to our duty. We shall be so if we advise the use of that which may render it dormant for the time being, but which only keeps it in the system.

I will now go to another class of cases in which the brandy bottle is supposed to be absolutely necessary, namely, syncope. A violent or long continued hemorrhage has placed the patient's life in danger. The great effort of the bystanders, and too often of the medical man also, is to prevent fainting. It is sometimes the same in cases of *post partum* hemorrhage. "Oh, she is fainting, give her some wine!" is the cry; and the medical man sometimes administers the glass of strong brandy and water. If he do, he is interfering with the very process which nature has set up for the purpose of saving the patient's life. The passive tension in the smaller vessels prevents the injection of blood into the nerve

battery which regulates consciousness as well as other functions. Syncope results, and nature takes the opportunity of allowing a plugging of the bleeding vessel by stopping the *vis a fronte*. The heart is only able to carry on circulation sufficient for organic, but not functional life. If we give so-called stimulants, we dilate the capillaries so as to allow the heart to go on sending blood into the bleeding organ, and we assist to send our patient out of the world instead of allowing syncope to have its sway ; we may bring back the patient by supplying cold water so as to fill up the comparatively empty vessels, and thus allow a more satisfactory circulation to be renewed. Our duty is to fill the blood-vessels with harmless materials, such as water, which is rapidly taken up as the patient comes out of the syncope ; we ought not to arrest that faintness which is laying the first stone for the arrest of hemorrhage.

There is another class of cases closely connected with these in the lying-in-room, in which sudden syncope, with rapidity of breathing, collapse, and a cerulean aspect, brings a sudden end to the patient's life. I have always found that there has been a free administration of stimulant before this kind of syncope has developed itself. The cause of the end is recognized as thrombosis or embolism. A clot has formed in the heart, and has hampered or brought an end to its movements. These clots are generally allied to a lithic or lactic acid (a gouty or rheumatic) diathesis. Persons who have been "low" are kept up by stimulants. They lose some blood in their confinement ; the vessels are not well filled ; the blood is loaded with fatty matter, with an excess of fibrin. The two combine to form a clot, and the more alcoholic stimulant you give, the more certain will be the ultimate result. Sometimes life appears to be kept in the body by its administration. I take it that in such cases the brandy is actually acting on the clot by absorbing some of its constituent parts, and diminishing its size, so as to allow a more easy passage of blood between the clot and the sides of the vessel.

This is so in some cases of embolism of the pulmonary artery; but the cases have ultimately died, all the same, or disease has been set up which has rendered the patient a miserable invalid for the rest of her short life. I would rather give solvents for fat and fibrine instead of those remedies, which certainly add to the quantity of peccant matter in the serum of the blood; and the more empty the vessels may be, the greater the danger, because the alcohol is more quickly diffused.

I have on more than one occasion, when called into consultation, had reason to believe that the coma had been caused by excess of stimulant, and not by the disease. I have withdrawn the stimulant, and found that the coma has departed, and the previous delirium has not recurred. It requires a very studious care of all the alliances of the case by daily observation with instruments of precision, if one is not to do serious mischief by over stimulation. It is no advantage to save a patient from death by typhoid fever, and then to have him sink from after consequences which have been set up by the remedies which have been used.

There are certain conditions in which it is absolutely necessary to relieve the heart by the rapid action of a diffusible stimulant, as when the internal organs are loaded, the vessels of the skin contracted, and all but empty. The physiological action of alcohol comes rapidly into play, and thus a weak organ may be saved. This may be possible when such an one has been suddenly chilled by immersion in water or by fright. Life may be saved and strains on internal organs taken off by a good dose of brandy. But such are the dangers attendant on a good dose, that if a patient be already recovering, I would much prefer the outward application of warmth and friction to the disturbing influences of strong drink. I am asked sometimes, "Surely you do not object to the administration of wine and spirits to those who have a weak heart?" The answer is, assuredly I do, if the weak heart is due to excess of fat in its periphery. I would take off the load of hydrocarbon by a diminution of supply, and the

administration of oxidizing agent. . I would not give an agent which takes the place of the latter; while if it be due to fatty degeneration we are only hastening the end.

- We may make our patients the merrier by one daily dose, but assuredly we are making life shorter also. To whip a tired horse may enable you to catch a train; but if the action be indulged in daily, and you do not let your horse have the necessary rest to enable it to throw off its tired condition, you will find one day that your horse will not respond to the whip at all. The usual action of alcohol is to quicken the heart's beat, to cause it to make more contractions in a given time, and to shorten the time for its rest. It is in the time of rest between beats, that there is repair.

. If alcohol does quicken a weak heart it is actual poison to it, though it may for a time make the patient more comfortable by diminishing the symptoms of danger. The beats of the heart require the interval of time to be lengthened between each, if you mean to get rid of the weakness which results from fat or any kind of degeneration. To quicken its action must diminish the power of restoration which the organ might possibly possess if its beats were not slower, not quickened. Alcohol, therefore, to be beneficial in such cases must slow the pulse and not quicken it, and then it may act, as Dr. Radcliffe suggests, as a tonic. I have very seldom seen this result. What may we understand by physiological saturation, beyond which it is not prudent to go? It seems to me that the use of alcohol appears to be safe within certain limits, only because we are unable to appreciate its effects. The millions of blood corpuscles must have a certain percentage altered before any perceptible effect is produced, such as may approach to physiological saturation. A certain number of liver cells may be rendered fatty, and the patient appear in perfect health; a few of the brain cells may be altered, or some of the glomeruli in the kidney changed, and yet the subject may appear perfectly well; but at length the stage of saturation is reached, beyond which the subject becomes either diseased in some of his organs from fatty degeneration,

or he is a drunkard in consequence of the change in his nervous system. The limit is passed. Then physiological saturation is reached, and our antagonists agree with us that total abstinence is the only remedy. Those who believe in the tonic power of alcohol would take their patients close to the edge of the precipice, and then warn them of their danger; too often when it is too late. My feeling is that it is our duty to prevent the commencement of so-called physiological saturation; and to do this, I feel bound to advise my patients in all its forms it is a powerful remedy for good, in a few instances, in acute diseases of a certain type, in which it is requisite to paralyze the vasomotor system in the periphery of the body, so as to relieve pressure in the internal organs; that it is especially powerful for good in total abstainers, but that it becomes a dangerous remedy for those who may be upon the borderland of "physiological saturation," and ought never to be given in any case in which there is any approach to atheroma, or fatty degeneration of any kind. I cannot believe in its real benefit in want of digestive power, except in rare cases in which a whip may be temporarily of service. For any one to trust to it, and not to take measures to remove the real cause of his indigestion is trusting a broken reed, which will run into his side in due time, and cause him serious hurt.

TREATMENT OF INEBRIETY,

Is the title of a paper read before the Society for the Study and Cure of Inebriety, at their June meeting, by Dr. Howie of Liverpool. He divided inebriates into three classes: 1. The deliberate inebriates. 2. The feeble inebriates. 3. The automatic inebriates. In the latter class he places the dipsomaniac, and very truthfully says, "they are maniacs in every sense of the word."

"The murderous maniac is straightway confined by the authorities, and prevented doing injury to the persons of his neighbors; but the poor dipsomaniac remains unnoticed, unprovided for, until some frightful murder leads to his tardy

apprehension. Under the influence of the dark demon of his life he imbrues his unconscious hands in the blood of an innocent fellow-creature. He kills his mother, his wife, or his infant child; he sets fire to a house and envelops a sleeping family in the flames of death; he wrecks an express train, and sends its precious human freight to pieces in a mountain cutting, or rolls them mangling over the nearest embankment. I ask why the latter should not have been confined like the former? There is more life sacrificed by the dipsomaniac than by the homicidal maniac; and yet we have no power to prevent him in his deeds of death. I hope that the time will ere long come in this country when every man who has been three times convicted of intoxication will be locked up in an asylum as a maniac. Such men are a disgrace to our present civilization, and a source of urgent danger to the community in which they reside. Any man who has been three times drunk is evidently unfit to be trusted in a town, where one unclosed gas jet may be the means of extinguishing the life of a score of human beings.

"The inebriate, while actually intoxicated, is as dangerous as a lunatic, and if he has been three times intoxicated or convicted of drunkenness, we do not know at what moment he may again become insane. He is no more accountable for intoxication than the homicidal insane is for murder."

He urged the folly of attempting to cure inebriates by lectures and temperance work, and the necessity of physical means and medical care.

The Twenty-Seventh Annual Report of the Washingtonian Home, Boston, Mass., Dr. Day, Superintendent, is before us. It is a thirty-five page pamphlet of more than usual interest. During the year, three hundred and forty-six cases have been admitted, and the results have been very gratifying — a large per cent. have been discharged more or less permanently restored. The following extract from Dr. Day's report deserves a wide circulation:

"The most efficient aid to prevention of intemperance comes from the establishment of asylums for the treatment of those who are beyond self-control, and to aid from the public funds those institutions which are already established.

"This institution which you represent, gentlemen, has a record of twenty-eight years of constant labor in this field of reform, and with such a record, it seems to me, it has a right to ask for a consideration of this the most important subject from the standpoint which this institution occupies. We advocate the establishment and sustainment of these asylums as a means which experience has proved to be the best yet discovered for reforming the evil, for reviving production and removing the burden on taxation.

"The practical operation of these institutions, in a few words, is to withdraw the candidate from the work-house or the prison, from the scenes and associations of his temptation and degradation, to receive him with kindness, and having first expelled the evil within him, to re-awaken his manhood and self-respect, and after a season to restore him to the community with a sound mind in a sound body, capable of performing all the functions which his natural powers enable him to, and to become a healthful influence, and an active worker in the great human hive.

"This is a statement of the whole problem. I assert that it is the practical operation of this and other similar institutions, from long observation and experience in the management of them. During the last twenty-eight years I have been connected with them (most of the time at this institution), and have during this time treated over ten thousand cases.

"From this experience I am ready to demonstrate from statistics, that asylums properly conducted are an actual saving to the State in dollars and cents, that from their establishment, the balance in the treasury at the end of the year, is greater than it would be without them. Of the thousands of cases which have been under our care, the instances of relapse have been less than is generally sup-

posed. The patients have come to us worthless as citizens ; they have left to become active, useful additions to the trades, occupations, and professions from which they have come ; producers, producing taxable results.

“We ask that the knowledge of this important fact should be known to every reflecting man, that the benefits of this reform and its modes may reach thousands, where now it reaches hundreds.”

Comparative Physiology and Psychology. By S. V. Clevenger, M.D.: Fansen, McClurg & Co., Chicago, 1885.

This volume of 247 pages treats of the evolution and relations of the mind and body of man and animals. Like many other efforts to extend the boundaries of exact science in the region of mind, and its relations to matter, the reader is not certain that the author has succeeded. This uncertainty comes from the strange use of metaphysical expressions employed to express the most opposite tendencies, which leaves the author's meaning obscure and doubtful. One idea of this work is to apply the “laws of Darwin and Spencer to the consideration of many points in comparative physiology and anatomy.” Another idea that seems to be prominent, “is that chemical relations and reactions originate all life, and are the beginning and ending of all material and immaterial things and forces.” Job expressed a strong desire to have his enemy write a book, and those who do not love the author of this work will be well satisfied with this effort.

The impression on the reader's mind is that the author has not done justice to himself, and with time and study he could have produced a much better work. Notwithstanding these faults the student of mental science will find much that deserves consideration and careful study. The publishers have given a very attractive volume, and no doubt a large sale will reward their efforts.

Clinical Lectures on Mental Disease. By T. S. Clouston, M.D., Superintendent Royal Edinburgh Asylum for Insane: Lea Brothers, Philadelphia, Pa., 1884.

This volume contains eighteen lectures by Dr. Clouston, and an appendix of over one hundred pages by Dr. Folsome of Boston, Mass., giving an abstract of the laws relating to the insane in this country. The first lecture is on the clinical study of mental disease, and the last lecture treats of the medico-legal and medico-social duties of medical men in relation to insanity. All the intervening lectures describe almost every phase of insanity, and illustrate it from histories of well-reported cases. The author is evidently a clinical teacher of rare skill and ability, and every page is replete with suggestion and practical fact. It is perfectly safe to say that this book comes nearer the wants of the general practitioner than any other in the language. While it may lack in a systematic generalization of facts, it is replete in vivid pictures of disease, that cannot be forgotten by the reader. To the specialist it is invaluable, as presenting a purely clinical study of the subject, supplementing his daily experience, and suggesting new facts and fields of observation full of interest. There is a certain freshness in these lectures, coming from a practical man at the head of a large asylum, that is in striking contrast with other works on this subject, that are evidently theories of others worked over. Although many of the statements of the author will be opposed to the experience of the readers of this journal, yet many other topics are so graphically presented, and are so full of suggestion, that the mistakes are forgotten. Altogether this is a most admirable book, and one that the general practitioner as well as the specialist should read. The appendix by Dr. Folsome is of doubtful value. The publishers have presented a fine volume, and it is quite evident that this work will take a very prominent place in the literature of this subject, and have a very wide circulation. We have given an extract in another place, and hope to give others from time to time.

First Annual Report of the Dalrymple Home, is a pamphlet of nineteen pages containing many encouraging facts. During the year thirty-two cases have been admitted and thirty-one discharged. A summary of the history of the cases admitted from the time of opening of the home, forty-nine in all, indicates a great advance in the study from the physical side alone. Both the report of the board and superintendent show that this home is in good hands, and the problems of inebriety will be thoroughly worked out in the future. The superintendent, Dr. Branthwaith, is well known and brings rare judgment and skill to this pioneer work. The secretary of this home is the distinguished Dr. Kerr, whose writings on this subject have placed him among the pioneers in this field. The work of this asylum is watched with much interest in England, but this most excellent report shows that it has passed the stage of experiment, and is now a reality that must not be ignored.

Good Health is the name of a very spirited journal published at Battle Creek, Michigan, under the charge of Dr. Kellogg. The *Sanitarian*, advertised in our pages, under the care of Dr. Kellogg, is the leading asylum of the kind in this country. It has been in existence eighteen years, and has grown into the fullest confidence of the public and profession everywhere.

"Inebriism, a Pathological and Psychological Study," is the title of a most excellent work, from the pen of Dr. Wright, of Bellefontaine, Ohio, so well known to our readers. This work is in press, and will soon be issued.

The Medical Register of New York, for 1885 and 1886, has appeared. It is edited by Dr. White, and published by G. P. Putnam's Sons, and is almost indispensable for reference to physicians and others.

Editorial.

EDGAR A. POE AS AN INEBRIATE.

The addresses delivered at Poe's memorial celebration lately held in New York were chiefly remarkable for their misconceptions of the poet and his character. The eulogies and praises heard on this occasion mingled strangely with regretful reference to his inebriety as a vice and great sin. It was a wicked and deceitful heart that clouded all his genius, the prevalence of a vicious passion that made him what he was, and so on. Poe complained justly of the persecution of both friends and enemies who sought to judge him from this standpoint. Now, nearly half a century from his death, the same old mediæval dogmas are brought up to test the man and his character. Edgar A. Poe, as a willful, voluntary inebriate, is a conception of the man contradicted by all teachings of science, and, from any standpoint of exact study, a physiological impossibility. When he is seen as an inebriate of the periodic and dipsomaniac type, suffering from a disease of the central brain and nervous system, all the mystery of his life clears away.

His career, from infancy to death, differs in no way from others of this class. Beginning in like manner, passing the same roads, crossing the same bridges, with the same experience and termination. His life and writings are replete with evidence of his diseased brain and nervous system. Even the drink paroxysms have left their indelible traces in his prose and poetry. To the specialist, given a history of his heredity and the first ten years of his life, and all the future could have been predicted with much certainty. The character of his writings could also have been clearly outlined; or, given his writings, with no mention of his life, and his inebriety and its nature would have been equally clear. In a

brief review of his life and the indications of his disease some of the reasons for these conclusions will appear.

Left an orphan at four years of age, he was adopted by a wealthy, indulgent family, and brought up petted and unrestrained. After some preliminary training in private schools he entered the University of Virginia. Here he drank and gambled to such an extent that he was cast off by his foster-father, and started out alone in the world. He enlisted in the army, and after two years was discharged and appointed a cadet at West Point. A few months later he was dismissed for neglect of duty, and from this time was engaged in writing for the press. He held various responsible positions on leading magazines, was greatly praised and blamed, but drank, lost his positions, and was ever poor and in trouble. He was always planning for the future, was restless, proud, and ambitious, yet failed. After the death of his wife, he became more dissipated, and used opium freely. He finally died at forty years of age, from exhaustion, having alcoholic delirium and coma at the last.

Although he wrote very largely, most of his work, like his life, was vague, gloomy, and erratic. A few of his poems are remarkable, but the themes are sorrow and ruin. When the facts of his life are examined more closely, a well-marked morbid heredity is seen. On his paternal side, his father was said to be an impulsive, unreflective character and boon companion, who early ran away from home and went on the stage. He was also called a weak-minded, narrow, rather insignificant actor, who played light parts and never attained any proficiency. He was undoubtedly a moderate and possibly an excessive drinker at times; also a weak, nervous man, dying young. On his maternal side, his grandmother was an English actress, who appeared in Boston with her daughter, Poe's mother. She excelled in light dramas and concert singing, her daughter taking the juvenile parts. After marrying a piano player she disappears from history.

Poe's mother comes out prominently when about twelve years of age as a member of a stock company. Later she is

married, and her husband dies ; then she is married to Poe. Like her mother, she was a concert singer, and excelled in light comedies. She was a bright, stirring woman, who worked hard up to a short time of her death, from consumption. She was also evidently an impulsive, excitable character, from an incident mentioned in which her husband was urged to cane a reporter who praised her domestic virtues and moral character.

From these ancestors Poe inherited an unstable brain and nerve organization, and no doubt a predisposition to inebriety. His early precocity and exhaustion pointed to neurasthenia and nerve debility, for which alcohol and other drugs were most grateful narcotics. Among the earliest references to his character and training is a mention of his precocity, and ability to sing and dance. One of the amusements was to mount him on the table after dinner, where he would declaim and pledge the health of the company. His teacher wrote that he was a clever boy but was spoilt by an extravagant amount of pocket money. His education seems to have been very superficial and fitful, at times leading his class and taking the highest honors ; then, from irregularities, which must have meant drinking and other excesses, falling into disgrace and obscurity. All through life he lacked in diligence and accuracy, but was brilliant and presumptuous. Although his mind was of an analytical type, and at times seemed very clear, yet it lacked vigor, and was narrow and changeable in its action. His emotional faculties were always unstable, and the imagination had become acutely morbid.

The use of spirits began early. At school, long before puberty, he drank in a wild, impulsive way. " Drinking full glasses of spirits without tasting it and without sugar or water." After puberty this desire for spirits became more intense, and was followed by profound intoxication, from which he rapidly recovered. All through his life these drink paroxysms were irregular, and of variable duration, seemingly dependent on unknown and very uncertain causes.

Sometimes recurring at stated intervals, then disappearing for a long time, but always impulsive and maniacal in intensity and character. The latter part of his life they were followed by periods of great prostration and debility. He often complained of exhaustion before the paroxysms came on. As he grew older the degeneration from these drink paroxysms became more pronounced, and he resorted to opium, probably because its effects were less noticeable, and the narcotic action equally gratifying. Of course his manner and actions were more mysterious and unexplainable, from this time. He was either greatly depressed, or elated. Later, periods of great indolence and dreamy indifference, followed by seasons of great mental activity, during which he would give up all work, or write incessantly. His manners changed, and he became harsh, abrupt, or emotional and sympathetic as a child.

Like all others of his class, he protested that he never drank much, and all his troubles were due to other causes. On several occasions he was delirious, had distinct alcoholic blanks, and could not remember events that had happened. Finally (as before on many occasions), he suffered from a drink paroxysm, on the eve of most important events; had delirium which was no doubt followed by capillary hemorrhage, ending in death.

Among the signs of mental defects noticed from childhood up, in Poe was his vanity and egotism. He was always self-assertive, and thought he was a universal genius. Wrote a theory of the universe, and always claimed great justice and independence as a critic. In reality he was notional, and either severe or very generous. All through life he sought every opportunity to bring out his old pieces in a new dress, and claim originality for them. He claimed to be a humorist, and when praised, made great efforts in this field. The failure of the world to comprehend his genius was attributed to envy and ignorance. Closely associated with his egotism was distinct delusions. One most commonly seen in every similar case, that his use of spirits was always a mere acci-

dent within his control, that he could and would stop any time. He always believed his drinking due to causes governed by his friends and enemies. He also boasted of great poetic insight and judgment, and yet his criticisms never rose above the faults of style and methods of expression. He seemed a bitter hunter for plagiarisms, and yet he himself was a close imitator of Moore, Byron, and Coleridge. His really famous poems were inferior to others that never attracted any attention, in his estimation. Delusions of neglect and persecution grew to be a constant thought. He never realized that his harsh criticisms of others, and defects of character, brought down upon him these enemies. Through the deepening gloom of his life, glimpses of his real condition burst on his vision, and he declared that he was insane, and should have been under the doctors' care long ago. Edgar A. Poe was clearly a mental defective as seen from almost any standpoint. In childhood he was called self-willed, defiant, and willful, breaking through all restraint. Later he was described as excitable, moody, and inclined to magnify every event of life, either good or ill. His defective brain force found relief from spirits, and in poetry and prose, congenial realms of thought. The early intoxication, and continuous or irregular use of spirits, would have been fatal obstacles to eminence in most cases, but in this case they served to bring out his talents in greater contrast. Intellectually he never rose above a certain level. The theme of all his writings was sorrow, ruin, and a morbid ideality of love and beautiful women. Flashes of genius, like sun-bursts through the black clouds, had a deep background of despair. Ideas of pain, misery, and sorrow, colored all his thoughts, and were brooded over with a satisfaction only seen in the insane. The higher brain centers suffered, and his low moral sense of duty, and conceptions of right and wrong were apparent at every step. He was always full of intrigue, and when pressed took advantage in many ways. When most prosperous he was restless and undecided, always planning some new scheme. The materials which he furnished for

the history of his life were false, and indicated great moral degeneration. His child-like efforts to conceal the events of his life, and make them appear different, and boasts of great honesty and honor, while doing the most opposite acts, were all symptoms of a diseased brain. In brief, both his intellectual and moral life was identical with his history, full of great irregularities and extremes, and also marked by a progressive march of degeneration.

His complaint of being the victim of others' ignorance was most terribly true. His enemies always magnified and increased the publicity of his drink paroxysms, and his friends thought to help him by continually presenting the enormity of these excesses, supposing that the pain and suffering which they caused would in some way give him strength to grow stronger. It is the same principle that to-day sends inebriates ten days to jail, hoping by wounding their pride in the worst possible physical and moral surroundings to better prepare them for a life of sobriety. In reality they are removed farther and farther from possibility of recovery. If Poe had been recognized as a diseased man, and been placed under medical care, his genius and poetic conceptions would have found more sunny paths, and left the world brighter for its songs. His life began with a sad heredity, intensified by surroundings and want of training into the disease of inebriety, which followed a regular line of march on to death.

Thus from his entrance into active life he grew more and more out of harmony with the surroundings, and found in spirits and opium an oblivion and rest. To say that Poe had a deep insight into the supernatural, with great originality, and extraordinary intellectuality, and so on; and also that this was sadly marred by moral obliquity and vicious weakness, that was sinful, etc., is to describe a character unknown to modern times. To say that Poe, as an inebriate, showed great genius in poetic expression, is to represent a class of cases, whose histories are known and have been studied. The conclusion apparent to every thoughtful mind is that Edgar A. Poe as an inebriate should have been recognized early in

life as a diseased man, and placed under treatment and care ; also after the lapse of many years, and the great progress of science, his malady and character should have been better understood, and his work more correctly estimated.

“CURSED BY HER APPETITE.”

A dispatch with this title went the rounds of the papers, describing the murder of a woman by two brutal men in a low place. The murderers claimed that the woman was intoxicated and assaulted them, and in self-defense they threw her out of the house; the injury she received from this caused death. This event called out much comment, as the woman was the divorced wife of a distinguished man, and had herself occupied a very high place in the social and literary world. After a speedy trial the murderers were convicted of manslaughter, and the event passed into forgetfulness. The wrongs of this world can never be forgotten, somehow and somewhere they will surely come to judgment. The facts of this case were brought to my notice and were verified by a physician beyond all possible doubt. B, the woman murdered, and called “cursed by her appetite,” was the only daughter of a moderate-drinking merchant who died early of gout. Her mother was a nervous invalid, hysterical and bed-ridden, dying of consumption at forty-two years of age. On her mother's side insanity, inebriety, and general paralysis had appeared in many members of the family. B was a woman of unusual intellectual force and brilliancy, graduating at Vassar at twenty-two, and marrying at twenty-four, she was the leader of the circle she moved in. Wine was used on the table freely, but she was never known to use it only sparingly. At twenty-eight she suffered from abortion, followed by severe hemorrhage, fever, and great prostration. Spirits were given freely, and when she recovered they could not be taken away. Finally she became intoxicated, and from this time a great struggle was made to break away from the drug. Pledges were signed, prayers and advice from the clergyman freely given.

Threats, entreaties, and every form of mental and moral influence was brought to bear to cause her to abstain. The husband still drank wine at the table, and the clergyman urged that the failure of the wife to do so in moderation was simply a moral weakness, which she could overcome. The physician joined in this view, and after two or three years of fruitless effort decided that she was a wicked, bad woman, who would rather drink spirits than live a temperate life. Acting on this theory the husband procured a divorce and she was driven away. From this time to death, four years later, she drank continuously, and was several times before the police court for drunkenness. The impulse to drink was so powerful that all her thoughts were directed to gratify this; every other thing was secondary. Finally, her death followed an assault, and the statement "cursed by her appetite" should have been "cursed by the ignorance and false teachings of friends." Two centuries ago Cotton Mather wrote concerning the execution of a witch, that "she was given over to the Devil and deserted by God," and history repeats itself in this case. The purely physical character of this case was not recognized. She was sick and diseased, and the real murderers were her husband, the clergyman, and physician. They drove her away from all hope of restoration, and she was a victim of persecution, as much so as any poor so-called witch of long ago. A better intelligence would have given this poor woman tender care and nursing, and housed her from the exciting causes, and from this restoration might have followed. Moral treatment was folly, divorce was certain death, and no more criminal stupidity could have been displayed, had the friends intended to have destroyed her. A similar incident, in a well-known family, was where the son became an inebriate dating from a partial sunstroke, and was driven out and condemned as wicked and vile, and soon after was shot in a low saloon. His death was literally caused by his parents who stupidly turned him out to die. Many such cases are taking place all over the country where men and women are cast away from all care and restraint, and

hurried on to a terrible death, that a clearer knowledge would have prevented. Truly, the old persecution of witches has not died out, but is seen to-day in the condemnation of inebriates as sinful, who are sick and diseased, and need care, treatment, and restraint.

LAWS IN SWEDEN RELATING TO INEBRIETY.

Where it can be proven that the husband is an inebriate, a dissolution of marriage will be granted the wife. If the husband is convicted of drunkenness more than twice, the wife can obtain a divorce at once by applying to the king. If the clergymen or guardian shall find either husband or wife to be inebriates, and manifestly unable to take care of themselves, he may apply to the courts, who will order a separation for one year, and longer if necessary. The penalty of visiting each other during this time will be imprisonment from one to six months. Should the inebriety continue, the king may decree a permanent divorce. If either a man or woman contracts marriage in a state of intoxication, or promise to marry, the contract is void. No transaction entered into while in a state of intoxication, or in a condition of mind in which he could not fully realize its nature and consequences, can be sustained at law. But, with a curious inconsistency, he is held fully responsible for any crimes he may commit in this state. The same penalties are to be meted out as if conscious and sane, in addition to those incurred for inebriety. Should anyone become intoxicated in a public house, and the landlord allow him to go out on the street, the landlord is liable to a fine for damages which the drunken man may inflict. It is the duty of the saloon-keeper and landlord to take care of and protect all persons who become intoxicated on their premises. No person can be received in a lunatic asylum in a state of intoxication. Three private asylums have been opened for inebriates; the local judges can send persons to these places rather than to the house of correction. A strong sentiment in favor of inebri-

ate asylums has been growing among the medical men and law makers. But, unfortunately, the temperance party is against it.

CAPACITY TO COMMIT CRIME AMONG INEBRIATES.

In several cases which have come to my notice, the question has been raised, Is not the inebriate incapacitated for committing certain crimes by reason of the injury from alcohol to his brain and nervous system? Thus in one case, a continuous inebriate, who was under the influence of spirits all the time, doing nothing, and in a state of partial stupor, was accused of forging a name to a check, and drawing the money on it. He denied all knowledge of the event, but was recognized as partially intoxicated when he presented the check for payment. It was shown that his condition was such that he could not have forged another name to the check. His own signature, written at this time, was very imperfect, and, as no free interval occurred in his drinking, it was not reasonable to suppose that he was capable of forging a name with skill and accuracy in his condition. This defense was ignored, but it was undoubtedly correct.

In another case, a periodical inebriate, who, during the drink paroxysm, was either in a state of acute delirium or partial stupor, signed a contract in a bold, steady hand, greatly dissimilar to his ordinary signature. On recovering he denied it, and, in an action to recover, it was claimed to be a forgery. The same defense was made, but failed.

In a third case, a man with uncertain reputation, was found in a state of partial intoxication, near a bank which had been robbed, and arrested for the robbery, or complication with it. The defense of incapacity to have committed the crime was urged without success, and had the prisoner been a man of character, he would undoubtedly have escaped. The facts all indicated a strong probability of his innocence.

A case involving a similar question was argued in the supreme court of Wisconsin in 1879. The prisoner was con-

victed of larceny, cutting a hole in a window pane large enough for his arm and effecting an entrance, etc. The prisoner was known to have drank very freely of whisky and beer on the night of the larceny. He denied all knowledge of it, and claimed to have left town long before the crime was committed. The defense claimed he was incapacitated to commit this crime by reason of his condition occasioned by excess of alcoholic drinks. The judge refused to allow this in evidence, and the case was taken up to the supreme court.

On this the court ruled as follows: "As we understand the offer, it was not to show that the accused was in such a mental condition as would excuse the commission of an act which would constitute the crime of larceny if committed by a sober man. It was not offered as an excuse or defense for a larceny committed, but for the purpose of showing that it was highly improbable that the accused did in fact commit the acts complained of, *viz.*: the entering of the shop and removing the goods therefrom; not as a defense for want of mental capacity, but as evidence tending to show that the acts which constituted the offence were not done by the accused. . . . It would seem, however, that there can be no doubt as to the right of a person accused of crimes to show that at the time of its commission he was physically incapable of committing it. There can be no doubt of the right of the accused to show that he was at the time prostrated by a disease which rendered it highly improbable that he could have endured the exertion and labor necessary to commit the crime, and so we think if, in this case, the evidence had shown that within a few hours of the time this larceny must have been committed, the accused had been temporarily prostrated by drunkenness, so as to render it highly improbable that he could have been present at the place where the crime was committed, or, if able to be present, that he could have done what the evidence shows was done by those who committed the larceny, he is equally entitled to show that fact. In such case the intoxication is not shown for the purpose of excuse or mitigation of the offense charged, but as evidence

tending to show that he was not present and did not commit the acts constituting the offense. Evidence of this kind would have but little weight against direct evidence showing the actual presence of the accused at the time and place when and where the crime was committed; but certainly in the absence of any such direct evidence, the accused may give in evidence any fact, which would have a natural tendency to render it improbable that he was there and did the acts complained of, and the fact that drunkenness was the thing which tended to prove such improbability, can make no difference. If a man by voluntary drunkenness render himself incapable of walking for a limited time, it is just as competent evidence to show that he did not walk during the time he was so incapable, as though he had been so rendered incapable by paralysis of his limbs from some cause over which he had no control. The cause of the incapacity in such case is immaterial; the material question is, was he in fact incapable of doing the acts charged? We cannot speculate upon the effect which the evidence, if admitted, would have had upon the verdict in this case. It was offered, apparently in good faith, as evidence tending to show that the accused could not have committed the offense.

“Had the drunkenness been proved so complete as to have destroyed his powers of locomotion, or so as to have destroyed the steady use of his limbs, it would have had a tendency to disprove the charge made against him. The evidence being material, it should have been admitted, and its rejection was an error for which this court is compelled to reverse the judgment.”

INEBRIETY AND SUNSTROKE.

Those who use alcohol in any form, either moderately or in excess, suffer more frequently from sunstroke and heat apoplexies. The fatality of these cases are greater than in those who are abstainers. The brain disturbances following are more serious and prolonged, and in many cases acute

manias, various palsies, and dipsomaniac impulses are very prominent.

Many of these cases occur in persons who are not thought to be other than moderate drinkers, particularly as they are seldom seen intoxicated, and, although at the time of the sunstroke may have the odor of alcohol about them, yet are not considered to be injured by spirits in any particular way. These cases suffer from sunstroke in two ways: either from the direct rays of the sun, or from the heat of close rooms or areas. In the latter case it occurs most frequently after sunset and before midnight. Very serious mistakes are frequently made in the diagnosis by physicians. A man will be found in the street in a state of coma, with an alcoholic breath, which, to a superficial observer, points to spirits as a cause. The real cause, sunstroke, is not recognized, and death follows in a cell at the station-house, or in some other place, and nothing has been done to avert this event. In any case of coma found in the street in hot weather, the diagnosis of apoplexy from heat should be considered, irrespective of all alcoholic odors in the breath. A moderate and only an occasional user of spirits, feeling bad, took a glass of brandy, and soon after suffered from sunstroke and was taken to the station-house, where he had been ordered by a physician who made a diagnosis on the odor of his breath alone. A clergyman who drank only wine at meals, and was a red-faced man, was struck down by the sun soon after drinking some wine, and was taken to the station as a drunken man, the diagnosis being made on the same grounds. The physician should not forget that the odor of spirits is often an indication of a tendency to apoplexy, excited by sunstroke or any other cause, and the circumstance of being found insensible in the hot sun is sufficient to warrant a diagnosis of sunstroke, rather than that of coma from alcohol.

In the second class, more difficulty follows. Thus, a man who has drank in moderation, or not at all, will be stricken down in a close room, and if the odor of alcohol is present he is supposed to be intoxicated. Cases of this kind are fre-

quent in bar-rooms, and close, crowded tenement houses in hot nights. The real diagnosis, heat apoplexy, is often overlooked. A man comes home from a hard day's work, takes a glass of spirits, and goes to some close room where the air does not circulate and radiation is imperfect, and soon after has an attack of heat apoplexy; or, he may go to some close bar-room, and late in the evening be stricken down.

These cases occur most frequently in large cities, and close, narrow streets, but will be found in all sections of the country where the conditions of heat and surroundings are favorable. The advice given in India to the English residents and troops is very sensible and correct. First, to abstain from all alcoholic drinks during the hot season; and, second, to drink large quantities of water, especially in hot days. With this are many directions about the care of the body, namely: to avoid over-work, pressure of clothes, bad food, and so on. Partial sunstrokes are more common where the person has a faint, attended with dizziness, momentary loss of consciousness, followed by severe headache and great prostration. These attacks have a very serious influence on moderate or excessive drinkers. Often it is the beginning of profound degenerations, which go on rapidly to death. Heat apoplexies are very intimately associated as causes of inebriety, and when occurring in inebriates lead to the gravest results.

The use of spirits in any form undoubtedly favors and predisposes to sunstroke; and, whatever the explanation may be, it is certain that he who uses alcohol has less vigor and resisting power to high degrees of heat.

A Chicago physician sends us the following: The State Board of Health of Illinois reports the death of two hundred and two physicians. Six are attributed to suicide; five are recorded as coming from the accidental over-dose of morphia, and two from an over-dose of chloral. Over thirty of this number were known to use spirits to excess. He thinks that twenty-five per cent. of all physicians who die under forty may be classed as victims of alcohol or other narcotics.

Clinical Notes and Comments.

HEREDITY.

The great principle of each begotten creature is but the sum and essence of what has preceded it, admits of but few exceptions. This principle does not merely refer to the form and size of the body, the features, or the system, but extends to the minutest parts of all the organs and their functions. At the time of its birth the child can only possess what it has derived from its parents, and, though after this it may receive the best care, education, and influences, these can only modify and direct that which is originally predetermined in its physical, intellectual, and moral organizations conferred upon it by its parents.

DR. IRWIN.

Dr. Danforth writes: In the habitual drinker the connective tissue undergoes a gradual increase by the action of alcohol until it comes to encroach upon the nerve fibers to a most disastrous extent. As a general thing the nerve fibers are in the first place stretched and distorted, and this produces a condition of extreme vitiation, as manifested by explosions of petulancy or anger, often amounting to maniacal violence. Later on the nerve fibers are gradually compressed so they become functionally impaired. Thus the functions of the cerebrum, the seat of the intellectual operations, are disturbed and rendered more or less abnormal by mechanical vitiation exercised by the connective tissue, which is due to the exciting influence of alcohol.

A man who had drank wine at the table for years and was considered a temperate man, suddenly rushed to a low saloon, drank to great excess for a week, also associated with

low company, and was after this a confirmed inebriate. Prayers, pledges, confinement in jail, were useless. He went on, squandered his property and pauperized his family, and died in the station house. The money and time spent in efforts to save him by moral means were wasted, and his ruin precipitated and made more positive. Had his case been recognized and physical means applied, permanent recovery would have followed, or at least temporary restoration, and the promise of the future would have been greatly increased.

In the Paris letter to the *Medical Record* is a notice of Dr. Combe's paper before the Academy of Medicine on the effects of morphiaism on the teeth, showing that dental caries and a falling-off of the hair were common symptoms. The commission who reported on this paper, affirmed that the dental lesions and other changes were the result of alterations in the functions of nutrition, similar to the gangrenous and suppurative processes observed in morphiomaniacs.

Some curious statistics of Sunday drunkenness come to us from Scotland. From the police reports it seems that in Glasgow, with a population of over 500,000, an average of over 900 cases were arrested for drunkenness on every Sabbath. In Edinburgh, with a population of over 200,000, over 200 persons were arrested each Sunday for this offense. In Greenock, with a population of over 65,000, nearly 250 persons were convicted each Sabbath. When it is remembered punishment brings no relief, but steadily precipitates the victim into more incurable conditions, these figures are simply appalling. The philosophers of Scotland are evidently unable to comprehend this problem practically.

In the southern agricultural counties of England, eleven per cent. of all the cases sent to the lunatic asylums were epileptic insanities, due largely to the universal use of beer, low wages and bad food.

The Homewood Retreat is the only private asylum for insane and inebriates in the province of Ontario. The superintendent, Dr. Lett, is a man of high reputation and acknowledged ability.

Green Spring Sanitarium of Green Spring, Ohio, under the charge of Dr. Marshall, is a very attractive place, and combines the virtues of a mineral spring with all the appliances of an excellent asylum.

Decided superiority is claimed for the Anglo-Swiss Milk Food in comparison with any other farinaceous food for infants. No so-called Milk Food consists entirely of milk; all are partly composed of cereal products, involving, when not properly prepared, the presence of an injurious amount of starch, which the highest authorities agree in condemning for young children. Its value for grown persons is coming into great prominence.

Fellows' Hypophosphites has been used by Dr. Brown in many cases of opium inebriety with great success. As a nerve tonic and stimulant it deserves the study of every practical student of therapeutics.

Papine, prepared by Battle & Co., St. Louis, should be tried by all who have occasion to use any form of opium. It is without doubt safer, and less likely to be followed by bad effects than other forms of opium.

Horsford's Acid Phosphate is a preparation of the phosphates of lime, magnesia, potash, and iron, with phosphoric acid, that seems to have a most positive action in the varied states of exhaustion and debility which come from inebriety.

Lactopeptine, like quinine, is more or less a matter of certainty as a medicine, and in the digestive disturbances following inebriety it is most excellent, and should be used always.

Coacine seems to be fast taking high rank as an anæsthetic in the varied nerve disturbances so often seen among inebriates. Parke, Davis & Co.'s preparations may be depended upon in all cases.

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RECENT PROGRESS IN THE STUDY OF INEBRIETY IN FRANCE.

BY W. H. VITUM, M.D.

It is gratifying to see that in France, as elsewhere, the real nature of inebriety is being carefully studied, and that experiments to this end are being carried on by those men who are best able to observe and appreciate their results.

The last number of *La Tempérance* contains several articles of interest. Dr. Decaisne makes some remarks which we quote at length.

"Inebriety is not only an individual malady, it is a family malady, and one which affects the race. It is certain that the families of drinkers are usually few in number, and they, without doubt, are right who claim that drunkenness 'nips in the bud' two-thirds of those individuals who ought to have been procreated. Dr. Magnus Huss, the Swedish physician, has shown that the northern peoples who abuse alcohol degenerate sensibly, and afford more frequently than others examples of monstrosities at birth. During the first years of the eighteenth century the English government was alarmed at the great diminution of births in London, and set on foot an inquiry, from which it resulted that the principal cause was drunkenness.

“In an excellent work on Alcoholism, Dr. Lancereaux has divided the after-effects of alcoholism into two classes. One purely functional revealing itself by an excessive nervous susceptibility, an abnormal reflex excitability, and at a certain period of life by an imperious craving for fermented liquors. The other showing itself in material lesions which bear more particularly on the central nervous system, and whose consequences vary according to the period of life at which they are manifested.

“According to this author the purely functional disorders constitute the mildest form of hereditary alcoholism in the case of children of drinkers; the nervous system generally does not function well, and presents certain disorders. M. Lancereaux has discovered that almost all the young girls suffering from hysteria who came under his observation, had drinking people for ancestors. By searching in the same way the antecedents of children subject to convulsions he proved that almost always the father or mother had used alcoholic drinks immoderately.

“Our colleague and other observers have held that the descendant of a drinker possessed ordinarily a marked instinctive desire (*appétence*) for drinks of an alcoholic nature, especially at the time of the great physiological changes, the age of puberty, for example, and in the case of women during pregnancy and at the change of life.” M. Decaisne here pauses to differ slightly from the author he has just quoted, in regard to the cause of alcoholic tendencies in the young, but goes on to say: “What seems to be beyond doubt, is that this tendency, sometimes continuous, sometimes intermittent, is pretty generally accompanied by evil instincts, vicious inclinations, which make the unfortunate heritor a being, lazy, vagabond, and incapable of living in society. On the day after the Commune Dr. Morel and Dr. Vintgrinier went to the prison of Rouen to attend the examination as to the mental state of a hundred and fifty children, from ten to seventeen years of age, the greater part of whom had been captured, armed, behind the

barricades. This examination confirmed Morel in his previous views as to the disastrous influence exercised by alcohol, not only on the individuals who use it to excess, but also on the descendants of those who are enslaved by this detestable drink. 'They are, indeed,' exclaims Morel, 'worthy sons of their fathers, these precocious assassins and incendiaries, on whose depraved physiognomy is stamped the triple seal of their degeneracy, intellectual, physical, and moral. They presented to us a saddening spectacle, and one well calculated to cause moralists and friends to the progress of humanity to reflect. Faces hardened and repulsive, heads without symmetry and without harmony, forms below the average in size; these are the physical marks of the little wretches. In these hundred and fifty children we hardly found ten attractive faces. The boys of seventeen appeared not more than fourteen; those of fourteen hardly appeared ten. The absence of the moral sense was notable in the majority. However, they almost all knew how to read and write. Only fifteen were absolutely without education, a proof that instruction without moral and religious principles is still worse than ignorance.'

"We also, through long days of misery and shame which are not yet far in the past, we also have met him, this child of the drunkard, the *gamin de Paris*, a misformed creature, the unhealthy growth of the streets of the great city, whom romancers and play-writers have sought to poetize; we have met him everywhere, where there was blood to spill, a victim to slay, an arson to be committed, a profanation or a sacrilege to be done. This creature exsanguinated, rachitis, abject, livid, you could doubtless meet him on the benches of the court of assize in the midst of those assassins of from eighteen to twenty years whose crimes even now so often horrify Paris.

"This is the lamentable subject which is treated by Dr. Legendre, in a work having for title, 'Hereditary Alcoholism. The black book of Alcoholism.' This important work, which has no less than 120 pages, is the *résumé* of all

that has been written on the question during the last few years. The author, with an excellent method, and borrowing from the best authorized sources, admits the theory of hereditary alcoholism, and divides it into two well-defined classes. 'Similar alcoholic heredity,' and 'transformed alcoholic heredity.' (It may be well to say here in explanation of these terms that 'Similar alcoholic heredity' is where the descendant inherits a form of disease similar to that of the ancestor; in other words, he inherits the instinctive craving for strong drink. 'Transformed alcoholic heredity' on the other hand, is where the inebriety of the ancestor appears in the descendant transformed into some other neurosis, epilepsy, mania, dementia, idiocy, etc.) He shows the disastrous consequences of hereditary alcoholism on the child, in whose case it engenders eclampsia, epilepsy, scrofula, tuberculosis, hysteria, hydrocephalus, imbecility, idiocy; in the youth, in developing epilepsy, hysteria, evil inclinations, wickedness, cruelty, resistance to all teaching, to all work, a tendency to vagabondage, to alcoholic appetites, to crime, and to intellectual enfeeblement; in the adult, tremblings, hyperæsthetic troubles analogous to those of drunkards, a tendency to crime, to suicide, to insanity, to mania, to general paralysis, to dementia. The author describes with care the effects of dipsomania on the family, on the race, showing it destroys the nuptial union, brings ruin to the household, enfeebles paternal authority, produces demoralization of the child, contributes to his neglect, and even dries up the source of life. In a word, the influence which it has in weakening the intellect, in producing degeneracy and change in the race, and in mortality. He arrives at the following conclusions:

"1st. Under the name hereditary alcoholism is included the totality of the pathological manifestations transmitted to a child by one or the other of his parents who are drinkers, and sometimes both.

"2d. The inheritor of this taint, as well as the drinker himself, can hand down not only his own vice, but a special

morbid tendency, a particular neuropathic state, which can always be charged to inebriety.

"3d. The alcoholic inheritance may at first be dormant. When it exists it shows itself in infancy, or later, or in another generation. It shows itself as congenital paralysis, convulsions, epilepsy, hypochondriasis, idiocy, etc.

"4th. The increase in the number of the insane, of the number of suicides, of crimes and misdemeanors, such are the results of hereditary alcoholism.

"5th. It is in hereditary alcoholism that can be found the explanation of certain monsters who come from time to time to horrify society and scandalize the courts of law.

"6th. These degenerate beings are smitten with sexual impotence. The female inebriate is apt to abort, and lastly the mortality of the newly born among drinkers reaches a figure truly frightful.

"7th. It has often been proved that in the case of drinkers, there is a loss in stature and physical force.

"8th. To sum up hereditary alcoholism as well as the acquired, determines an enfeeblement of the species, the destruction of the family, and the degeneration and abasement of the race.

"9th. From a medico-legal point of view, the hereditary inebriate, in particular the dipsomaniac, should be regarded most of the time as irresponsible, or at least his responsibility should be regarded as very limited. He is a sick man who should be cared for, remembering that he presents an undeniable propensity to sickness, that he possesses a defective intellectual organization, in a word that he is a degenerate. If the moral sense has not completely disappeared in his case, at least its use is not accurately regulated. The judge then ought to take into account this moral state in appreciating his acts.

"10th. The treatment consists for the child in a strict hygiene and a wisely ordered education, hydrotherapy, the gymnasium, exercise in the open air, a tonic and reparative

alimentation. Such are the general indications. Later, hydrotherapy combined with bromides, hot air baths, etc."

Dr. John Lemoin has put forth a work entitled "Experimental researches as to the passage of alcohol into the milk." The experiments were carefully carried out, and the milk of cows and goats was subjected to experiment as well as human milk. The results are not conclusive, but it is an encouraging sign when such subjects are made the theme of a scientific treatise.

Dr. Jacquemard has also published an article under the heading, "Alcoholism and Epilepsy. The influence of alcoholism in producing epilepsy in the new-born." This work, although presenting nothing new in scientific matter, is a good *resume* of what is known on the subject. The author attributes many of the disastrous consequences of alcoholism to the use of poorly rectified and adulterated liquors. He closes his paper by a vivid and truthful picture of the physiological evils of hereditary alcoholism.

M. Mattell, at a recent meeting of the Academy of Medicine, treated the subject of criminal responsibility of inebriates. Crimes, murders, etc., committed when the perpetrators are under the influence of drink, are rapidly increasing. The author believes this to be the result of the increased use of toxic alcohols, which contain empyreumatic substances that exercise a most dangerous influence on the nervous system, often manifest in sudden fits of frenzy, mania, and morbid impulses. Judges are at a loss how to regard a criminal who suddenly commits crime without any reason or motive. If the momentary delirium were the result of some former cerebral lesion, the medical expert would have some clue to understand the evidence. But in these cases the former moderate and harmless inebriate passes at once into a ferocious and dangerous criminal maniac, committing the most terrible acts. A case was mentioned of an Italian, who always worked in compressed air, and was of sober habits; he allowed himself to be persuaded to drink large quantities of alcoholic drinks. At

midnight he was alone on the street trying to find his way home, when suddenly, without the slightest provocation, he drew a knife and stabbed several people on the corner of the street. One of them died. The murderer was captured, and after a sleep in the station-house, awoke next morning without any idea or conception of what had happened. He denied all memory of these events, and could not understand how he should have done it. The author believed that working in compressed air induces neuralgia, nervous disturbance, and a general cerebral condition which increases alcoholic susceptibility. He should have been regarded as one of limited or questionable responsibility, yet this man was convicted; but the final judgment considered these facts, and a less sentence was given him.

These and many other facts give most cheering evidence of progress in the fields of science and the rational methods of viewing the inebriate and his malady.

M. Vallin read a paper before the French Society of Hygiene on the danger from the use of tobacco. He showed that cardiac narcotism, manifest by an intermittent pulse and tendency to faint, was common among excessive users of tobacco. A discontinuance of its use would be followed by a cessation of these symptoms. In children, chloro-anæmia and diminished blood corpuscles were present. Blowing sounds were noted in the carotid arteries, and a general dullness was noticed. Young persons with this chloro-anæmia from the excess of tobacco often develop pulmonary phthisis. Women who smoke suffer more than men, and have more cardiac symptoms. Young men who use tobacco to excess, are more often inclined to find in alcohol a relief from their nerve disturbances, and hence more often resort to drink.

The liberty of an inebriate ends when that liberty becomes a curse to others, and interferes with the good order of society.

ARSENIC INEBRIETY.

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

A man was lately brought to me for consultation with the following history: Born in England, age forty-four, both parents died in infancy, no history of any special hereditary taint. He became a horse-doctor and trainer, and used beer in moderation from childhood up. When twenty-five years of age he came to this country, and was employed in a livery stable at Charleston, S. C. During the war he was engaged treating horses in the cavalry service.

It is probable that he drank to excess at times, as he lived an irregular, uncertain life of a horse-jockey and trainer, going about the country up to 1875, when he settled in Washington, D. C. From his own statements and that of his employer, it appears that he began to use arsenic about this time to prevent typhus and other fevers. He was very superstitious and afraid of death, and was, no doubt, familiar with the effect of arsenic on horses, and very likely applied this knowledge to his own case.

Up to 1880 he was in good health, and did his work well, although he took from one to two drachms of Fowler's solution every day or second day, depending on circumstances, of exhaustion, over-work, and bad feeling. He could not drink beer or spirits, because of the intense nausea and headache which followed. From this time up to January, 1885, he seems to have wandered round from place to place, doing service as a trainer and horse-doctor. The use of arsenic had steadily increased, until he was taking three ounces of Fowler's solution a day. Often it was difficult to procure this. Then he used the powder, taking what he supposed to be fifteen or twenty grains a day. He thought the effect of this was not so marked as the solution. His appearance was that of good health. The face was full, and the skin

clear and white. The eyes were brilliant, but seemed to be unsteady; when talking the facial muscles moved inordinately, yet when quiet no wrinkles or marked lines were visible. His walk was deliberate and hesitating, and cutaneous sensibility was diminished. The muscular power seemed unimpaired, although he complained of rheumatic stiffness, which he said was very prominent when he was deprived of his usual dose of arsenic. His appetite, formerly very good, had within the last year been irregular. At times he ate inordinately, then would abstain for a week or more. His bowels seemed to act with his appetite, at times constipated, then very loose. Within the past year his sleep was broken by bad dreams. He would wake up covered with perspiration, and his mind filled with a sense of fear, not clearly defined, but vague and oppressive. He would fall asleep during the day in any surroundings that were monotonous, and wake up in a short time feeling bad. When he awoke in the morning a drear sense of exhaustion and pressure all over his body would come on, growing steadily worse until the arsenic was taken. In an hour after, all these bad feelings passed away, and a sense of quiet exhilaration prevailed, which formerly was marked, but lately was less distinct and shorter. Respiration was difficult from any general exertion before this drug was taken, but after, no change was observed. The heart was evidently enlarged, and indicated much functional disturbance. He complained of failure of memory and general indisposition to work, was in doubt which course of action would be the best, was filled with fears and dread of mistakes, particularly when the effect of the drug wore away. After he had taken the usual dose this passed off, but the indisposition to work continued. He could not concentrate his mind long on any topic. At times he would seem to be very emotional, laughing and crying at the least little things; then he would be oblivious to all emotion — be stolid and indifferent. The sexual function seemed paralyzed, but pride of dress and appearance seemed to be the only pleasure and object of his life. He would dress himself

with great care, and spend his time in a stable or on a hotel stoop, gazing out into space in silence. When the effect of the drug wore off, he would be boastful, excitable, walk round, and drive different horses. At such times his judgment was bad, but when he had taken the drug it was generally very correct. He was very methodical in his habits, and took the drug twice a day, without change. He did this in secret, and was known to his companions as a very changeable, eccentric man, who, early in the morning and late in the afternoon, was "half crazy." These and other symptoms indicated a general failure of both body and mind, rapidly approaching dementia. At times he was alarmed, and wished to give up the use of the drug; then, later, he was indifferent. The action of this drug seemed that of a stimulant and narcotic. When the effects wore away, great depression and exhaustion followed. To the general observer no indications of his real condition would appear. He remarked that if he could get this drug always he never would abstain; but he found it difficult to always keep a supply. He was taking regularly from twelve to twenty grains of arsenic every day. The urine was not examined, but evidently there was little or no trouble with his kidneys. He bathed very often, to take away a strong, offensive odor of the skin, which was evidently the elimination of the arsenic. He evidently failed to take my advice, and disappeared, a few weeks later, in New York. The interest of this case turns on the length of time arsenic had been taken, and the comparatively small dose after all the years' addiction. Second, on the general absence of any very special prominent symptoms. This was probably owing to the care and method of taking it. The effects of this drug as an exhilarant and narcotic deserves a wider study. Third, the inquiry is suggested, Did this man inherit a neurotic diathesis which found in arsenic a source of relief, in the same way as that found in alcohol and opium? Is it not likely that arsenic will take the place of alcohol and opium in a certain number of neurotics, having some peculiar

organization? Is there not danger in using arsenic for any length of time in inebriates? From correspondence I find that an impression prevails among many medical men of large practice, that the secret use of arsenic is rapidly increasing. The peculiar tolerance of this drug in some cases suggests the possibility of its use as a stimulant or narcotic, like alcohol or opium. How far these are exceptional cases, and to what extent this form of inebriety exists must be determined by future study.

The *Turkish Bath* is the most satisfactory and effective remedy that can be used in inebriety. Dr. Shepard of Columbia Heights, Brooklyn, who has the most complete baths of this kind in the country, and whose experience extends over a quarter of a century in this field, says, "The Turkish bath may be depended upon to relieve the cravings for drink; in many cases for a very long time, and often permanently. Complete restoration has followed the use of the baths in many cases, especially where they have been used once or twice a week, and the Turkish has been alternated with Russian and Roman baths."

To this we add our experience that there is no remedy or means that can be used so positive in its effects, particularly in cases who are trying to be restored at home.

Dr. Woodward wrote half a century ago as follows: "I have in a long practice noticed many persons who have been frequently arrested for petty crimes and drunkenness, become insane and idiotic. These cases were in the prodromic stages of their disease, and the symptoms of drunkenness, debauchery, idleness, petty dishonesties and vices, were unrecognized. The question of their responsibility, and where insanity began, and what the treatment should be, will be discussed and settled in the future."

INEBRIETY, AND THE RESULTS OF ITS TREATMENT IN ENGLAND AND ELSEWHERE.

BY NORMAN KERR, M.D., F.L.S.,* PRESIDENT OF THE SOCIETY FOR THE STUDY AND CURE OF INEBRIETY; CONSULTING PHYSICIAN TO THE DALRYMPLE HOME FOR INEBRIATES, ETC., ETC.

Habitual, in common with occasional inebriety, has been very generally looked upon as only an offense against moral and social order, and a sinful act. This is the view which, I regret to say, has been taken by the great bulk of the religious, philanthropic, and temperance worlds in other countries as well as in Britain. Imbued with this belief, the measures which have usually been employed in dealing with the inebriate have been his treatment as a criminal by fine and imprisonment for the offense against the community, by rebuke and scorn for the breach of morals, by denunciation and excommunication for the sin. The intemperate, having been regarded but as wicked and premeditated sinners, have, with a few honorable exceptions (who have understood the true nature of inebriety), been treated as if they must have been specially vicious and depraved persons to have become units in the vast army of the drunken. Proceeding on the same lines, efforts at the reclamation of the tippler have generally been limited to religious exhortation, and to the administration of the teetotal pledge,—in other words, to the moral and spiritual, to the exclusion of the physical, disorder. What has been the result? Enormous numbers of drunkards have taken this pledge, only a comparatively small minority of whom have remained steadfast in their disuse of intoxicants.

Moreover, notwithstanding all the brave and gallant

* Read to the International Congress against the Abuse of Alcoholic Drinks, held at Antwerp, Sept. 12, 1885.

efforts of the warriors in the cold-water army, drinking to excess goes on merrily apace ; insobriety, while somewhat decreasing among men, has been terribly increasing among women. This is a state of things pregnant with yet deeper ills to coming generations, for, by the advancing intemperance of the mothers of the future, our successors, endowed from their birth with an inborn tendency to excess, cannot fail, from their heightened nervous susceptibility and their diminished will power, to be less fitly equipped to do battle with their inherited proclivities, and with the temptations to drinking which the tyrant customs of society, the sacred sanction of the Christian Church, and unrighteous legislation by the State, cause so to abound on every side.

Why, after having done so much, has abstinence accomplished comparatively so little during the past fifty years of its august and active propaganda ? Whence has arisen this legislative inaction, or rather wrong action, for most of the acts hitherto passed by the British Parliament have been based on the mistaken lines to which I have alluded ? The reason is not far to seek. Both moral and legal reforms have, as a whole, been so engrossed in temperance work on an extensive scale, carried away with the pleasing notion that there is a short cut, a royal road, to sobriety, that they have never bestowed a moment's thought on the rise and progress of inebriety in the individual.

"Why do men and women become drunkards ?" Many are content with the epigrammatic reply, "Because they drink." Very true, so far as it goes, but this is only half the curriculum of education in confirmed intoxication. The inquiry which has been omitted, an inquiry essential to a proper understanding of the most effectual means of prevention and cure, is, "Why do men and women TAKE TO DRINK ?"

If philanthropists, Christians, temperance reformers, and statesmen had appreciated the teaching of that far-seeing pioneer of temperance, Dr. Benjamin Rush of Philadelphia, one hundred years ago, they would have realized the physical character of intemperance ; they would have seen that

inebriety is often either a diseased condition in itself, or is the outcome of certain antecedent diseased conditions of body or brain.

The procedure of indignant reproach and excited appeals to the heart is incomplete, as it has been founded on a defective view of the genesis and development of the drinking habit. Inebriety has a physical as well as a moral and religious aspect. In whatever form it appears, it is always partly physical, inasmuch as, without the intervention of a material intoxicating agent, there can be no intoxication.

In many instances it is at first purely physical; as, for example, in the inheritors of the drink diathesis, the individuals weighted with which are, as it were, so seared with the red-hot iron of alcoholic heredity, that all their life long they are unable to drink any intoxicating liquor in moderation. If these drink at all they drink to drunkenness.

A society, of which I have the honor to be president, was founded in England last year for the elucidation of the causes of intemperance in the individual, under the title of the "Society for the Study and Cure of Inebriety." It consists of members who are medical men, and of associates who are ladies and gentlemen not belonging to the profession of medicine. Among the former are some of our best known physicians and surgeons, and many leading temperance reformers are among the latter. The papers already read, as published in the quarterly numbers of the proceedings, afford ground for hope that a fuller and more accurate knowledge of the etiology of inebriety will ere long be acquired, a study which has been carried vigorously on for the past fifteen years by the American Association for the Cure of Inebriates.

Broadly, inebriates may be ranged under four classes.

I. The common sot, who never refuses to drink, and drinks any kind of liquor, as much and as often as he has the opportunity. By many this ordinary drunkard is regarded but as a vicious fool. He is not necessarily so by any means. He, (and alas, too often she,) may be a person of

gentle heart and unselfish disposition, who, no matter how frequently he is guilty of excessive indulgence, as frequently repents and loathes the bonds that drag him to his doom. Not unseldom the mental powers are deficient from birth; in very truth, as in popular language, he is a "born idiot." If not afflicted with idiocy, he is still oftener endowed with insufficient control, and thus has little ability to resist the narcotizing power of the magic potion. In such cases,—and they are numerous,—drunkenness has a physical origin.

II. Others resort to drink only on the recurrence of an attack of insanity. These are not insane through drink, but become drunken through insanity. When sane they are perfectly sober; when insane they drink to insobriety. In their lucid intervals they are strictly temperate in their habits, and well-conducted in their walk and conversation. The drunken outburst is but the mode in which their recurrent madness is manifested. Here, again, drunkenness springs from physical causes.

III. Others,—and this is an extensive class,—lapse into inebriety through the effects of actual poisoning of the bodily and mental man by alcohol. Alcohol is an irritant, narcotic poison, poisonous alike to the intelligence and to the material frame. Inebriety may result as a *sequela* of alcoholic disease of the brain, or of its membranes, or of some other organ or tissue. It may also be the direct consequence of the disturbing influence of this poisonous agent on the cerebral and nervous centers. In the first case, inebriety is the issue of bodily disease; in the second case, it is itself a form of disease. In both these groups inebriety has a physical origin.

IV. The operation of no natural law is more patent than is the operation of the law of alcoholic heredity. The drunken mother, the drunken father, or a drunken grandparent, may hand down to their descendants an alcoholic stain which not even a lifetime of entire abstinence from intoxicating drinks can eradicate. I have known men and women of the highest culture and the most irreproachable

morals, of strong will and deep thought, of unaffected piety and exalted aim, who have been compelled by bitter experience to acknowledge to themselves the saddening fact that they could never dare to dally with strong drink. The continuous and victorious struggle of such heroic souls with their hereditary enemy,—an enemy the more powerful because ever leading its treacherous life within their breasts,—presents to my mind such a glorious conflict, such an august spectacle, as should evoke the highest efforts of the painter and the sculptor. Before so protracted and so lofty a combat, the immortal group of Laocoön contending with the serpents, grand though that great work of art is, must pale its ineffectual fires.

In this comprehensive group of cases of habitual drunkenness, with an inherited predisposition, inebriety has also a physical beginning.

Only of late years has an attempt been made to conduct the treatment of inebriety as the enlightened physician would order the treatment of any other disease. In America, where, as we have already seen, Dr. Benjamin Rush pointed out the way, the disease aspect has been recognized, and, to the credit of their legislation be it recorded, many large homes are supported in great part at the public expense, where the poorest male or female habitual drunkard, either on his own application or on the application of others, may be treated with a view to cure. The results have been, on the whole, encouraging. Of 600 cases treated at the Home at Fort Hamilton, New York, the after history of which has been ascertained, about one-third are reported to have done well.

In the British Colonies something has also been done. The Melbourne Retreat, for instance, has discharged a number of patients during the eleven years of its existence, with a cheery tale of decided improvement.

In England, Scotland, and Ireland, very little has been attempted on behalf of the diseased inebriate, and that little only very incomplete, either by voluntary effort or by the

State. A temporary measure, entitled the Habitual Drunkards Act, which will expire in five years, has been enacted. No power of compulsory committal of an inebriate to a Home has been given. Entrance must be voluntary, and the application of an inebriate for admission into a Retreat is made very formidable indeed by having to make a declaration before two justices that he or she is an habitual drunkard, is desirous of being received into a home in which he or she undertakes to remain, and surrenders his or her liberty for any period not exceeding twelve months. A statutory declaration, signed by two persons, must also be produced, stating that the applicant is an habitual drunkard within the meaning of the act. In the case of females especially all this procedure before magistrates is a strong deterrent to requests for admission.

For years past there have been several private homes for the reception of male and female inebriates, some of which have been genuine efforts at reformation and cure, and have, to my personal knowledge, done considerable good. There are also five Retreats at present licensed under the Habitual Drunkards Act. The Government Inspector, in his fifth annual report, just issued, states that, as a general rule, the Retreats have worked well. The only attempt to present the particulars and results of each case treated, in such a form as to prove of permanent value, will be found in the report of the first fifteen months' working of the Dalrymple Home for Inebriates at Rickmansworth (about twenty miles from London). This is the only institution of the kind which is conducted without personal profit to the proprietors, being owned by an association no member of which can derive any pecuniary return from the undertaking, and is, at the same time, licensed under the Act. The Home was established for the purpose of giving the Act a fair trial, with no private interests involved in its financial success or failure, and under such conditions as are calculated to secure the highest degree of trustworthiness and enlightened supervision. The Government Inspector declares the report of the Superintendent

to be "very satisfactory," the "success of this Retreat to be very marked," and thinks that "it may well form a model for similar establishments which may be opened in future."

Patients are received privately as well as under the Act. Forty-nine have been admitted in all.

Education.—All but one had been well educated, 8 having passed through a college curriculum. *Marriage.*—26 were married, 20 single, and 3 widowers. *Occupation.*—13 were gentlemen of fortune. There were 7 civil servants, 4 lawyers, 4 medical men, 4 clerks, 1 librarian, and the remainder were engaged in commercial pursuits. *Heredity.*—In 25 cases there had been inebriety in the family; in 6, either father or mother; in 5, grandparents; in 7, brothers; and in 7, uncles. In the remaining 24 cases, it must not be supposed that there had been no hereditary predisposition. All we can say is that we have been able to hear of no record of the kind. *Insanity.*—In 6 cases insanity had been known to have been present in the progenitors. *Associate Habits.*—43 used, and 4 did not use, tobacco; 2 were addicted to chloral. *Drinking Habits.*—25 were regular and constant, or 24 periodical inebriates.

Frequency of Periods.—4 of the latter had on an average an outbreak every week, 1 every 2 weeks, 1 every 3 weeks, 3 every 4 weeks, 4 every 6 weeks, 6 every 2 months, and 4 every 3 months. The average time during which the habit had been going on was $8\frac{1}{2}$ years. *Delirium Tremens.*—9 had had one attack previously, 3 two attacks, 2 three attacks, and 1 five attacks. *Exciting Cause.*—In 18 social drinking, in 15 nerve shock from domestic business, or financial worry, in 6 idleness, and in 4 special temptations of their calling. *Complicating Diseases.*—31 had none, 4 had syphilis, 3 gout, 3 phthisis, 1 rheumatism, 3 dyspepsia, 2 chest troubles, 1 stricture. *Discharges.*—26 had left from efflux of time, 3 from illness, and 3 who were found not to be amenable to treatment.

After History.—1 had become insane, 3 had died, 1 was not heard from, 1 was re-admitted, 6 were unimproved, 6 were improved, and 14 were doing well. In other words 50 per cent. of the survivors had been enabled once again to

fulfill their duties in life, while 20 per cent. more had been improved. Though, from the brief space of time which has elapsed since the opening of the Home, it would be unwise to speak with confidence of the proportion of permanent cures, the results as yet attained have been so far beyond what any one had ventured to hope for, that the friends of the victims of strong drink have good reason for encouragement in their endeavors to raise the fallen and strengthen the feeble.

There ought to be improved legislation. There is a class of inebriates on whom, as —

“On the impassive ice the lightning plays,”

all advice and aid seem utterly wasted, who, in short, appear to be not amenable to treatment. Though I look upon no case as absolutely without hope, these are practically beyond the pale of remedial care under the present legislative provisions, and require at least three to four years' seclusion from temptation.

For such, and for the not inconsiderable number of inebriates who will never of their own free will enter any institution, and submit themselves to discipline, it is desirable that magistrates, or some other authority should be invested with the power of compulsory committal.

The path leading to the Home should, too, be made as inviting and as easy as possible to the drunkard desirous of cure. This can be done by dispensing (in the case of voluntary entrance) with the appearance before justices. Means, by inspection and investigation, might easily be adopted to prevent any abuse of the powers of either committal or detention, which latter ought to be considerably increased.

For the rich there would rapidly be provided ample accommodation, and for the poor, in the interests of the sufferer, as well as for the protection of the community, Homes ought to be established where both males and females could be received, the deficit, after the produce of whose earnings, being made good at the public expense. This would be a saving to the community, for it is much cheaper to prevent than to punish.

It would be well, in addition, to place all Homes for Inebriates, like Asylums for the Insane, under government visitation, a plan which would afford an effectual reply to any complaints, and be a safeguard against cruelty on the one hand and lax management on the other.

The terrible extent of habitual drunkenness which we see over most of the civilized world is a reproach to good government, and a standing menace to public order. The philosophy of inebriety lies in a nutshell. Alcohol is an irritant, narcotic poison, and in intoxicating liquors is present in such proportion as tends to distort the mental vision, disturb the reason, and enervate the will. The great majority of drinkers, happily, are able to resist the full strength of the alcoholic invader, and, though many may suffer in bodily infirmity from his ravages on the person, can stop, at various stages, short of confirmed drunkenness. But vast numbers have not this power of resistance, and, either from inherited alcoholism or from a transmitted feebleness of resolution, go down like chaff before the victorious progress of the foe. These fall by the operation of natural law, because they are susceptible to the benumbing influence of the poison, and are, physically speaking, truly "weak brethren." Your inebriates are the sad, though sure, outcome of your drinking customs, your ecclesiastical patronage of a narcotic poison, and your legalized public temptations to indulgence. Let the community, the Church, and the State once master the truth that intoxicating drinks are material poisons, affecting human beings as other poisons do, in varying degrees, according to the idiosyncracies of the individual; and effectual remedies, social, ecclesiastical, and legal, will soon be adopted, which will steadily lessen the evils arising from the common use and sale of intoxicants. Meanwhile, the afflicted through alcohol are with us, the legitimate fruit of our perilous habits and our muddling statecraft; and, as a simple matter of equity and fairness, we are bound in honor to do everything that within us lies to supply ample and rational opportunities of reformation and cure to the very feeblest of the victims of our self-indulgence and our sensuality.

JUDICIAL RECOGNITION OF INEBRIETY AND MORAL INSANITY IN CRIME.

The following opinion of Judge Robertson of the Court of Appeals of Kentucky, in the case of *Smith v. Commonwealth*, tried in 1864, outlines many facts, which a quarter of a century of farther study has fully confirmed. Smith, an inebriate, was tried, convicted, and sentenced to be hung, for the murder of Landaur. An appeal was taken for reversal, and on this the judge decided. "The judge of the lower court instructed the jury, 'that, in case of homicide without any provocation, the fact of drunkenness is entitled to no consideration, and that temporary insanity which has followed as the immediate result of voluntary drinking to intoxication is no excuse for crime.' In all this we cannot concur. If a man designing a homicide drink to intoxication, either to incite his animal courage or prepare some excuse, the killing will be murder. But if sensual gratification or social hilarity, without any premeditated crime, induced the drinking, surely his condition may be such as to reduce even an unprovoked homicide from murder to manslaughter. And if transient insanity ensue, although it should not altogether excuse, yet it should mitigate, the crime of the inevitable act. There was testimony in this case tending to show that the appellant, when he killed Landaur, was intoxicated, and also that such a condition superinduced moral insanity, and the jury had a right to weigh that testimony and determine, not only the fact of intoxication, but its actual effect on the mind and will, and consequently on the conduct of the appellant. Had they believed that it was neither simulated nor malicious, but without even producing momentary insanity, prompted a homicide which otherwise would not have been perpetrated, they had a right to decide that the act was not so criminal as murder; and if, especially, they had been satisfied that the act was the offspring of momentary insanity, they could

not, as conscientious triers, have doomed such a victim to the gallows. The instructions tacitly concede that permanent insanity produced by drunkenness may excuse a homicide, and this, contrary to the ancient doctrine, is now universally conceded to be American law. And why is it law? Only because no insane man is responsible for insane acts. And why should an insane act, prompted by transient insanity, have no exculpatory or mitigating effect on the question of crime or its grade? In Lord Coke's day a man could not avoid a contract on a plea of insanity or incapacitating drunkenness. That absurdity has been long exploded. And why should its spurious twin—that drunkenness, whatever may be its effect, is no excuse for crime—be still recognized as law in this improved age of a more enlightened and homogeneous jurisprudence?

“We conclude that this instruction did not clearly and distinctly embody the true modern law, and may have been, therefore, prejudicial to the appellant. The next instruction we shall consider is the following, as given to the jury: ‘When the jury, from the evidence, entertain a rational doubt on the question of insanity, they should always find in favor of sanity.’ This, too, is not now either altogether or always a consistent and true doctrine. Can it be possible that, here and now, a jury is bound to hang a man for murder when they naturally and strongly doubt his capacity to commit any crime? The ‘rational doubt,’ which should result in an acquittal, lest an innocent man might be unjustly punished, is a doubt as to all or any one of the constituent elements essential to legal responsibility or punishable guilt, and, unless they all concur, acquittal is the legal consequence. As a sound and responsible mind is indispensable to such guilt, why should not a strong and rational doubt of the capacity to commit the imputed crime favor the acquittal of the accused? It is true that, *prima facie*, every man is presumed to be sane, and, therefore, the burden of proof to rebut this presumption devolves on the party claiming the benefit of the plea of insanity. But so, too, in like manner,

every man charged with crime is presumed innocent, and will be so held, until the commonwealth shall rebut that presumption.

“But if the testimony for rebutting it should leave room for a rational doubt of guilt, ‘not guilty’ is the verdict of the law. Why, if the evidence of insanity is strongly preponderating, should not the presumption of sanity be rebutted, and why should the jury be bound to find sanity merely because insanity has not been proved with such absolute certainty as to exclude a rational doubt? If this be their duty, then, in all cases of partial insanity, a case could be scarcely imagined, and perhaps may never arise, in which a plea of insanity can be made available. A doubt of sanity is essentially different from a doubt of insanity—the former should always avail, the latter never. When the proof of insanity is ever so strong, there may, and generally will, be a doubt whether, nevertheless, the accused was not sane. This is a doubt of sanity which should never convict, but should always acquit. ‘Belief’ is of different degrees of certainty and assurance. On such a metaphysical question as that of partial insanity, no proof of it can impress the jury with moral certainty. The preponderating probability of insanity may be as assuring as that on which they individually act in the affairs of ordinary life, and, therefore, they may be said to ‘believe’ the alleged insanity, and yet may feel some rational doubt of it. Such a doubt in such belief may compel a rational doubt of responsible sanity; and, so doubting, the jury ought not to convict. But when the evidence strongly preponderates in favor of sanity, a doubt whether, nevertheless, the accused was not insane should never acquit. And that is what we mean by a doubt of insanity. The instruction does not discriminate between the two classes of cases, but compounds them, and it was therefore misleading. And this conclusion is not at all inconsistent with the principle of the case of *Graham v. Commonwealth*. In that case the instructions, adjudged indefensible, assumed the sufficiency of a doubt of insanity, not of sanity, and the decision

of the question thus propounded was all that was judicial in the case. The last instruction we shall notice is in the following words: 'To establish a defense on the ground of insanity, the accused must prove that, at the time of the killing, he was laboring under such defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing, or, if he did know it, he did not know he was doing wrong.'

"All this may be true in most cases of intellectual insanity. This species of insanity, as first defined by Erskine, and illustrated by the sustained verdict in Hadfield's case, 'is delusion,' arising from a partial eclipse of the reason, or from a morbid perversion of the percipient faculties which present to the abnormal mind as accredited realities, images of objects that have no actual existence, or a false and distorted aspect of existing objects. Whether the true theory of the human mind be psychological or only physiological, spiritual or material, man is certainly so constituted as to be compelled to believe the testimony of his own senses. This is the ultimate test of all human knowledge, and necessarily has the force and certainty of intuition, which no reasoning can overcome or impair. An intellectual monomaniac may reason logically, but he reasons from false premises which his morbid mind assumes, with intuitive confidence, to be undoubtedly true. His false conclusion may result, not from 'defective reason,' as assumed in the instruction, but from an insane assumption of false premises. To punish a homicide, committed by the insane victim of such delusions, and under its resistless influence, would be punishing for what every other man in the same condition would ever do in defiance of all penal consequences; and, therefore, such punishment would be useless, and inconsistent with the preventive aim of all criminal jurisprudence. Although he had an abstract knowledge of 'right and wrong,' and knew that crime is justly punishable, nevertheless he did not know that his act was criminal, but felt sure that it was lawful and righteous. But if he knew that he was doing wrong, he was not

impelled by delusion, and his act was criminal. As the intellectual was the only species of monomania recognized for many years after the trial of Hadfield, the doctrine repeated in this instruction, excepting only the 'defect of reason,' which it seems to presuppose, was established as applicable to all pleas of insanity in criminal cases; and until lately it had been applied to a class of cases which are not within the scope of its philosophy. Moral insanity is now as well understood by medico-jurists, and almost as well established by judicial recognition, as the intellectual form. Mentally, man is a dualism consisting of an intellectual and moral nature. It is this peculiar nature that exalts him above the animal, and makes him legally and morally a responsible being. The animal has neither reason to guide nor a moral will to control its passions. Passion governs and instinct alone guides its conduct. It is, therefore, not responsible to the criminal law. But a proper man in a sound and moral state, with *a mens sano in corpore sano*, has peculiarly and pre-eminently the light of reason to guide him in his pathway of duty, and also has a free and rational presiding will to enable him, if he so choose, to keep that way in defiance of all passion and temptation. It is this intellectual and moral nature alone that makes him, in the probationary sense, a man, and holds him responsible for his voluntary conduct. And it would be as useless and cruel to hold him accountable, either criminally or morally, for an act done without a free, rational, and concurrent will, as it would be if his reason had been in total eclipse. The common law progresses with all other sciences with which it is affiliated, as a growing and consistent whole, and consequently, as the science of man's moral nature has developed the phenomenon of insane affections, emotions, and passions, which either neutralize or subjugate the will, medical jurisprudence recognizes this morbid and overwhelming influence as moral insanity, and pronounces it as exculpatory as the other form called intellectual insanity. No enlightened jurist now doubts the existence of such a type of moral, contradistinguished from intellectual,

insanity as homicidal mania, or morbid and uncontrollable appetite for man-killing, and pyromania, or the like passion for house burning, and kleptomania, or an irresistible inclination to steal. In each of these cases, and others of a kindred character, whether the unnatural passion be congenital or only the offspring of some subservient cause, moral unhingement and subjugated or subsidized will are the invariable characteristics. This is disease, and the man thus doomed to the anarchy of morbid and ungovernable passions is, in law, as well as in fact, insane, and to the extent of the operation of that blind and brutal influence, he may be no more responsible than a tiger or other brute. But if his sanity extend no further than a morbid perversion and preternatural power of insane passion or emotion, he not only 'knows right from wrong,' but knows also that the act he is impelled to do is forbidden both by moral and human law. Yet, nevertheless, his will being paralyzed or subordinated, the uncontrollable appetite necessitates an act which he knows to be wrong and justly punishable. But as he was a helpless puppet in the hands of Briarean passions, he is no more a fit subject for punishment than an animal without a controlling will, or than he, himself, would have been, had he never been blessed with that moral pilot of the passions.

"The instruction, as given, excluded any such insanity from the jury. The instruction given by the circuit judge in the case of *Graham vs. Commonwealth*, was much more comprehensive—as nearly right as any we have seen on that subject, in any case. It was as follows: 'The true test of responsibility is, whether the accused had sufficient reason to know right from wrong, and whether or not he had sufficient power of control to govern his action.'

"The instruction we have been considering in this case was therefore not only inapplicable to the species of insanity relied on by the appellant, but was radically defective in principle. We conclude that the verdict and judgment in this case ought not to stand. Therefore the judgment is reversed, the verdict set aside, and the cause remanded for a new trial."

Abstracts and Reviews.

FORMS OF ALCOHOLIC INSANITY.

The late M. Lasèque of Paris, in a monograph on alcoholic studies, describes an intermediate form of alcoholism, between acute and chronic, which he calls sub-acute alcoholism. This is marked by a peculiar delirium and trembling palsy, a restlessness, and continuous insomnia associated with digestive troubles, etc., etc. The patient feels that he must move with the impulses of his delusion; he must act upon every conception of his imagination, no matter what it may be; he must enter into conflict with his imaginary enemies, must do what he can to stay their intrigues; he has hallucinations of sight which he acts upon with promptness; when he fails and becomes conscious of it, seeks escape by suicide. He draws a distinction between this form of alcoholic delirium and delirium of persecution, so called; in one hallucination at first prominent. In the delirium of persecution seen in the latter, the patient is pursued by sad thoughts, but is exempt from terrors. Each one of the fancies or ideas which torment them, have passed into a state of accomplished facts: his disturbances are retrospective; he does not expect anything he recalls, and suffers from troubles of the past. The alcoholic melancholic is constantly menaced by bad thoughts; he is terrified and trembles, lives in continual fear and dread of the future; he may be compared to a person accused and dreading sentence. The other to those already condemned and living over the past. He draws some distinctions between the dream state and alcoholic delirium. The dream follows a natural delirium, and is only an elaboration of a series of pathological thoughts. The ideas of an awakened alcoholic are only a continuation of the ideas commenced during the

dream. He compares alcoholic delirium to a natural dream brought about by no extraneous influence. In both these states nothing but visual hallucinations are recognized. Like any other dreamer, the alcoholic is in an incessant physical and mental movement during this crisis; he tells long stories with confused and illogical form or shape; he deals with facts, never with reflections; he has no surprise, and makes no analysis of his own state or what will happen in the future; no recriminations of his persecutors or what they will do, is remembered. Like a dream, this alcoholic delirium passes away and is forgotten. As in a dream, this alcoholic state can be suddenly checked or suspended by the intervention of a powerful emotion.

He says that dipsomania bears the same relation to alcoholism as hysteria does to epilepsy.

INEBRIETY AND MALARIA.

Dr. Griswold of Manchester, Ct., in a series of very interesting papers on Malaria in its relations to other diseases, published in the *New England Monthly*, groups many curious and suggestive facts on the above topic. He says: "Malarial poisoning, when combined with unhygienic surroundings, as close, badly ventilated, overcrowded tenements, insufficient and improperly cooked food, prolonged and exhausting mental labor, and the worry and anxiety incident to a life of poverty is one of the most active agents for the creation of an abnormal appetite for drink."

Two cases are mentioned in which malaria preceded the inebriety. In one, when the malaria was checked, his desire for alcohol stopped. In the other, excessive drinking always followed the paroxysms of ague. Bird's remark is quoted: "That drunkards abound in damp and badly drained localities by the same law that they abound in uncomfortable lodging-houses and badly ventilated tenements." Dr. Gray of the Utica Asylum, writes to the author of these papers as follows: "A disposition to drink in chronic malarial poison-

ing, might often be accounted for, on the theory of relief from suffering, and a desire on the part of the unfortunate victim to substitute for the state of mental depression, so common in malaria, one of mental exhilaration. Thus, the onset of a debauch might be precipitated by a fresh attack of malaria."

Dr. Mason of Fort Hamilton Asylum, writes "that any depressing or enervating cause, as chronic malarial poisoning, would predispose to as well as prove an exciting cause of alcoholic inebriety."

Dr. Wright of Bellefontaine, Ohio, writes: "I have no hesitation in declaring that there is frequently a direct connection as a matter of cause and effect, between the malarious influences upon the constitution, and the development of the unmanageable craving for alcoholic intoxication, and I am of the opinion that malaria often operates as a powerful cause in the production of dipsomania."

Dr. Day, of the Washington Home of Boston, Mass., writes: "Malaria is the cause of alcoholic craving in many cases. Patients who come from malarious districts are of a different type from those of other localities. I also find more excessive inebriety coming from unhealthy habitations, where poisonous gases are known to exist. Those who are brought up in non-malarial districts, in clean, well-ventilated houses, are less likely to suffer from inebriety."

Dr. Crothers writes: "The connection between malaria and dipsomania, as cause and effect, is a well-established fact. Chronic malarial poisoning will in certain cases create nerve exhaustion for which alcohol is the only remedy or source of relief. Confirmed inebriates rarely have malaria, but when they are associated, one intensifies the other."

To this we would add that the periodicity and paroxysmal character of dipsomania has many features in common with the chills and fever of malaria. Dr. Wall, who had many years experience in India, affirmed that inebriety in malarious districts always took on a dipsomaniacal type. Dr. Holt of Georgia, wrote long ago "that ordinary moderate drinkers,

whenever they became infected with malaria, their drinking assumed a periodical, paroxysmal, and dipsomaniac form."

It would be a question of much interest to determine whether the moderate drinker would always grow into this form of inebriety from the presence of malaria. It may be considered as established that malaria is always a predisposing cause of inebriety. The practical fact to be remembered is the danger of using alcohol as a remedy in such cases. Given a defective inheritance from insanity, phthisis, epilepsy, inebriety, or any general nerve or brain disease, with malaria, treated with quinine and alcohol, and the result in inebriety is a matter of great certainty. Excepting two short papers published in the *Medical and Surgical Reporter* of Philadelphia, some years ago, with notes of cases from my records, this is the first discussion of this subject. We especially commend this to our southern readers, as one of the many unknown fields awaiting discovery.

APHONIA FROM INEBRIETY.

Dr. Morgan, in a paper published in the *Journal of the American Medical Association*, gives two cases of this affection. He refers to the literature showing that it has been noticed as far back as 1761 by Morgagni, who speaks of alcoholism as a cause of aphonia, and particularly of the central lesion giving rise to this trouble. Other references are made to show that it has been noticed by different observers. Dr. Cohen thinks it comes from the exposure, muscular relaxation, and lowered vitality following inebriety. Other writers suppose it is only one of the many palsies, which may appear in the various muscles of the throat and larynx, or that it is a reflex from some central nerve lesion. Undoubtedly it acts very much as other poisons do which affect the throat and voice. Dr. Morgan's remark that these cases are more common than the scanty literature would indicate is confirmed by all who are treating these cases. In our experience about ten per cent. of all cases suffer from this paralysis of the lateral

crico-arytenoids. Often it is very transient, and disappears in a few days; in other cases it lasts a longer time. The treatment, most effectual, seems to be active catharsis, and cold applications on the outside of the throat. All internal medication and electrical currents have not been satisfactory.

The removal of alcohol and building up the system, is always followed by a disappearance of this affection. It will be found in most cases that aphonia is associated with other palsies of different parts of the body which escape attention at the time, but come out when this passes away. Bronchitis or laryngitis are the usual associate affections, and often the hearing is disturbed and lessened, and catarrh is also present. When erysipelas and rheumatism are present, the prognosis is more difficult, but usually the future of the case is promising. This subject should receive more careful study and clinical observation before it can be well understood.

INTOXICANTS IN INDIA.

The *Dublin Review* for July, has a long article on Intoxicants and their revenues in India, from which we gather some interesting facts. India is one of the very few countries in the world where the introduction and sale of foreign liquors has never succeeded. The English-born residents use beer and wine, and some of the higher classes of natives; but the great mass of the population who drink, use fresh, native spirits, distilled from palm juice and rice.

The Hindoo, as a rule, does not drink, and the orthodox Hindoo is always a total abstainer, although he may use opium and smoke ganga-root. The manufacture of these spirits is regulated by law; in former times it was done by government, now the right to distil is sold at auction to the highest bidder. All distilling must be done in day time, and only one still is allowed for every ten thousand inhabitants, and no spirits can be sold at any other place. The palm and rice are so abundant that distilling can be quickly

done, and the spirits are always fresh and less intoxicating than older liquors of other countries. Since 1880, the number of distilleries have decreased: evidently the business is not so profitable. The government control is very severe and exact. It is estimated that over forty per cent. of the better classes are total abstainers from religious scruples. The class who drink seem to seek the narcotic effect in drunkenness at once, hence the drink is excessive. The gunga plant is smoked, and is taxed by the government in the same way as spirits, houses being licensed for its sale. Its effect, in causing rapid intoxication, is found to be more pernicious than alcoholic spirits or opium. A large per cent. of the insane admitted to asylums, become so from the use of this plant.

The *India Medical Gazette* mentions the great frequency of criminal assaults lately noticed in Bombay, where the assailants were under the influence of this drug. The very low price of this intoxicant makes it readily procurable by the lower classes. The delirium it produces has a certain fascination to many persons who use it. But unlike opium, it leaves the brain in an exceedingly sensitive and unstable state, ready at any moment to revenge real or imaginary injuries, or take offense from any cause. The frequency of these assaults has called attention of the government to devise some means to stop the sale, and control these victims.

Opium is cultivated under strict government supervision. In 1883, 876,454 acres of land were used for cultivating this drug, and the product was 8,071,120 lbs. of crude opium. Most of the land is used for a second and third crop of Indian corn, or other grain, the same year. The use of opium among the poorer classes is rarely excessive, but among the wealthier people abuses exist. The idea prevails that it is a drug of great value, and it is used in nearly all ailments, both externally and internally. A commission appointed to examine the revenue reports declared that the use of intoxicants had not increased in proportion to the population and increase of wealth.

The Seventeenth Annual Report of the Inebriates' Home of Fort Hamilton, New York, by the president, Hon. G. G. Heaman, is out. From it we learn that in 1884, three hundred and forty-four patients were admitted; this with the number under treatment at the beginning of the year made a sum total of 471 persons treated during the year.

On the 31st of December, 1884, there were 134 patients remaining in the institution, viz.: 53 boarders and 81 indigent poor.

During the year 4 patients have died in the Home, 2 were transferred to hospitals, and 3 to the lunatic asylum; 328 left during the year; 138 of these are engaged in business and doing well; 49 unimproved; 78 have been lost sight of; 55 were re-admissions; 7 have died since leaving the institution. Among the tables given, the following are suggestive:

SOCIAL CONDITION.

Males: married, 213; widowers, 23; single, 172; total, 408. Females: married, 50; widows, 11; single, 2; total, 63. Grand total, 471.

APPROXIMATION OF AGES.

Under 20 years, . . . 2	40 to 50 years, . . . 141
20 to 30 " . . . 87	50 to 60 " . . . 64
30 to 40 " . . . 166	60 to 70 " . . . 11
Total,	471.

The oldest patient was 70 years; the youngest patient was 19 years. The following extracts from the president's remarks are worthy of note:

"By a comparison of the statistics of this year with those of 1883, it appears that there were a less number under treatment, but the average time of stay was somewhat lengthened. The number of re-admissions was considerably lessened, which latter is in itself a great gain, as the re-admissions usually consist of those coming and remaining but a short time simply to recuperate and with no intention to reform.

"To such a class but little permanent good can be done, and they are very objectionable people to have as associates for others.

“With the present capacity of the building, the longer each remains the less the number that can be accommodated, as the institution has been filled to its utmost capacity during the whole year, and admission could only be obtained by waiting for a vacancy to occur.

“The trustees have already made arrangements to enlarge the building, which will probably be completed by spring, thus considerably increasing the capacities of the institution for the care and maintenance of free patients.

“The usefulness and necessity of this institution is thus abundantly proven; its reputation is now world-wide, and it draws its inmates from all parts of the United States, and also from Europe, and we believe that to-day it is the best institution of its kind existing.

“The necessity for such hospitals is now generally acknowledged, and it is stated by the best authorities ‘that at least thirty-eight per cent. of all cases of inebriety that come under treatment in inebriate asylums, are cured.’

“Inebriate hospitals have demonstrated some facts at least which cannot be gainsaid; many intemperate men who have entered them voluntary and conformed to their teachings, have gone forth to the world stronger and better than before and are still pursuing sober and useful lives in at least the proportion as stated. One man out of three has been saved, and this against strong adverse circumstances in most cases.

“It has been shown also that there are not a few cases of incurable inebriates which may remain quietly and soberly within an institution, for years together, and thus shield themselves from risk of debauch, and their families from annoyance and danger.

“It has also been proven that inebriate asylums are a constant rebuke and warning to the people on the subject, which has a deterrent influence in favor of temperance.

“These facts, taken together with the fact that inebriate asylums and homes record about a third of their cases restored, and that public sentiment is strengthening every

day in favor of sobriety, there should be no discouragement from any quarter, nor rivalry between different methods, other than that which is born of high purpose and earnest effort to accomplish the most good for the individual and the general public."

The officers of this hospital are the well-known Dr. Blanchard as superintendent, Dr. Barker as assistant, and Dr. Mason as consulting physician.

Inebriism: a pathological and psychological study, by T. L. Wright, M. D., Bellefontaine, Ohio, 1885. Our readers are already familiar with portions of this work, which have been published in the JOURNAL during the past year. In the flood of temperance literature, and the noise and shouting of this centennial temperance era, this little book comes as the still, small voice of science and truth, that will be heard when all the roar and noise of moral reformation will have died away. Future generations will regard with wonder the theories of this age, that all this drink insanity and its calamities should spring from a healthy mind and body, and be only a moral malady and disorder. Dr. Wright's book is a refutation of this theory, and may be said to mark another step forward in the evolution of the study of this subject. The pathological and psychological effects of alcohol on the organism are presented in a most suggestive way. Also many of the conditions from which this disease springs, which may be latent, or go on masked for years; then suddenly at any moment, spring into great activity from the application of some exciting cause. To those who are only acquainted with the popular scientific literature of the drink question, this book will be a revelation, and a new continent of facts not dreamed of before. They will realize that inebriety and its disasters can not be described by figures, or made clear by lectures or legislative acts. But, back of all this, where the subtile forces of life are massed and directed, the inebriate or the temperate man is made with as much certainty as the surface of the ground upon which the

raindrop falls determines whether it will empty into the Atlantic or Pacific. The object of the author to present the latest and most accurate conclusions of science on this topic is admirably accomplished. Superficial critics may find fault with the absence of classification and distinction of certain forms of alcoholic maladies, and also consider his minute descriptions of the degeneration from alcohol too sweeping, and only true in certain cases. But in this they will overlook the fact that Dr. Wright's book is a pioneer effort, and of necessity can only be an outline study, which will require long years of observation to perfect and complete. The philosophy of this work was recognized eight years ago, in the birth of the *JOURNAL OF INEBRIETY*. What the *JOURNAL* has aimed to do for these eight years, viz.: the gathering and grouping of the facts of science on this topic, Dr. Wright has done in this volume. The philosophy and principles of this book are old as the centuries, and Dr. Wright comes forward as an organizer of these facts, placing them on a practical basis, where they can be utilized and made available in the efforts to comprehend this disorder. Like Dr. Parrish's work, Dr. Wright carries the subject into wider fields, indicating boundaries and landmarks, of great undiscovered countries of laws and forces, that for centuries to come will be a most fascinating field for the psychologist. We query if Dr. Wright's little book will pass all unnoticed in the first stage of indifference which greets every new phase of science. Or will it find the second period of fierce denial and opposition, or will it come to the calm seas of acceptance as the last voice of science in one of the most important fields of progress? Whatever the history of this book may be, our readers will join us in saying that this is the best publication in print on this subject of inebriety and its cure.

Second Annual Report of the Hangchow Medical Mission Hospital for 1884: Shanghai Presbyterian Mission Press, 1885. This report is an account of the year's work, and an appeal for help and assistance to enlarge its operations.

4,707 patients have been treated during the year. The physician in charge, Dr. Main, devotes much space to the methods found valuable in the treatment of opium cases. He seems to have tried the American quack plan of curing opium smokers by pills of morphine and opium, and comes to the conclusion that the latter end is worse than the beginning, and opium smoking is a more curable condition than opium eating. He finds the heroic plan, or sudden "knocking off," preferable to the gradual weaning. He remarks: "I have never seen any bad results follow this mode of treatment, although patients have been admitted suffering from diarrhœa, dysentery, anæmia, and advanced phthisis. For the first few days, patients suffer from considerable uneasiness about the stomach, vomiting, diarrhœa, etc., but these symptoms soon pass off and the patient under simple tonic treatment makes steady progress towards recovery." The observations on opium mania are quite interesting, and it is evident that this large mission hospital is doing a good work, and should have the fullest support of all charitable persons. The doctor is also engaged in teaching a class of four students in medicine, who have made excellent progress in their studies. To those of the profession who are suffering for want of work, we commend such a mission hospital.

The Fifth Annual Report of the Inspector of Retreats in England, for 1884, shows a considerable improvement over previous years. The opinion of different managers of asylums are given: Thus Dr. Brown of the *Tower House* reports great success, thinks that nearly all of the fifty-six patients under his care for the year were greatly benefited, and many of them permanently. Dr. Ker of the *Coleman House* is positive that twelve months should be considered the minimum time in which any good results can be expected. Faults in the law of commitment are mentioned, and the inspector gives his views in some detail, leaving a very painful impression on the reader's mind, that the inebriate is regarded as a man whose liberty must be as little restricted as possible, and even this may be liable to many and serious abuses. It is evident

that inebriety must be better known in England before its hospital treatment can advance very far, or show permanent positive results.

Insomnia and other Disorders of Sleep, by Henry M. Lyman, M. D., Chicago, 1885; W. T. Keener, publisher. This work of two hundred and forty pages presents, in seven chapters, a suggestive discussion of the following topics. The nature and cause of sleep. Insomnia or wakefulness. Remedies for insomnia. Treatment for insomnia in particular diseases. Dreams. Somnambulism. Artificial somnambulism or hypnotism. The author gives in these pages an excellent summary of the accepted views of experts, and adds some very practical therapeutic hints on the treatment. A spirit of candor, accuracy, and genial culture marks every page, leaving a pleasant impression on the reader's mind. It may be truly said that this is one of the very few works that will repay the reader for his time and study. These border-land fields should receive more study before we can clear up many of the great mysteries which confront us on all sides.

What the Temperance Century has made Certain, is the title of a little book by Rev. W. T. Crafts, published by Funk & Wagnalls, New York City, price 35 cents. This same firm publish the *Homiletic Review*, a monthly magazine of religious thought and sermon literature. This furnishes to the scientific student, a most admirable review of the best thought of the pulpit, and will be found almost indispensable for every library where the moral march of the world is recorded.

Mothers and Daughters, a manual of the hygiene of women: by Mrs. Dr. Cook; Fowler & Wells Co., publishers, New York, 1884. This is a popular hand-book on the physiology and hygiene of women, fairly written, and contains a great deal of information. Unfortunately the writer makes a bad impression on the reader's mind for candor and scientific accuracy. The publishers have presented a very neat volume.

The Medical and Surgical Directory of the United States, published by R. L. Polk & Co., Ledger Building, Philadelphia, Pa., will be the largest and most complete ever printed. It will contain a full list of all physicians, showing where they graduated and where located, also every hospital and private asylum in the country, and a great variety of other medical information invaluable to physicians.

Perils of American Women, a doctor's talk with maiden, wife, and mother; by J. L. Austin, M.D., Boston, Mass.; Lee & Shepard, publishers, 1885. This is a most excellent non-professional work, addressed to women, and whatever it may lack in brevity, is made up fully in accuracy. The style is good, and commends itself as singularly free from misinformation and bad doctrines.

Dr. Mattison's paper on the "Treatment of the Opium Addiction," recently published in this journal, has appeared in a very attractive little volume from the press of G. P. Putnam's Sons, of New York. It is very gratifying to the author to find it so highly commended by the press and profession generally.

Dr. Searcy of Tuscaloosa, Ala., has issued, in pamphlet form, a very pleasing oration delivered before the medical association of his State, "On Success of Life," physiologically considered.

Sir Andrew Clark, in his Lumelian Lectures, considers alcohol very dangerous and injurious in fibroid phthisis. In this form of disease it will increase the tissue degeneration, and rapidly precipitate fatal conditions.

So familiar also is the drink crave, to gratify which, even for a moment, love, honor, truth, and duty are forgotten. This malady, which some would vainly persuade us is a vulgar vice, is often an inherited neurosis.—DR. YELLOWLEES.

Dr. Bauer of St. Louis, relates a case of an inebriate who turned from alcohol to cocaine, and has been using this to excess hyperdermatically. Literally a cocaine inebriate.

The *Scientific American* of New York, very pleasingly supplements the studies of the psychologists, by carrying him into new fields of progress and thought.

The *Popular Science Monthly* brings more suggestive thought for the scientists and scholar, than any other science journal in the language.

The *American Inventor* of Cincinnati, describes and illustrates the new inventions every month. It is interesting to trace the psychological bearings of these new efforts to grasp and apply practically the law of nature in the work of life.

The *Electrician and Electrical Engineer* of New York City, is a forty page, double column monthly. The following are some of the topics discussed in the late numbers: "Electric Railways in Practice;" "The Electric Light Convention;" "Underground Wires;" "The Calorimetric Measurement of Incandescent Lamps;" "Electric Light-houses;" "Electric Fire Arms;" "The Compass in Iron Ships;" "Measuring the Candle Power of Light," etc.

The *American Farmer*, by Charles L. Flint. R. H. Park & Co., Publishers, Hartford, Conn., 1885. This work is intended to be for the farmer what the dictionary is to the scholar. It may be called a library in which almost every topic relating to farm-life is presented in a clear practical way. The work is systematically arranged, and so divided that the exact information can be obtained at once without reading over other topics. To all our readers who manage either a farm or garden, who have stock and poultry, who cultivate trees, shrubbery, lawns, and who are interested in soils, motor farm powers, water, drainage, buildings, and every other topic relating to the home in the country, this work will be a most valuable advisor. All managers of asylums will find in this book practical facts of the greatest value. We commend it as a text-book on all topics concerning the farm, and farm-life. The work contains two thousand pages, well illustrated, and is issued in fine style. Address the publishers for circulars.

Editorial.

CRITICISMS.

WE have received several papers for publication, some containing sharp criticisms on the present temperance efforts, and others glowing accounts of the great work accomplished by the societies for temperance and prohibition, and the results to be achieved from temperance school books, educational and legislative efforts, etc. The controversial character of these papers prevent their publication in our JOURNAL. But we take this occasion to say that no one has recognized more keenly than we do the transient character of the present efforts to practically cure or prevent inebriety by legislative and moral means. But it will be apparent to every scientific student, that this is only a repetition of all new advances of truth; that the present efforts to reach this evil are the earlier empiric stages in which all sorts of theories and notions must prevail, to be followed by a full recognition of the truth farther on. It matters not what theories are held most largely at present, or their failure when tested practically; the student of science has no fears of the prevalence and growth of errors, as long as the subject is in a state of agitation. If prohibition is the only remedy, if the pledge and prayer will suffice, if education and legislation will reach and prevent this evil, the evidence, if true, upon which these theories must rest, will appear and be accepted beyond all question or doubt. As scientific men we seek only the facts, and agitation will surely bring them to the surface. Hence let every theory and means supposed to prevent and cure the inebriate, be pressed to its utmost limits. Let the faith and prayer cure for inebriety be tried everywhere. Take up every advertised specific and test it fully. Increase the penalties of the law, and enforce them, and in brief, let every

method be agitated and urged upon the public notice that can possibly promise relief. Of course the loss and suffering growing out of these abortive methods will be very great. Thousands of poor inebriates will be offered in sacrifice before the great truths are realized and made practical, but this is the history of every advance. We, who have studied the inebriate scientifically, and know that he is a sick man, not to be reached by moral remedies, have everything to gain by agitation, no matter what direction it may take. If the facts we have ascertained are true, they will be recognized and accepted in the future as positively as night follows day. While we deplore the errors and profound ignorance of the inebriate and his malady manifested in temperance circles, we rejoice at the prevailing activity and spirit of agitation which is growing in all directions. Every temperance sermon and lecture, every printed page, and effort of society or individuals brings us nearer the dawn of a new and larger realization of the disease of inebriety, and its cure by physical means.

HALLUCINATIONS IN INEBRIETY.

The following case was the subject of much discussion in a large circle of persons anxious to solve the mysteries of the future state. A. B., whose heredity was not ascertained, suffered from great depression and nervous fever, following the death of his wife, from which he slowly rallied. He was given spirits in various forms, and continued their use after he recovered. He had been a temperate man before, and was a merchant of good standing and intelligence. Within a year from the death of his wife, he was converted to spiritualism, and seemed a very ardent investigator. Later he heard voices at night, which after a time he distinguished as his wife's from the spirit land. The recollection was very pleasant, although he could not recall much that was said to him after. These voices increased in intensity, and his friends concluded that this was evidence of his larger spiritual growth, and nearness to spirit influences and life.

By and by, these voices grew threatening at first, and seemed to be those of persons seeking his ruin. Then they would change, and the voice of his wife came again with boastful assurances of his power and strength. These conversations, or rather replies to these voices, were delivered in a loud tone, and a select circle in an adjoining room were making rapturous notes of what was said. After a time he could not conduct his business without making mistakes, his memory was bad, he was nervous, unsteady, could not make out bills, or count money correctly. This his friends interpreted as efforts of the spirits to draw him from the sordid work of making money. A physician was called to prescribe for his general anæmia and loss of appetite. He found that he regularly took from one to three bottles of porter every day, and from four to six ounces of brandy every night at bed-time. Often this would be doubled before morning. He was ordered to stop the use of the brandy at night. But the second night after the voices were very wild and threatening. Black men armed with knives entered his room, and he became greatly excited. His attendants gave large doses of brandy, and gradually these enemies disappeared and his wife began to talk to him again. After a boastful conversation he fell asleep, and for two days after he was unable to leave the bed. His spiritualistic friends concluded that alcohol was the true agent to crush out the coarser, animal part of his nature, and place him in close communion with the spiritual. Acting on this view, spirits were resumed as before. Regular seances were held nightly in his room. From the physician's statement, the following order of events took place with but little change from day to day. At about nine P. M. the lights were turned low, and four ounces of brandy were given. If nothing was said for one or two hours, two ounces more were given. Then low, subdued voices would be heard in the next room saying ill things about him, expressing desires that he should suffer, and that he was guilty of some recent crime, and devising means to have him arrested and punished. He would

reply to these voices in very intense language. This would at times increase their activity, and they would come into the room, stand by his bed, and make efforts to catch him with a rope, or strike him with a knife. The excitement of these scenes would cause prostration, and the man would fall back in the bed, and be perfectly quiet for a time, then hear voices of his wife telling him that she had come to protect him, and that he was a great man and could not be injured by these devils. This conversation was all reported in the next room by his friends, who trusted to their imagination to supply the ideas and language of the spirit visitor. An hour or more of these replies and questions would follow, then they would grow fainter and die away, and the man would sleep. Next morning he would awake feeling weak and wretched and use porter during the day, lying in bed or walking out a little. My opinion was sought by the physician, who had pronounced it alcoholic delirium long before. Strange to say, our united views had no value in the minds of the friends, and acute mania came on, necessitating his removal to an insane asylum. He died a few months after, of pneumonia. A fitting sequel to this case was the publication of these conversations, in which the editor showed that the evil and good spirits which are ever striving for the mastery in the human heart was clearly illustrated in this case. Finally his wife's spirit came for his protection and made him the agent of many beautiful thoughts to the world. No mention was made of the alcohol he took at the time, or his final eclipse in insanity.

Dr. Lunier, inspector-general of lunatic asylums in France, and honorary member of our society, died suddenly, Sept. 5th. The doctor will be remembered as secretary of the French medical temperance society, and editor of *Le Temperance*, and one who made very earnest efforts to rouse the attention of medical men to the full recognition of inebriety as a disease, and its curability by medical means. He was also one of the editors of the *Annales Medico-*

psychologiques, and among the works which he published, was one entitled, "The part played by Alcoholic Drinks in the Increase in the Number of Cases of Insanity and Suicide."

WILL IN INEBRIETY.

A noted clergyman and lecturer began an address at a great temperance conclave, by saying: "One great object of our efforts is to strike off the chains and liberate the poor, oppressed inebriate from the bondage of a tyrannical will." Like many others who assume the role of teachers, this clergyman was not familiar with his subject. Had he even studied a single case practically, he would have known that, of all men, next to the insane, the inebriate was the most perfect example of one with a free will, cut loose from all bondage and restraint. Under the influence of alcohol he is liberated from all guidance by reason or experience. He has motives of which he is not conscious, and which cannot be foreseen by any one. He commits acts which he dare not himself anticipate, or meditate a moment in advance, and which no one could foretell. Consciousness deceives him constantly. Here disease and not will instigates his deeds; it inspires an intense longing to be free from every condition of pain and ill, and enjoy freedom of thought and act. He is most literally a free man, free from every responsibility, acting beyond all ranges of character and experience, swept by conditions and circumstances independent of common motives and impulses. His will is very near perfect freedom in the metaphysical sense.

INSANITY NOT DEGRADATION.

In a city of boasted wealth and intelligence, the daily press commented at some length on the degradation of an inebriate who went about offering to sell or pawn his little babe for drink. The bar-keeper who refused to listen to this proposal, and turned him out, is commended for his humanity.

The clergymen and moralists unite in a great protest against the degradation exhibited by this terrible sinner of an inebriate. Two remedies are urged with great energy. The one the more severe punishment of these victims, the other the grace of God in the prayer and pledge. In a letter to a daily paper, a clergyman calls this incident a disgrace to the civilization of the city, and the editor endorses it, deploring the degradation of such men. The public sentiment and intelligence that considers such a case one of pure degradation, is more of a wonder and phenomena than the victim. The failure to recognize the insanity of this poor victim, and place him under restraint at once, is deplorable in this age of progress. If this man had gone up and down the streets, shouting and doing strange things, his condition would have been recognized. But here is a form of insanity more pronounced and dangerous than the ordinary acute mania of lunatics, a state of the brain in which all motives of duty and right are suspended, and he is likely to commit any atrocity or crime, suddenly and without premonition. The insanity that would offer his child in pawn for alcohol, would explode in any direction, no matter what interest suffered. The terrible disasters frequently coming from this class are most clearly the result of this false teaching that inebriety is a moral state which the victim can control at will; consequently neglect, with means and measures that increase his disorder, beset him until some criminal act ends his career. No further history comes to us of this poor inebriate, but somewhere in the future he will commit crime; then another display of dense ignorance will be seen in the press and pulpit utterances.

STATISTICS NOT WELL STUDIED.

Mr. Auger, in a late number of *The Voice*, presents a table of the commitments for crime in Connecticut, from which he shows that under the license laws, these commitments were 277 per cent. more than under the first five years of the prohibitory law. The arrests for drunkenness had steadily

increased under license law, until, in 1884, they were 2,879, which was fifteen times greater than the increase of population. This table and its conclusions are quite different when studied from a scientific standpoint. Thus the 2,879 arrests for inebriety in 1884 does not represent as many different persons who are inebriates, but indicates the increasing chronicity of a few incurables, who are repeatedly sent over and over again to jail. In the Hartford jail one hundred commitments for inebriety in one year represented twenty-three persons only. In New Haven and Bridgeport, the number was still less, and in reality the 2,879 commitments did not indicate over six or seven hundred persons. The same is true of crime statistics, where the persons were inebriates, and the crime was committed while under the influence of spirits. A certain number of inebriates commit assaults, breaches of the peace, and thefts regularly when intoxicated. Like the common inebriate, they are constant repeaters at the police courts, where they receive short sentences, and often spend over two-thirds of their time in jail. It is the usual experience of every court and jail that ninety-five per cent of all the arrests and commitments for drunkenness and petty crime, for the first time, are followed by other arrests with increasing frequency, as long as the person lives. Thus, a young man arrested for some offense, either drunkenness, or assault, or both, will come back the second year for the same, and in about an average time of three years will be "a repeater," and be arrested from four to six times every year. This is particularly true of inebriates, and crime associated with it. Thus, the law becomes an active agent with the saloon-keeper in destroying these poor victims, and making recovery more and more impossible, with every commitment. The increasing commitments of inebriates under the license law, show that the criminal law which seeks by punishment to check these cases utterly fails, and actually precipitates them into more incurable states. The failure of these tables to show the number of commitments for the first time, makes it impossible to determine the strength or weakness of the license

law. Careful observers all over the country have recognized the fact, that an army of incurables are steadily growing up in every community, composed of inebriates, criminals, insane, and paupers. An effort has been made to reach the insane, and house them, and thus protect society and check this disorder. The criminal, inebriate, and pauper are still regarded with the same spirit that prevailed in the dark ages, and are treated on the principle that punishment, suffering, and human vengeance are the only means to restore to them healthy life and living. The result most naturally would be the opposite, and an army of incurables would follow, an increasing menace to law, progress, and civilization. These tables bring out this fact, and also show that in Connecticut, as elsewhere, the real question is not prohibition or license alone, but the physical conditions and causes which develop this vast army of defectives, and furnish the favorable soil for their culture and growth. This subject must be studied from a higher point of view, and statistics must include a larger array of facts to enable us to draw correct conclusions.

STATISTICS OF INEBRIATE REPEATERS.

The following figures are given to show that statistics of inebriety from court records are often misleading and worthless, and also the folly of short sentences to jail, as a curative or preventive measure for inebriates. The report of the House of Industry, on Deer Island, near Boston, Mass., of last year, shows, that of the 10,705 persons committed to this place for offenses, 9,084 were for drunkenness, 174 were sent as common inebriates. Those were probably persons who drank all the time, and who could not keep sober. Of this number forty-six were sent for the first time, and twenty-five for the second, and so on, diminishing until we find one man who numbered his thirty-eighth time of sentence. Of the 8,631, 2,833 appeared for the first time, and 1,286 for the second time, and so on down to the seventy-fifth time, who was represented by one man, who had been sentenced for the same offense to the

same place seventy-four times before. This last man had gone down on the records representing seventy-five different men. These 9,084 men and women sentenced for drunkenness actually appeared in the records of the courts and jails where committed as over 58,960 different persons, each commitment being put down separately, and appearing on the books as a new person each time they were sentenced. The average of the commitments in the 9,084 persons were over six for each one.

It will be apparent that statistics of the increase of inebriety based on the number of arrests and commitments are without any value and absolutely false. Another curious fact appears: the large number who claim to be under arrest for the first time for this offense have been repeaters in other cities. These figures only give their history and commitments to this place. One man had a record of serving out forty-one different sentences for drunkenness at Ward's Island, New York. It is difficult to get at the exact number of men who go from town to city, continuously serving out short sentences for inebriety, steadily growing worse, and finally becoming insane, or drifting into the alms-houses to die. This army of defectives are steadily increasing, and are moving from place to place, made worse by the efforts of the law to benefit them.

CAMPHOR INTOXICATION.

In a late number of the *Annales Medico-psychologiques*, a long account is given of some unusual symptoms following an overdose of camphor, which lasted months after. The close resemblance to many cases where, after the first profound intoxication, the nerve and brain disturbances continued for months, will be apparent to all our readers. The case was a young man with no heredity of nerve disease, and in apparent good health, who for a slight catarrh and insomnia, took, by mistake, 300 grains of camphor. Soon after, he seated himself at the dining-table, felt chilly, lost

power of speech, was bewildered, and finally cried out that he was crazy. A physician was called and emetic given, which brought up much of the camphor. He was taken to his room and, excepting some chills and hallucinations of vision and sensations of trembling, he recovered and was out in two days at his work again. Three weeks later, he suffered from severe headache, and had a well-marked hysteric sensation of choking, and, when in bed, suffered from a sickening sensation of swinging. Later, exact ideas of time were lost, everything seemed new and at the beginning. Although able to work, all events seemed new and strange. Sensation of his height became perverted. He thought he was higher than the houses, and suffered at the thought of the great disadvantages of his height. By striking himself on the head, felt better. He went to an asylum, and was better at first, but finally fell into a mechanical state of existence. Was contented with everything, had no care for himself or any one, would talk and seemed to realize what was said, but had no interest, or continued memory of events. Two weeks later, he recovered and went about as usual. After six weeks' residence, went home, and, on greeting his family, was thrown into a trance state, in which he could not talk or act; but yet fully realized what was said and done about him. Two weeks after, from some excitement in his family, he had another trance state, and came out of it very weak and trembling. For a long time after, he was conscious of an unstable brain, which seemed balanced on a very slight point, likely any moment to turn over. Fragments of conversation went whirling through his mind, and at times his surroundings were all perverted. He would walk round and never remember what he was doing or where he was; was somnambulist. From this time the case continued to recover. The disorders of sensation, and hallucinations of the senses, which he seemed to partially realize, pointed to central brain disturbances, that was undoubtedly the beginning of very grave lesions. This poisonous dose of camphor either

kindled into activity a latent nerve defect, that was the legacy from the past, or it produced some cell change in the great centers. This emotional instability, with disordered and changing sensations and hallucinations, presenting the most diverse and complex symptoms, are often seen in inebriates, although they have been months free from spirits. In other cases it follows a single paroxysm of intoxication, and lasts for months or years.

PYROMANIA FROM INEBRIETY.

An eminent physician sends us the following clinical history, with the remark that he has withheld the names, as many of the relatives occupy responsible positions in society. We give a condensed outline of the facts, expecting in the future to make a careful study of this and some other cases of similar character.

A., a man of great energy, and very successful in business, became a moderate and occasional excessive drinker, at about thirty-five years of age. He owned and lived in a hotel, and led an intensely active, stirring life. He married a delicate, nervous woman after he had begun to drink, and a family of eight children were born to them. He drank regularly every day, and occasionally to great excess, until his death at fifty-four years of age, from pneumonia. His wife was a nervous, weak woman, who became very religious late in life, and died from old age at seventy-six. Of the eight children, one died in infancy, another died of some convulsive disease at about puberty. The third child, a girl, ran away with an actor at eighteen years of age, and finally became a dissolute woman. The fourth child grew up a strong temperance man, and was very active in business. At twenty-five he was convicted and sentenced to prison for putting fire to a store of a rival merchant in business, and burning his own property for the insurance. He was pardoned out after three years, and within a year was re-sentenced for ten years, for burning up a mill on his father's

land. Two years later he died of consumption in prison. The fifth child, a boy, was a graduate of college, and a lawyer. He used spirits in moderation. At thirty-five he was convicted of burning up the block of the village in which he lived, and was strongly suspected of having burned up his father's hotel property. After two years in prison he was pardoned, and in the next five years was convicted twice of attempting to burn property. He ran away, and was convicted for a similar offense in another State, under an assumed name, and served a term of imprisonment, then disappeared. The sixth child was a temperate man, and was tried for barn-burning twice, and escaped from some flaw in the testimony. He then went to Oil City, and owned a large well. Later he was convicted of putting fire to other wells, served his term of imprisonment, became palsied, and is still living. The seventh child, a girl, married, and died early, leaving a large family of respectable people. The eighth child, a boy, had spinal disease, and was a cripple until death. The brother of the father of this family, and his descendants, are among the best people in their country, indicating that heredity was a small factor in causing inebriety originally. The inebriety of the father undoubtedly was the cause of the pyromania in the three sons, and the nerve defects noticed in the others. Dipsomania, pyromania, kleptomania, prostitution, pauperism, all forms of insanity and brain and nerve defects, and early mortality, etc., are the common entailments from a moderate or excessive drinking ancestor. The seeds are sown, and their appearance again is certain somewhere in the generations to come.

In the mortality census of 1870, the deaths from alcohol were classed under poisons. In 1880 these deaths were put under the head of alcoholism. In another decade they will occupy a distinct place in the nomenclature, and be fully recognized as diseases.

Clinical Notes and Comments.

DR. PARRISH'S RECEPTION IN ENGLAND.

It is a pleasure to note the very pleasant reception given to Dr. Parrish by the president and fellows of the English "Society for the Study and Cure of Inebriety," Sept. 19th, at the Dalrymple Home near London. Over one hundred guests were present, and among them were Lord Ebury, Hon. Reginal Capel, U. S. A. Consul-General Waller, Generals Bruce and Gillilan, Colonel Sandwith, Rev. W. Allan and Mr. Frederick Sherlock (C.E.T.S.), Rev. Dr. Burns and Mr. John Hilton (United Kingdom Alliance), Mr. Robert Rae, Mr. J. W. Leng, Mr. H. Branthwaite and Mr. T. Hudson (National Temperance League), Miss Haslam (C.E.T.S. Women's Union), Mr. C. Wakely (U. K. Band of Hope Union), Dr. H. W. Williams (Medical Temperance Association), Rev. S. Todd (Good Templars), Rev. G. M. Murphy (Lambeth Baths Temperance Mission), Rev. W. L. Lang (Baptist Total Abstinence Society), Mrs. Lucas (British Women's Temperance Association), Rev. Prebendary Barker, Surgeon-General Francis, Inspector-General Kealey, Surgeon-Major Poole, Mr. J. T. Rae (Hoxton Hall Blue Ribbon Movement), Drs. H. Hicks, F. R. S., Alfred Carpenter, Langdon, Down, Wynn, Westcott (Deputy Coroner), and others comprising many very distinguished physicians and clergymen.

After an elegant lunch, the meeting was called to order by the president, Dr. Kerr, who said: "It afforded him much pleasure, in the name of the council of the Society for the Study and Cure of Inebriety, to offer a reception in so appropriate a place to Dr. Joseph Parrish, whose labors of love on behalf of the inebriate were so well known, and who had once before, on a visit to Britain, rendered good service to

the cause of legislation for habitual drunkards. Dr. Parrish's evidence before the late Dr. Donald Dalrymple's committee had been most valuable. Dr. Parrish was president of the American Association for the Cure of Inebriates, a body which had agitated this question for sixteen years and published an able QUARTERLY JOURNAL OF INEBRIETY, of which Dr. T. D. Crothers was the editor. Dr. Kerr congratulated Dr. Parrish on the decided advance since their guest's last visit to this country. Their distinguished American brother would now find an act, which, though temporary and very incomplete, was yet the legislative affirmation of a principle, and had been of some service, as the experience of the Dalrymple Home had shown. Dr. Parrish would see five retreats licensed under the Habitual Drunkards Act, and had himself been living under the roof of that Dalrymple Home which had been so highly commended by the government Inspector, and had been so successful in the treatment of inebriety. Dr. Parrish would, too, discern in the auspicious first year's work of the Society for the Study and Cure of Inebriety steady and genuine progress in the acknowledgment of the truth that inebriety was a physical disease, demanding treatment as such. There remained, however, much to be done. Though temperance reformers and Christian workers were beginning to realize the fact that there is a physical aspect of inebriety, only a comparatively limited number recognized in alcoholic excess something more than sin, vice, or crime. Habitual drunkenness was a bodily disease as well as a sinful act, and till the Church and the State saw this fundamental truth would intemperance be effectually grappled with. It was disgraceful that, while in America the poorest inebriate could be treated in a home, in England there was no home under the act for either males or females in indigent circumstances, and no Home, licensed or unlicensed, for impecunious males.

“In America, also, any confirmed inebriate could enter a home of his own desire without let or hindrance. Here, there had to be an appearance before two justices (a most forbid-

ding procedure, especially to ladies), and other humiliating barriers. All such restrictions should be swept away, the risk of unlawful detention being easily guarded against. The act, too, should be made permanent as well as improved. Other amendments were needed, and Dr. Kerr hoped that the proceedings of that day would hasten the advent of better legislation, and would tend to unite, in one grand effort on behalf of the victims of intemperance, abstainers, non-abstainers, and prohibitionists on both sides of the Atlantic."

The chairman concluded by proposing the following resolution of welcome:

"That this meeting of clergymen, medical men, abstainers, prohibitionists, and others interested in temperance reform, assembled at the Dalrymple Home for Inebriates, Rickmansworth, England, on the invitation of the Society for the Study and Cure of Inebriety, cordially welcomes the presence of Dr. Joseph Parrish, President of the American Association for the Cure of Inebriates, who is now inspecting such homes in the United Kingdom.

"That this meeting congratulates Dr. Parrish and the association of which he is president, on the steadily increasing recognition of the diseased condition of the confirmed drunkard, and on the generous provision for the treatment of the poorest of this class in America at the public expense.

"That this meeting rejoices at the fair amount of success which has followed the treatment of inebriety as a disease; and trusts that this visit of Dr. Parrish will aid in the removal of all the existing impediments to the simple and prompt admission of voluntary patients to homes in England under the compulsory detention provisions of the Habitual Drunkards Act, and will stimulate a popular demand for permanent legislation, and for more effectual legislative measures for powers of committal in certain cases of confirmed inebriety.

"That this meeting, while bidding God-speed to every intelligent endeavor by temperance and prohibitive agencies to prevent drunkenness, earnestly prays for the co-operation

of all temperance reformers and philanthropists in America and Britain with enlightened medical treatment, in a united and sustained attempt at the rescue, reformation, and cure of the pitiful victims of alcoholic indulgence."

Dr. Down, who seconded the resolution, said: "The subject of inebriety had been to him extremely interesting, for he had always felt very intensely the misconceptions which had been entertained with regard to it. He thought one could not have much experience in the world, much less experience in the medical world, without being conscious of how deep an evil this is, and what radical means were required for its cure; and it was lamentable to think that in England we had gone on taking no care of our habitual drunkards until they lapsed into insanity. We had only regarded them with scorn, and not as the victims of a physical disease. He thought a great impetus would be given to the movement by a meeting like the present, which would call public attention to the fact that drunkenness was a disease, and if for the treatment of any disease people could use their own discretion and go into hydropathic establishments, or take the baths at this or that center, surely it ought to be within their power when suffering from this disease to come into an institution where the control and treatment were remedial. He felt also that the difficulty was specially with reference to poor people. One often saw in the hospital wards and elsewhere those who were the victims of this disease, but one was perfectly powerless to advise them what they ought to do. One knew that if for six or twelve months they could be under moral restraint and without temptation there would be a great chance of curing them; but, as the chairman had them, there was no such refuge for the drunken poor."

Mr. Hilton praised the efforts of the Society for the Study and Cure of Inebriety. Its researches had already been most valuable.

Mr. Sherlock said: "That, as editor of the *Church of England Temperance Chronicle*, hardly a week passed over that he

did not receive some request for information as to some place to which poor men and women who were habitual drunkards could be sent. Last week he had no fewer than seventeen letters from different people asking for homes to which poor people might be sent. Only yesterday he was speaking to a man who was penniless, and who was anxious to obtain two-pence for gin. His father was wealthy, and a member of Parliament, and a statue of him ornamented one of the market-places of a city. This man was appointed by the prime minister to a living in the north of England, and he succeeded there one who was now an ornament of the Episcopal bench. This poor man followed him; but the one was a bishop and the other an outcast on the streets of London, because he could not give up the drink. Efforts had been made by his friends to control him, but they could not do it. One of them told him that she was thoroughly of opinion that had they only been able to place him in such an institution as this he would probably have recovered."

Mr. Arthur Gunn said: "The National Temperance League followed the labors of this society, and of medical men, whether in this country or in America, with the greatest interest, for they esteemed them as of the highest importance to this cause. As regards moral and religious arguments, those who were not instructed in medical matters could use them and did use them in their private circles, but that which had exercised the most potent sway during the last few years was the medical work that had been done. Therefore, the National Temperance League was never behind on any platform in expressing the obligations of the country to those medical men who were studying this question, as so many were doing in the present day. The league felt the study of inebriety was particularly required, because it had in past times been the subject of much misconception; the fact was that inebriety was a problem that could not be solved except by study, and the persons who supposed that they could cure a confirmed inebriate just as they could cure the man in whom the habit had not been formed, lamentably

failed in appreciating the difficulties of the situation. As regards Dr. Parrish and his experience in America, the league felt that the temperance community owed him a debt of gratitude. Some present had the pleasure of knowing the late Stephen Alford — who labored hard for the establishment of these homes in England, homes which were made possible largely by the evidence which Dr. Parrish had given before the committee that sat to inquire into this matter. All honor was due to Dr. Parrish for the devotion he had shown to this department of temperance work.”

The Rev. G. M. Murphy was “Sure the experience of ministers of religion in this matter was second only to that of members of the medical profession. They saw the necessity of homes for the poor, to which allusion had been made. He had been thirty years laboring in South London, and had therefore not been without opportunities of studying the question of inebriety. Not always had total abstinence triumphed simply because the attempt to apply it to the disease and inebriety had come too late in life. This morning a woman, a widow only since yesterday, came to see him with her married daughter. The husband and father hanged himself yesterday morning in the London-road, Southwark. He knew that that man had for years fought the drink honestly and fairly. They might judge how honestly and fairly he fought when he mentioned that only last Sunday night he was in Surrey Chapel in his working clothes because his other things were in pawn. He had known him to be an abstainer for a year and sometimes more, but, as his widow told him this morning, he would be sober even for a long while, but he said to her, ‘You don’t know, dear, how horrid is the craving that I always feel upon me.’ What a blessing an institution of this kind would have been to such a man as that. It was not the inebriate alone who suffered, but there was a long chain of suffering. In this man’s case he had a daughter near her confinement, and when the news was broken to her it might be the means of the destruction of her child, and perchance of her own life, for she was the pet daughter of her father.”

Dr. Williams, representing the British Medical Temperance Association, said: "That organization consisted of a body of men numbering 300 and upwards who were personally pledged to total abstinence. He could only say for his part that he regarded drunkenness as a disease pure and simple. In his own private practice he should have been glad to have sent patients to such an institution as this years ago had it been in existence. Some were now in the grave, who, he was satisfied, would have been decent members of society could they have been received for a time into such an institution as this. They must be thankful for the work the society was doing, and he only hoped that their esteemed president might have health and strength spared to continue in the work he was now doing."

Dr. C. R. Francis bore testimony to the value of the home in which they were now assembled. "Persons who came here ought to stay longer than three months, for during that period the craving did not thoroughly die out. He advocated a residence of six months or even a year. The longer a person abstained from alcoholic liquors the better was the chance that the craving would die out. It was a melancholy case that Mr. Murphy had told them, but there was the unfortunate man he spoke of exposed to all the fierce temptations of the outer world, when an institution such as this would have helped him materially. There were some people who knew so little of this disease that they thought a person had only to come to a home like this, stay a very short time, and then go out and continue to drink moderately of that which caused him to fall; and so it came to pass that the worst foes of the man were those of his own household. So far from leading him in the right path, as they could only do by abstaining from drink, they offered it to him, saying, 'You have been to the home and got cured, and surely you can drink now.' They could not do it; it was a physical impossibility."

Surgeon-Major Poole said: "That, though a warm advocate of these homes, he thought a good deal might be done to

prevent inebriety, and while we supported these homes, and did our best to keep them going, let us not forget that we had before us the great principle of the prevention of drunkenness."

Mr. Hudson said: "That if these homes were multiplied to the fullest extent that the most sanguine could desire, what a multitude of sad cases would still be unprovided for. He had often heard on the temperance platform a remark to which he took exception, viz.: that 'no person was born a drunkard,' his opinion being that hundreds and thousands had been born with an incipient craving for drink. Let those who doubted this read the evidence given before the Parliamentary Committee in 1834, and they would find that Dr. Gregg Dods insisted upon the heredity of alcohol."

Mr. Leng of the National Temperance Publication Depot, said: "He entirely sympathized with all that had been said as to the utility and the necessity for these homes. The league was constantly advocating the value and the necessity of these institutions, and he wished to call attention to a remark made by the government inspector as to this particular home: 'The success of this retreat is very marked, and I think it may well form a model for similar establishments.' We owed much to America, in a literary point, in regard to this subject. Their literature on this topic was much in advance of our own. At the offices in the Strand they were constantly having appeals as to where they could send the poor inebriates, but such havens of refuge had yet to be established. This was a question that should be taken up by the government in the same way that it had dealt with other forms of disease."

Dr. Parrish of the American Association for the Cure of Inebriates, was received with applause, and said: "I suppose there never has been a time in the history of the world when the human mind has been so awakened to the horrors of intemperance as now, and when people of all classes, and of all nations, and of all modes of thought, and of all professions of religion have formed in one common army to

approach this great enemy with some desire at least to conquer him, and yet they have made that approach without definite plans, without leadership—everyone fighting in his own way, and, as a consequence, without those definite results which under a better system might have been expected. When the society which I have the pleasure and honor to represent was first organized, and when it announced as its radical principle that intemperance was a disease, the religious press of America at once pounced upon us, the political press and the entire press of the country was opposed to the doctrine and opposed to the society, but it was not long before people began to remember that any scourge whatever that would kill from 50,000 to 100,000 people a year must be a disease. They began to find out that if they drink alcohol, which was a poison, they would be poisoned; and they began to think that lying and stealing did not kill people, but that drunkenness did; and the moral and physical aspect of the question were thus separated. Hence, our little organization, the Society for the Cure of Inebriates, has grown, and growing with it has been a public sentiment which, I am happy to say, is becoming an established sentiment among all people on this question, that inebriety must be considered from its physical side. I do not pretend to say that moral means should not be used, that religious influences should not be brought to bear upon the inebriate, but simply that the physical aspect must not be forgotten or neglected. I have been, as Dr. Kerr has said, some days an inmate of this establishment. I have read its rules; I have eaten at its table; I have associated with its inmates, and have somewhat familiarized myself with its operations. I see that there are prayers twice a day, that those men who have struggled in their rooms and at their homes with this terrible craving are brought to their knees in this establishment twice a day. Are there no religious influences brought to bear upon them by these efforts? Certainly there are. And yet the physical side is not neglected. The whole of the surroundings are such as to

improve the morals, to elevate the mental as well as to improve the physical.

“Hence there is no need of separating the means—religious, moral, and physical. They all belong to the same programme, and are all part of the same method of treatment. It is true that there are a great many persons brought to the front of this matter through religious influences; it is true that the Gospel temperance meetings in our country as well as here have exerted a powerful influence for good wherever they are held, and by whomsoever they are conducted if they are sincere and honest in their endeavors, and then the prohibition movements have been earnestly pressed, with what results it is difficult to say; but with reference to this institution, there is one feature of your law which your chairman has alluded to, which seems to me, at least, to be unnecessary, and that is that the man must present himself before two magistrates, and be certified that he is unable to take care of himself. Now, I suppose there is no country in the world where the doctrine of personal liberty and the right of man to himself is more earnestly pressed than in this, the rights of the subject; but it seems to me that a man ought to have a right, if he is disabled, to ask somebody to help him without going to two magistrates. (Cheers.) In our country there is not a law in a single State that interferes with a man's personal right to go to an institution of this kind, and commit himself for a given time—six months or a year, as the case may be—and agree during that time to comply with all the rules and regulations of the institution. We do not appreciate what an inebriate has to encounter. He is ostracised by the Church and by his family; he is not admitted into society; he is alone; he is an unique specimen of humanity. His surroundings are different from those of other men, his associations are different, and, in short, we do not know what he has to contend against. (Hear, hear.) I have often thought that an inebriate fights more hardly and struggles more fiercely in a single hour against the craving for drink than many of us who do not inherit it, have to do in a

lifetime. ("Hear, hear," and cheers.) And when a man feels that coming upon him, and has not the liberty to go to a place like this, or any other shelter, where he feels he can be protected and so taken care of, it seems to me not like England, not like America, not like any free country where a man ought to have the liberty to do that which will protect himself from ruin. I have had men during my experience come to me and ask me and plead with me to put them into a room and turn the key upon them and hold them there until the craving had passed away; and should the law prevent that? I think not. It is a humiliation that men should be prevented from doing such a simple thing as to ask to be protected from the drink. The institutions of America are few as compared with the size of the country and the number of people. But they are increasing constantly, and they will increase, simply because the sentiment of the people is beginning to demand them. Those in existence report a varied percentage of permanent cures, but taking the whole I should think it would be about thirty-three per cent. (Cheers.) I am more than gratified to hear from the gentlemen who represent the great temperance associations here, that they give their hearty testimony in favor of institutions of this kind. With us the support has not been so cordial in that direction, but our temperance friends are coming to it. They are realizing the necessity, and they will finally co-operate with us as heartily as they do here. When I return I shall tell our friends that in England the temperance and the scientific sentiment, if I may so call it, the physical and the moral, are shaking hands with each other. (Cheers.) Now I feel very much like the master of a little skiff would feel in starting out with his boat upon a rough surf after all the eloquent and admirable speeches that have been made, which represent a larger craft and a more intelligent leadership, but at the same time I am glad to have the opportunity of saying to you what I have said, and of carrying back with me pleasant reminiscences of this meeting and of encouragement in the cause in which you and I are engaged. This cause is close to the heart of the

English nation, and belongs to us as well, as a common people. (Cheers.) Your thoughts and our thoughts have been running in the same direction. Our purposes are the same, our objects, our hopes, our aims are the same, and we expect the same results; and it is natural, therefore, that I should be glad to look you in the face and go back and tell my people that England and America, the Stars and Stripes and the Union Jack, are working together to prosper this cause, which is the cause of man and the cause of God." (Loud cheers.)

Dr. Danford Thomas, Coroner for Middlesex, proposed a vote of thanks to the chairman, to whom, he said: "They were very much indebted for his labors on behalf of this movement, and for the kindness with which he had received his guests that day. In the course of his public duties he (the speaker) had frequently brought before him the evils of intemperance, and he knew the fearful results to which the horrible craving for drink often led. He was afraid that drunkenness was extending side by side with the spread of the work of temperance. It might seem paradoxical to say so, but such, in his experience, was the fact. He was afraid drunkenness was extending, particularly amongst women; and here he must remind the meeting that his duties brought him principally into connection with the working classes. He would most heartily second the wish that had been expressed on all sides that homes for the poorer class of inebriates should be established. While we provided large institutions for the treatment of other moral delinquencies, we should support some large institutions of this kind to enable the poor people to help themselves, and he believed the time would come when Parliament will adopt measures of that kind. Then something further should be done to arrest temptation, though it was a very difficult question."

Consul-General Waller said "He was delighted with the unsectarian character of this meeting. In America too often the strong and energetic workers of one sect expended the most of their energy in fighting the strong and energetic workers of another sect, and temperance parties were apt to show but little sympathy with each other. How delightful,

then, was this meeting, and how unanimous was the opinion of all that these refuges should be provided for the victims of intemperance, both poor and rich! He seconded the vote of thanks to the chairman, whose labors in this cause he gladly recognized."

The Chairman having acknowledged the compliment, the meeting was brought to a close.

INSANE AND IDIOTS IN CALIFORNIA.

Dr. Mays of the Stockton Insane Asylum of California, lately read a paper, in which he showed that insanity was decreasing for the last ten years, judged by the number of commitments to the asylum. Taking the ratio according to the population, in 1876 one in 950 was seized with insanity; in 1884, one in 1,300 was noted. Of idiots, only 507 were reported in 1884. This was the smallest number for any State of the Union of equal population. The State of Maine, with one-fourth less population, has two and a half times as many more idiots, and so on. From these figures the doctor takes a most hopeful view of the future immunity from these affections in California. The traveler who goes about to the different towns and cities of the State has another view of this subject. While he cannot contradict the statements of Dr. Mays, he may assert most positively from a layman's standpoint, that this apparent immunity from insanity and idiocy cannot last long. He can see in every part of the State forces at work, in saloons and the free use of wine and stronger spirits, that will as surely produce a large increase of insanity and idiocy as night follows day. It would be interesting to have some statistics on inebriety in this State, and from this a clearer idea could be obtained of what the future of insanity and idiocy will be.

OPIUM IMPORTATION.

A table giving the quantity of opium and its extracts imported into this country during a period of fourteen years is very suggestive. Beginning in 1870 with 254,609 pounds, it

run up to 416,863 pounds in 1872, then declined. In 1878, 1879, and 1880 it reached its highest maximum figures. The latter year being 533,451 pounds. The next year it dropped to 318,700, and last year, 1884, it was 331,472. If the statistics of the importation of morphia and opium together could be obtained extending over a period of many years, and be accurate, it would give data of great psychological value. It would establish or disprove the theory of drink cycles, or distinct psychological epochs in which narcotics are used to great excess, then decline in use, to some minimum point, and ascend again. In this very imperfect table there are many hints looking in this direction.

MEDICO-LEGAL RELATIONS OF MORPHINOMANIA.

Dr. Monteyel, in the *L'Encephale* No. 6, concludes, respecting morphinomania, as he designates the morphine form of opiophogism: I. That morphinomania, considered in itself, is not a psychosis, and does not *per se* prejudge the mental status of a person accused of crime. II. The more or less effect of morphine on the intellect depends upon the person, and not on the dose used; this last has but little medico-legal value. III. It is desirable to ascertain whether an accused morphinomania, at the time of the alleged commission of reprehensible acts, was under the influence of a full dose of the drug, or was suffering from the effects of abstention from it. IV. In morphinomania it is indispensable to distinguish the first period, called euphoria, from the following period called physico-psychis marasmus. V. In morphinomania, during the period of indulgence, responsibility during euphoria is complete, except as to acts having for object assuagement of the morphine craving. VI. During the period of physico-psychical marasmus, responsibility is null, but the acts committed under the influence of this state are only such as would be committed by a dement or an acute maniac. VII. In abstinence from the drug responsibility is null, but the acts committed under the influence of this state, and for which the patient is responsible, are such as would be the result of dementia or furor.—*Journal of Nervous and Mental Disease.*

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Fellows' Hypophosphites has already been before the profession long enough to become permanently established as a remedy of great value and excellence.

Colden's Liquid Beef Tonic comes, claiming a place among the remedies for exhausted brain and nerves, and should be given a fair trial before its value is determined.

The Anglo-Swiss Food is intended to take the place of condensed milk. The analysis shows that it has from 14 to 15 per cent. of nitrogenous matter, 54 to 55 of carbohydrates soluble in water, 15 to 16 carbohydrates insoluble in water, 5 to 6 of fat, 2 to 2½ of ash.

Dr. J. M. Masena of Salmon City, Idaho Territory, writes to Battle & Co., Chemists: "Your preparation of *Papine* is a good substitute for morphine and all opiates, without their bad results and after effects. My experience with your medicine has been very gratifying."

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"The efficacy of *Lactopeptine* in appropriate cases is an established fact. It is one of the certainties in medicine, and in this respect ranks with quinine. For delicate women who require constructives and digestants, I know of nothing which equals your Comp. Syrup *Lactopeptine*. I am never without *Lactopeptine*, and, being an habitual dyspeptic, am constantly compelled to use it for relief."—*Lunsford P. Yandell, M.D.*

Parke, Davis & Co. have put on the market a very excellent preparation of cocaine hydrochlorate, which will be found very satisfactory in the sick-room. The same firm have made a student's specimen case, containing a sample of all the drugs of vegetable origin in the United States pharmacopœa. Each specimen has both the common and botanical name, and represents the best of the class. They are all arranged in a neat box, and sold for ten dollars.

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As a **nutrient**, and a **reliable tonic** in all cases of debility and weakness, Malarial Fever, Anæmia, Chlorosis, Incipient Consumption, etc., it is the best preparation ever used. It acts directly on the sentient Gastric Nerves, stimulating the follicles to secretion, and gives to weakened individuals that first prerequisite to improvement — an appetite. It strengthens the nervous system when unstrung by disease, and has been employed with remarkable success as a remedy for Drunkenness and the Opium Habit.

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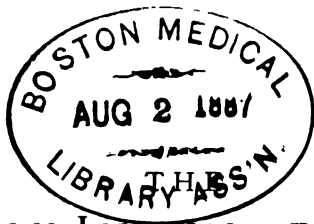
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INEBRIETY, AND HOMES FOR INEBRIATES IN ENGLAND.

BY JOSEPH PARRISH, M.D.,

President of American Association for the Cure of Inebriates.

[An Address delivered at the November meeting of the American Association for the Cure of Inebriates.]

Drinking to intoxication has assumed such damaging proportions among the higher, as well as the lower classes of English society, that it has claimed the attention of the British Parliament so far as to provide special remedial legislation. Thus, during the session of 1872, it was

"Ordered, that a committee be appointed to consider the best plan for the control and management of habitual drunkards."*

That the committee might prosecute their inquiries intelligently and thoroughly, they proceeded without delay, and yet with characteristic prudence and deliberation, to send for persons and papers.

Of the witnesses examined for the United Kingdom, there were eminent physicians and surgeons in general practice, medical inspectors and superintendents of lunatic asylums, and directors and managers of private retreats.

* Committee—Sir Harcourt Johnson, Mr. Birley, Mr. Henry Samuelson, Mr. Wharton, Dr. Lyon Playfair, Mr. Henry Mitchell, Lord Claud John Hamilton, Mr. Akroyd, Mr. Miller, Mr. Downing, Major Walker, Mr. William Henry Gladstone, Mr. Clare Read, Colonel Brice; Dr. Donald Dalrymple, Chairman.

2 *Inebriety, and Homes for Inebriates in England.*

Connected with the administration of law, there were examined, governors of prisons, of houses of correction and reform, stipendiary magistrates, and constables of counties and boroughs, and also two medical witnesses from America, both of whom were at the time superintendents of asylums for inebriates.*

In addition to the verbal testimony furnished by these persons, of whom there were twenty-nine, who gave answers to three thousand two hundred and thirty-nine (3,239) questions, several papers were handed in from penal and reformatory institutions, exhibiting in tabular form, statistics of commitments and discharges for drunkenness, with suggestions from scientific and philanthropic persons as to the kind of legislation that was needed. In addition also to such papers, there were presented abstracts of the laws of France, Austria, Sweden, and the Netherlands, on the use of intoxicants, with information from those countries touching the appointment of guardians for inebriates, divorce, crime, punishment, and the relation of inebriety to insanity.

The sessions of the committee were held at regular intervals, from the 29th of February to the 7th of June, and during these months such an amount of testimony, and such an array of facts, had accumulated, as to enable the committee to prepare and present a report, which, for thoroughness of research and completeness of design and arrangement, may be said to be a model public document. It shows a concurrence of testimony on the following points, to wit:

1. The absolute inadequacy of existing laws to check drunkenness.
2. The increase of drunkenness in large towns and populous districts.
3. The confirmation of the statement that drunkenness is a prolific source of crime, disease, and poverty.
4. The utter uselessness of small fines and short imprisonments.
5. That occasional inebriation frequently becomes con-

*Dr. D. G. Dodge, New York Inebriate Asylum, Binghamton; Dr. Jos. Parrish, Sanitarium for Inebriates, Media, Penn., now of Burlington, New Jersey.

firmed and habitual, and soon passes into the condition of disease, uncontrollable by the individual.

6. That self-control is suspended or annihilated, moral obligations disregarded, and the decencies and duties of life alike set at naught; and that the victims of this condition obey only an overwhelming craving for stimulants, to which everything is sacrificed; and that this is confined to no class, condition, or sex.

7. That the moderate use of alcoholic liquors is unattended by any bad effects, while there is much to prove that excess in ardent spirits is far more deleterious than similar excess in wine or beer.

8. That there is a large amount of secret drunkenness of both sexes, which never becomes public, but which is probably a more fertile source of misery and degradation than comes before the police courts, and that legislation in behalf of such cases is urgently demanded.

9. That there is a necessity at this time for more efficient legislation to check the downward course of the drunkard, and secure his control in reformatory and curative asylums or homes, by which many cases of premature death from intoxication, including suicide and homicide, may be prevented.

10. That though the habit of prolonged intoxication may lead in the end to insanity, yet there is a difference between inebriety and insanity proper, so distinct as to warrant the opinion that placing inebriates in lunatic asylums is improper, and should not be allowed, except for a very brief period, *e. g.*, during a paroxysm of delirium tremens.

11. That for the class known as casual or occasional drunkards, it is recommended, in order to arrest or possibly prevent the establishment of the habit, that more efficient laws should be passed with something like the following provisions:

A register should be kept, in which should be recorded the name of every person arrested in this initial stage of drunkenness; that a fine not exceeding forty shillings should be imposed upon every such person, and placed opposite to

his name, in the register, with costs, if any. That after three convictions of the same person in any one year, the magistrate should have power to require the offender to find security for his sobriety and good conduct for a fixed period of time, and in default of the same, or in case of forfeiture of security by a fresh offense, then to sentence the offender for a considerable term to an inebriate reformatory.

It is further recommended that the register shall be progressive, so that if the offender should continue to offend, or be unable to find security for sobriety and good behavior, or forfeit the same, he be enrolled as an habitual drunkard, and committed to an inebriate home or asylum for a term not exceeding twelve months.

This admirable report goes on to recommend the establishment of sanitarium or reformatories by the government, and by private enterprise, to be divided into two classes, to wit :

“A. For those who are able, out of their own resources, or out of those of their relations, to pay for the cost of their residence therein ;” and “B. For those who are unable to contribute, or only partially. These to be established by the state or local authorities, and, at first, at their own cost, though there is good reason to believe that they can be made wholly or partially self-supporting.”

Such is an outline of proposed legislation, as it came before the representatives of the people in Parliament assembled. From year to year, in session after session, the friends of the inebriate labored to secure the passage of a law that should embody the principles and methods agreed upon by the committee, but it was not till 1879, that the question was brought to a climax, by the passage of an act known as “The Habitual Drunkards Act.”

After seven years of doubtful questionings and discussions, and seven years of diligent research and inquiry, the great Parliament made the discovery that there was a physical side to the evil of intemperance, and deliberately committed itself to the dogma of disease as applied to it ;— they thus inaugurated a new era in the career of the temperance

reformation, and found that they must legislate, if at all, from that standpoint. Hitherto they had dealt with the inebriate as a criminal, by fines and imprisonments: hence it was not strange, when they attempted to frame a law upon the basis of the new doctrine, that they were embarrassed, and encumbered it with the débris of the old. And, when they enter upon the task of reconstructing the jurisprudence of inebriety, which must be the logical outcome of the affirmation of the new principle, it may be no less confusing. That time is at hand. Verily, it is even now. To repeal the old statutes, and enact in their stead such laws as shall compass alike the entire domain of public morals, and at the same time recognize and provide for the singularities and necessities of the individual life of an exceptional class of the community, is no light or easy task. But if there is a legislative body that is equal to it, that body is the Parliament of Great Britain; and to it the eyes of the world are turned with earnest expectation and hope.

The next significant and most important step in the line of progress was the formation of a "Society for the study and cure of Inebriety." It was instituted February 25, 1884, with Dr. Norman Kerr of London, as its president, and a long list of other distinguished names, as vice-presidents, council, and officers. This society has not been idle since it came into existence, but, with regular meetings at which papers are read and discussed by men eminent in the scientific and literary world, much is being accomplished in the line of study, and much light thrown upon the pathology and treatment of the disease.

Its accomplished president says: "Notwithstanding all the brave and gallant efforts of the warriors of the cold-water army, drinking to excess goes on merrily apace; insobriety, while somewhat decreasing among men, has been terribly increasing among women. This is a state of things pregnant with yet deeper ills to coming generations, for, by the advancing intemperance of the mothers of the future, our successors, endowed from their birth with an inborn ten-

6 *Inebriety, and Homes for Inebriates in England.*

dency to excess, cannot fail, from their heightened nervous susceptibility and their diminished will-power, to be less fully equipped to do battle with their inherited proclivities, and with the temptations to drinking which the tyrant customs of society, the sacred sanction of the Christian Church, and unrighteous legislation by the state, cause so to abound on every side." . . . "Whatever else it may be, in a host of cases it is a true disease, as unmistakably a disease as is gout, or epilepsy, or insanity. Sex exerts a powerful influence, nerve-storm in natural functions being an influential factor in the production of inebriety among females." "The influence of intoxicating drink is primarily physical, and no moral or religious surroundings or conditions can prevent or alter the physical effects of intoxicating agents on the human brain and nervous system."

DR. NORMAN KERR, F. L. S., *London.*

Many others testify in the same way.

"Inebriety is a disease, and must be treated as such, the physiological condition being waste of brain, and nerve power."

DR. LONGHURST.

"It is the province of the Christian Church to bring men to sobriety by the path of morals; but it is the duty of the State to make men sober, whether they be moral or immoral. The Church is bound to fight against drunkenness for the sake of the individual drunkard, but the State is bound to seek its abolition for the sake of the community at large. The establishment of homes for inebriates, especially for women, in the neighborhood of our large towns, is an absolute necessity in the present state of society."

J. MUIR HOWIE, M. B., C. M., *Liverpool.*

"Drunkenness is a moral evil, but drunkenness has also a physical basis, and physicians have done much for the community in getting men to look at it in that light."

REV. LLEWELYN D. BEVAN, D. D.,
Vice-President National Temperance League.

"How many men of eminence, — artists, poets, clergymen, and literary men, as well as religious and active women, — in order to sustain the pressure at which many of them, alas! are often compelled to work, have, by too frequent indulgences, degenerated into confirmed drunkards, and in none of these instances could it be properly said that they were actuated by vicious tendencies, but were impelled by an inflamed and disturbed state of mind. In many sensitive temperaments there is a dormant defective proclivity, ready to start into activity and carry all before it. This dormant power is often the heritage of a drunken parent, or from a parent of overwrought and unnaturally sustained brain-action; or it may be the result of an enfeebled constitution from disease, or other personal conditions."

STEPHEN S. ALFORD, F. R. C. S.

Such testimony touching the physical aspect of inebriety, were it necessary, or even important, might be multiplied to a burdensome extent, but the views of the society to which reference has been made are thus sufficiently represented. Those who have given themselves not only to the study but to the hard, practical work of employing means for its cure, and who are now engaged in this responsible service, should also have a place in the rôle of evidence.

Such testimony however may be premised by that of the government "Inspector of Retreats" — an officer employed to discover and reveal defects and failures if they exist. He says: "The general condition of the different retreats has been on the whole *very good*; and the health of the patients, *very satisfactory*. As a rule, the retreats have worked well, and the complaints made to me, either by the licensees or the patients, have been few in number."

H. W. HOFFMAN, *Government Inspector.*

Under the "Habitual Drunkard's Act" there are five licensed retreats, whose status may first be considered:

1. *Dalrymple Home*, at Rickmansworth. "I am satisfied that even such results as I am able to record are sufficient

to indicate that this institution meets an urgent need of the time and will serve as a pledge of future usefulness. Out of forty-nine admissions, there were men of the average age of thirty-six years, all of whom had been heavy spirit-drinkers of a daily quantity varying from one pint to two quarts. Of the thirty-two discharged, fourteen have recovered, and resumed their avocations in life, and six have decidedly improved."

DR. R. WELSH BRANTHWAITE,
Medical Superintendent.

2. *Tower House Retreat*, Westgate-on-the-Sea. "In reviewing my book of last year (1884) I am glad to say that I have met with decided success in the treatment of a majority of the cases that have come under my care. Fifty-six have been under care from the beginning, and only a small number left without deriving great benefit, which I trust in the majority of cases will be lasting."

J. H. BROWN, *Principal and Licensee.*

What is meant by "decided success" in this report is not quite clear. Does it mean decided cures? If so, is it justified by following up the patients after leaving? This is important.

3. *Old Park Hall*, Wallsall, Staffordshire. "The work of building up an institution for the cure of inebriety is a most responsible one. A man who undertakes it should be himself a total abstainer, and require the same of all in his service. He should be a Christian man and rely upon Divine Aid to secure success. The inculcation of right principles and conduct should be done by example, which is seen and felt, and is more effective for good than constant preaching to the patients. The institution has not been sufficiently long-lived to assume any given percentage of cures, but all who come are the better for coming, and if they remain long enough great good can be accomplished." Such is the opinion, as expressed to the writer, by

FRED. JOHN GRAY, *Medical Superintendent.*

4 *High Shot House*, St. Margaret's, Twickenham, Middlesex. "The necessity for such homes can admit of no two opinions. If we fail to recognize as we ought that intemperance is a disease, quite as much as small-pox or any other affliction, we shall never be able to apply the proper remedies."

HARRISON BRANTHWAITE,

Medical Superintendent.

5. *Colman Hill House*, Halesowen, Worcestershire. "It is too soon to speak of ultimate results so far as cases are concerned, but there seems good grounds for expecting a fair proportion of cases will be permanently restored, while improvement may be considered *certain*, in almost every case. Judging from the last nine months we are much encouraged to hope for good results in the future. . . . It is succeeding beyond our expectations, and we get most gratifying accounts from those who have left."

This is an institution exclusively for women, and is said to be among the most successfully managed, under the skillful care of Doctors Hugh R. Ker and J. V. de Dennie, and an accomplished matron, Mrs. Taylor.

An interesting feature of the work is the fact that there are several institutions conducted by women, exclusively for women—and for those of the upper and middle classes, among whom intemperance is said to be on the increase. In a recent address by Dr. Norman Kerr of London, before the ladies of the "Christian Workers' Temperance Union," it is clearly shown how this evil is growing. He says, "There could be little doubt that female inebriety had been increasing enormously amongst us. The evidence given before the Committee of the House of Lords clearly proved this. In one town there was an absolute majority of females of the whole number arrested for drunkenness. . . . In Liverpool, in one recent year, there were more female than male commitments, for crimes connected with drinking, to one large prison. In London the proportion of women summoned for drunkenness had increased from about 15 per cent. to 49 per cent., or nearly one-half the total number.

In Edinburgh there had been a marked and most alarming increase."

With such facts before them it is not surprising that the true and sober women of the realm should arouse themselves and come to the rescue. Among those who recognize the importance of studying the subject from its physical side, and dealing with their enfeebled and enslaved sisters in that direction, the following may be named: Mrs. Theobold, of the

Tower House, Leicester, was the first to open a Home for the higher classes of ladies, to be treated for intemperance from its physical side. Mrs. T. was for years a popular and eloquent platform temperance speaker. She dealt with the subject as others did, awaking interest and sympathy in the drunkard and his family from the standpoint of morals and religion. The time came when she abandoned the platform, and devoted herself with fidelity to the physical treatment of her unfortunate sisters. To the writer, on the occasion of his recent visit to her beautiful Tower House, she remarked:

"A person may be cured in motive, in purpose, and in will—the moral nature being restored to its normal state; and yet *the impulse comes as a physical demand, like hunger*, and must be satisfied, unless the victim is restrained, or supplied with a satisfying substitute."

After a quarter of a century of temperance work before the public, she has come to adopt this creed, which contains in a few words the substance and the philosophy of the evil: a *physical impulse*, asserting its need, like hunger.

Buxton House, Earls, Colne, Essex. Conducted by Miss Pudney. She "aims to promote a higher moral tone and more force of character; by which the power of habit may be overcome; and to develop these, great kindness and gentle firmness, unremitting oversight, and personal companionship are devoted. Pleasant social intercourse, recreation, and refining amusements provided."

With such a course of treatment day by day, and the intervention of the medical advisor when needed, Buxton House is an instrument of good for the upper and middle classes.

A peaceful home, presided over by the genius of philanthropy and wisdom.

Spelthorne Sanitarium, Redfont, near Feltham, Middlesex, is an institution under the care of the "Wantage Sisters of Mercy" (Church of England), in which, while the religious element is prominent as a governing force, the physical view is considered important, as may be seen by the following quotation from the notes of an observer, and adopted by the Order: "The very term Sanitarium tells that drunkenness in its aspect as a disease has been carefully kept in view; while the term 'patient,' rather than 'inmate,' avoids wounding jealous susceptibilities."

Chapel services are held three times daily.

The sister in charge writes as follows:

"The sisters only took up the work the 3d of July, 1884, and one year is not sufficiently long to make our views worth very much. Married women are more restless and anxious to leave than single women and widows. Family cares, and anxiety about children, unsettle them. A very observant sister once said, 'fleshly indulgences deaden all spiritual perception; they neither desire heaven nor fear hell.' Still there are many exceptions, and we have in this short time very reasonable hope for the future of two or three that have completed their year and gone out into the world, afraid of trusting in themselves, and keeping up a friendly relation toward ourselves."

In addition to the above, the same sister gives the following: "One year at least is necessary for a cure. To tide over the broken-down condition, and remove physical disability, requires at least six months, and the last six months are needed to restore and establish the moral and religious character."

AGNES, *Sister in Charge.*

West Home, Belmont, Twickenham, Middlesex. A family of women. "I believe the Home should be conducted as near like a family in ordinary sober life as possible, that when the patients go out at the end of a year, *they will not feel any rebound.*"

"The physician is not often needed, though a medical certificate is required to admit a patient. A year is the shortest term for which they can be received.

"At West Home, while availing ourselves of every remedy that medical science can afford, we put our trust in the Great Physician. LADY SUPERINTENDENT."

St. Raphael's Convent and Hospital, Croyden. Under charge of "Sisters of Mercy." "Religious services twice daily in chapel. Require a year's residence. Not much reliance on medical treatment, except in a few cases. In sinking or craving, our medical man is sent for. Keep a composing draught on hand which serves very well. Require an hour's silence, morning and afternoon, as good discipline. A certain amount of exercise is enjoined. Patients dress in uniform—black, with white caps. LADY SUPERIOR."

St. James' Home, Kennington Park, London. Religious and "Blue Ribbon Army." "No servants. Patients do all the work of house and public laundry. Prayers twice daily, which all *must* attend, and wear black dresses and blue ribbons. This is for the middle and poorer classes, and is in a measure connected with a mission under the care of Charles Zierenberg the 'Honorable Secretary.'

"Of the thirty-eight who left after a stay of twelve months and upwards, 32, or 84½ per cent., are doing well. Of these thirty-eight, sixteen received a decent outfit, and were placed in good situations. One of them was sent to Canada, and her master and mistress speak in the highest praise of her. Five were restored to parents; while seventeen returned to their friends.

WILHELMINA, *Lady Superior."*

The percentage of recoveries, as stated above, is beyond what is justified by long and faithful experience, and all such statements, from whatever source, should be taken with large allowance. They may be believed by "Blue Ribbon" advocates of the cause, who in their zeal sincerely accept such results as true; but no careful, scientific observer, nor any institution with a rational classification and study of its inmates,

can make such averments. To eliminate the alcoholic poison from the system, and to re-create the moral nature, so as to produce a new-made creature, without the taint of her former degradation, is a tremendous task, and no cure is established till that is done. The injury is too deep on the part of the victim, our knowledge too superficial, and our experience too short, to claim such sweeping results. Especially is this true under the circumstances which embarrass the superintendent of St. James' Home and his zealous wife, who feel the need of more room for exercise, out of doors—for more space in dormitories, to prevent the crowding of the inmates, and for a general enlargement of their facilities to improve the personal hygiene and domestic sanitation of the establishment.

Waverly Retreat, Westgate-on-Sea. Conducted by Mrs. Rawlins. "I find the greatest difficulty to contend with in females is ill-temper, when the craving for stimulants is at its height. The signing of papers (agreeing to be governed by the rules and regulations of the establishment, and the instructions of the medical attendant) answers quite as well as a license, and prevents many acts of unpleasantness, such as going before magistrates."

Waverly is well situated and should be well patronized.

Vergemont Sanitarium, Stanley, near Liverpool. Under charge of "Liverpool Ladies' Temperance Association." "The object of this institution is to give, with the aid of medical treatment and religious influence, an opportunity of reformation to women anxious to overcome a habit of intemperance, which they find they are unable to control. It receives those who are able to pay, and those who are not; the latter class doing all the work. There are no hired servants.

"We find but little difficulty in retaining our patients, they knowing they have entered for one year, and some of them who are married would be sent back by their husbands if they were to leave before the expiration of their term. The grounds are so secluded and private, and yet so ample, that they have plenty of room for exercise; and not being ob-

served from the outside, they avail themselves of it, and are contented.

MISS MARY M. HOCKING, *Matron.*"

Home for Inebriates, The Shrubbery, Leyton, Essex. Established twenty-five years. Its proprietor says: "My experience is, that bad cases of confirmed inebriety can only be cured by compelling total abstinence for a period of not less than twelve months. I only undertake mild cases in the early stage, when they are more amenable to treatment. I am not licensed under the Act, nor do I wish to be. I can more readily obtain patients and induce them to place themselves under treatment by considering them merely as visitors, coming to reside with me for a time as a private medical man. I am happy to say that I have been tolerably successful, though some cases have taken two years to cure; but from six to twelve months is generally sufficient."

DR. JAMES GREENWOOD.

Queensbury Lodge, Edinburgh, instituted in 1832. This is a "House of Refuge for the Destitute," and like other such institutions, in all civilized countries where they exist, many inmates are received who are brought to their low estate through strong drink, but no tabulated statement of the number of such is furnished, and hence this department cannot be reckoned among the institutions devoted to the cure of inebriety. It is rather custodial and industrial. There is, however, a distinct department for ladies of the higher class who are intemperate, in a separate and costly building. The prices are high, the appliances all superior, and twenty patients can be accommodated. There is a long list of officials, and of lady visitors, who render efficient aid.

Dunmurry, Sneyd Park, near Bristol, Gloucestershire. For both males and females, a limited number. Proprietor and his wife devote themselves to the patients, and are always with them. Daily family worship insisted on as an essential in the rôle of treatment. The lessons for the day read in their order.

“Having attendants is a choice of evils: I do not have them. To place a man of intelligence and culture in the care of an ignorant, and possibly a rude hireling, is therapeutically wrong. All sources of irritation should be avoided. Homes should be small to admit of personal supervision for the cultured class, and I take no other. I consider the first three months of a patient’s residence should be given to physical renovation. The second three months should be employed in learning to enjoy life without the usual accompaniment of alcoholic stimulants. Such persons have been in the habit of thinking that their cups were essential to real pleasure in their social life. Let them learn the contrary fact and enjoy the experience. The third three months, they should learn to do just like sober and upright people do—live like other people—and the longer they continue to accommodate themselves to the new life, the better for them and for all concerned. I have had clergymen as patients, and ninety per cent. of them have been led into inebriety by very hard work—fasting, and loss of sleep—thus impairing appetite, and demanding stimulants. Rest, abstinence, and tonics establish a cure. Married women are the most troublesome; always restless, anxious to be at home, etc.” *

JAMES STEWART, B. A.,
Late Surgeon in Her Majesty’s Navy.

There is one more establishment among the list of homes for inebriates, that is so unique in its character and methods of procedure, as to merit notice more for its departure from recognized practices, than for its claim to be doing a good work for the cause of temperate living. It is located near Bristol, and is conducted by its female proprietress.

On a visit by the writer, he was informed that she was

* A CURIOUS CASE.—“A lady got into the habit of chewing rice; could not sleep without it. Her husband frequently got up in the night to procure it for her. It fastened upon her to an alarming extent. A child was born, and so soon as it grew up, and was able to masticate, it took to the rice also. This alarmed the mother, and after a severe and protracted struggle, the rice was abandoned.”

having remarkable success in the treatment of her cases—all being men—by the process of educating them to be satisfied with a specific quantity of malt liquor. Hence she gave her patients each three goblets of beer per day. Her theory is, that as the appetite can not be destroyed, it can be trained, and so trained in the use of beer as to keep within the bounds of healthy stimulation; hence the practice referred to.

This view is at variance with the principles and practice of every home, or asylum, or hospital in the United Kingdom, and in America, so far as is known. With such an array of opposite opinions from the world of science and of morals, such practice must be sustained with a host of living testimony of long standing, before the doctrine of total abstinence can be abandoned or modified, as an absolute and imperious necessity in the curative process of alcoholic intoxication.

The following rules are recognized as cardinal by *all other Retreats and Homes*:

No intoxicating drink to be introduced on the premises under any circumstances, unless ordered as a medicine by medical superintendent.

No drug of any kind to be taken by patients except with consent of the physicians.

Such are brief notes of seventeen homes or retreats for inebriates, all of which, with one exception, were visited by the writer during September and October last. As already stated, five are licensed under the "Habitual Drunkards' Act." The remainder are conducted as individual enterprises and are capable of doing good to a helpless class of the community. The Dalrymple Home is the only institution of the kind in England, however, the managers of which are prohibited from receiving any pecuniary advantage from the investment.

With the exception already referred to, where beer is prescribed, there is a singular uniformity in the ethical code of all the institutions. No liquor is allowed. Permission must

be had to leave the premises. Money must be given up. In some instances, correspondence is inspected. In some, fines are imposed for neglect. Religious services are recognized in all, while in those conducted under the patronage of religious orders, church observances are enjoined; but the great need of every one, is to keep a more complete history of its inmates. A physician is connected with each retreat, and yet there are but few, if any, comprehensive clinical records. It is not enough to record the name, age, social position, occupation, length of time of the drink habit, and whether the indulgence was constant, or intermittent. All these are well enough, nay important, but what the scientific enquirer wants to know, and what the statesman wants to know, is, the cause of the drink habit; whether it is physical, psychical, or moral. What influence has society and the environment of the patient upon his life? What effects are produced by study, occupation, and general habits, other than drinking?

What is the effect of meteorological conditions upon the temperament and conduct? The microscope should be brought to the work, the secretions and excretions being examined from time to time. Analytical chemistry should be availed of, to assist the microscope in its discoveries, and so every collateral aid, and all allied conditions, so far as may be, should be compared, and the lessons they teach faithfully learned.

Within the whole domain of physiological and psychological research, there is no subject to compare with the single fact of drunkenness, in its scope and bearings, and which demands of the student more patient and painstaking study.

The normal function of every home, or retreat, or asylum is not simply to cure or benefit the inebriate, but to make inebriety a study for the benefit of the community. And every retreat should present to an awakened and interested public, at least once a year, a statement of its clinical observations and conclusions, showing the disease aspect of drunkenness in such an intelligent form as to create an abiding

interest in the results of research and study, so that the community at large may be partakers of the enlightenment which such inquiries may reveal.

THE ACT.

Some of its provisions are admirable, but why it should be operative for ten years *only* is not apparent. Its great defect is, that it requires a candidate for admission under it to appear before two magistrates, sitting together, and over his legally attested signature, confess himself to be what the law describes him to be, to wit: "dangerous or incapable of managing himself or his own affairs" Is such a person competent to be qualified before justices, and to obligate himself to "conform to the regulations, for the time being, in force in the retreat," the chief of which is to abstain from alcoholic drinks or drugs, unless prescribed by the physician in charge? If he continues to abstain he is cured, so far as the object of his commitment is concerned, and, to say the least, this has the appearance of needless, if not contradictory legislation.

The law does not however prevent persons from entering retreats voluntarily, and it is far better that they should do so, by making a similar contract with the superintendent of the retreat, *who should be empowered by statute to restrain inmates when, in violation, or threatened violation of their obligations, restraint becomes necessary.* Very often the knowledge on the part of the patient that the physician holds "the power of the key," is of itself sufficient to deter him from attempting escape, or other violation of trust. The majority of retreats in England are for women, and are based upon the voluntary principle. By far the larger number of their occupants are volunteers, and the average duration of their residence is not far from a year.

Every drunkard knows that there are times when he needs wholesome restraint, and that such are times of danger, when the impulse assails him, and the passion overpowers him. As he would confide in a friend, who would defend and pro-

tect him, so he would respect a law that would empower another by judicious and timely aid to restrain him when necessary from debauching himself.

That so many on both sides of the Atlantic have voluntarily committed themselves, is a sublime fact which attests their surviving manhood, and also an earnest desire for recovery. It also certifies to their appreciation of efforts put forth in their behalf by the homes and retreats, whose doors are ever open to receive them.

If the government would legalize the house regulations, which are always in harmony with the provisions of the act, making them supplementary to the act itself, the signature of the applicant being attached to them on admission, he would become a joint party with the state and the superintendent, the latter assuming the control, and the government acting as the protector of the patient against undue exercise of authority.

For cases of confirmed dipsomania, in which compulsory interference may be necessary, action should be taken by a special commission, with powers similar to those in charge of lunacy cases.

Paupers who are inebriates should be detained for curative purposes, and also indigent persons, not paupers, but yet who are unable to meet the cost of residence and treatment, both of whom should be committed for long terms, and thus prevent such frequent discharges and re-commitments as now darken the penal records. Such power might be given to poor-law guardians, or to special local authorities.

Drunkenness is not a mere accident in the experience of life. It is an established fact in human history, that has kept pace with the centuries, from the beginning until now. It has proved itself to be beyond the reach of human laws. Law cannot penetrate the occult forces of humanity, and search out the intricate by-ways of the morbid element which is its source, and which is so intertwined with vital processes as to poison the very channels through which they flow.

Resolutions and edicts, pledges and covenants, good as they are in themselves, and intended to strengthen the moral

sense, and restore the moral nature, must succumb at times to that which is inherent, vital, and overwhelming. When the *crave* comes, it demands satisfaction, *like hunger*.

Drunkenness, therefore, is a study, not for the philanthropist and reformer alone, but for the physiologist, with his microscope and its revelations; for the chemist, with his analytical tests and reactions; for the psychologist, with his spiritual affinities and contradictions; for the statesman, with his political influence and legal research; for the minister of religion, with his theologic lore and his appeals in behalf of virtue and self-control. Nay! it is more, for it cannot be approached from either starting-point, and pursued to its logical result, without falling short, far short, of the grand consummation. This can only be reached by encompassing the whole realm of inebriety, which extends from the remotest constitutional cause in the individual, to the outer limit of its most revolting desolations in the community.

If we would gather results that are in a broad sense exhaustive and conclusive, we must explore all its manifestations, and consider the temperaments and characteristics of its victims.

We have seen in the foregoing pages, how learned and scientific men have testified that intemperance is a disease, and the result of its treatment in Retreats; and if we add to this evidence, the coöperative sentiment of temperance organizations—the Alliance, the League, the Good Templars, &c — there is every reason to look for a solid public sentiment in England that shall favor the treatment of inebriety in Homes such as have been favorably referred to, and which will demand such legislation as shall render them effective in a scientific as well as moral sense.

THE FUTURE.

With such legislation as is suggested, and sufficient appropriations of money to enable Retreats to pursue the study with scientific care and accuracy, great achievements may be anticipated. Already a commencement has been made on this line, but funds are needed to procure instruments of

precision, and employ experts, when needed, for special topics.* Modern physiologists and chemists are agreed that there is a strong affinity between *some of the alcohols* and the nerve centers, but what is its full significance, and why it should belong to some alcohols more than to others, is yet to be disclosed. Chemistry has revealed the fact that the word Alcohol, as we are in the habit of using it, should not be so used, as there are several varieties of it, with quite different toxic powers, which should be studied separately, and their varied qualities and effects upon the human structure at the same time examined. This is an important phase of the subject, which is demanding special attention at this time. And so we should enter, by means of the institutions, into other special fields of research, which need not be enumerated here.

So far as religion is concerned, there are a number of retreats founded exclusively on a religious basis, where the means of religious instruction, the value of a religious example, and the encouragement to pursue a religious life, constitute the chief portion of every day's curriculum. Each one of these religious homes, however, has its medical advisor, and no patient is considered safe to resist the temptation of the saloon without a clean bill of health.

As to the statesman, the legislator, and political economist, he soon will learn, if he has not already, that it is wiser to save men from becoming a public burden, than to allure them into ways of excess and degradation, and will legislate accordingly. He will discover that a wise economy prompts parliamentary aid in supplying retreats with sufficient means to enable them to proceed with their ætiological and pathological researches, in the hope of eliminating the causes of inebriety, so far as the individual is concerned, and that ample provision will be made to assist and support those retreats that are not self-supporting.

There certainly is no grander work at this time engaging the thought of the British nation. The retreats that are conducted as they should be, recognizing the disease, and

* The Dalrymple Home has recently introduced microscopic and meteorological observations, in addition to the ordinary statistical records.

applying remedies, necessarily embrace the whole range of the inebriate's existence, and of all the influences that affect his life, while they neglect not the moral and religious side of the subject.

The work of other instrumentalities, however, is not to be discredited. Each has followed its own course, and accomplished results more or less satisfactory. With them there is no controversy. But now, we are crossing the borderland, and entering upon possessions, which science has discovered, the cultivation of which promises a goodly harvest. The retrospect is full of instructive experience. The present is in possession of vast resources. The future will be a gradual unfolding of truth—a continuous repetition of discoveries. Every properly equipped Retreat, or Home, or Asylum for Inebriates, will stand as a beacon, casting its gleam on the horizon beyond. Every individual inebriate who submits to the scrutiny of science, while he receives the protection of his fellows, will be a practical factor from whose interior being shall be eliminated the hidden causes of the mysterious "drink-crave" that possesses his brain, and impels him onward toward threatened ruin.

Why not this? We live in a day of enterprise, of energy, and advancing knowledge. The times are rich in expedients. Resources are unlimited. True religion and science are no longer at variance. One is handmaid to the other, and both are one in design and purpose. The better part of the inebriate is asserting itself afresh. It comes struggling up through the mist of doubt and fear, and pleads for help. Help is furnished in measure and quality as never before. Drunkenness can be traced through all its wanderings, from the incipient impulse, to its final, fatal breath. When this is learned, sobriety will be practiced, not so much on account of pledges, signs, and mottoes, as from an intelligent appreciation of the causes and career of inebriety.

It is no Utopia that lies at the end. It is England's cause, with British brains pushing it on, and British law to sanction and sustain. It belongs to the people of the United Kingdom, to whom it is especially commended now in its physical aspect.

TREATMENT OF INEBRIATES.

BY STEPHEN LETT, M.D., SUPERINTENDENT HOMEWOOD RE-
TREAT, GUELPH, CANADA.

To send an inebriate to gaol is costly, useless, and demoralizing. This is especially true of the confirmed inebriate, whose inebriety becomes a disease (if it was not so from the first), and requires to be treated on the same general principles as other diseases. It would be quite as consistent to send a patient laboring under the delirium of typhoid fever to gaol and expect good results, as to send an inebriate there with a view to improving his condition or curing his malady. Punishment is not the physic for disease. The course of treatment requisite for the inebriate must be conducted in a properly regulated and a thoroughly appointed institution specially adapted for the purpose, the details of which will vary according to the class of society from which its inmates are to be drawn; but there is one essential point in which all institutions of this nature must agree, viz.:—The medical man, who should also be the chief executive officer, must have absolute legal control of his patients, not only when necessary to place them under lock and key, but also to retain them under his care for a sufficient period to effect a permanent cure of a malady, where such happy results are obtainable. In the Province of Ontario, while the law somewhat restricts the period of detention to rather narrow limits, it gives all other necessary powers. The mode of admission to an inebriate hospital in this country is twofold, viz.:—Voluntary and compulsory. In the former case admission can be awarded to any inebriate who applies in writing to the Medical Superintendent of the hospital, provided it is certified to the satisfaction of the Superintendent that the proposed patient is an inebriate, and that he is

a reasonably hopeful subject for treatment with a view to the cure of his inebriety. Such person may be detained for one year and no longer, and it is a condition of his admission that he shall remain such length of time, not exceeding one year, as in the opinion of the Medical Superintendent is required to effect a permanent cure of his malady, but before admission is awarded he must sign a pledge agreeing and consenting to such specific condition, and to faithfully conform himself to all the rules and regulations of the institution while an inmate thereof. The compulsory commitment of an inebriate is obtained by a relative or friend presenting a petition, sworn to before a commissioner of the Court of Queen's Bench of Common Pleas, to the Judge of the County in which the alleged inebriate resides. Such petition shall set forth that the alleged inebriate is so given over to drunkenness as to render himself unable to control himself, and is incapable of managing his own affairs, or that by reason of such drunkenness he mismanages his affairs, or squanders his property, or places his family in danger or distress, or transacts his business prejudicially to the interests of his family or creditors, or that he uses intoxicating liquors to such an extent as to render him dangerous to himself or others, or incurs the danger of ruining his health and shortening his life. The judge then causes a copy of this petition to be served upon the alleged inebriate and appoints a time for hearing the case. If upon the evidence adduced the judge finds the allegations set forth in the petition to be true, he forthwith reports the fact to the Provincial Secretary and transmits a copy of the evidence. Upon the receipt of such report and evidence the Provincial Secretary may direct the Sheriff of the County in which the inebriate resides to forthwith remove him to an hospital for inebriates, to be placed under treatment and detained therein for a period not exceeding twelve months. In case of escape provision is made whereby the Medical Superintendent may by his warrant retake any eloper, whether he is a voluntary patient or committed by due process of law. The act

governing the custody and care of inebriates was originally framed for the contemplated hospital for inebriates at Hamilton, which was to have been a public institution supported by the funds of the Province, but of course made as far self-sustaining as possible, by utilizing the work of the patients. That institution was, however, diverted from its original function to an asylum for the insane. The urgent demand for accommodation for this class of unfortunate sufferers at that time was pressing heavily upon the government. This act has since been made to apply to the Homewood Retreat at Guelph, which is a private establishment, intended for the more affluent classes of society, but the only institution in this Province where inebriates are treated. Institutions for the care and treatment of inebriates ought not to be called "asylums," but "hospitals," which they should be not only in name but fact. For the class of patients for which your correspondent wishes to provide, the hospital should be built and maintained out of the public treasury. It should be governed and inspected by the same machinery as the public asylums for the insane, which I presume in England is quite as efficient as we possess in this country. It should accommodate both male and female patients in about equal proportion, and be provided with ample grounds for farm, garden, walks, etc., as well as various work-shops, amusement hall, recreation rooms, and chapel. The size of the building will of course depend upon the requirements of the locality from which it is to draw its population, and the design will vary with the fancies of the architect, but the size of the sleeping apartments should be calculated on a basis of not less than eight hundred cubic feet to each patient. Dormitories may be largely used, but a certain proportion of single rooms will be found not only useful but requisite, and some of these require to be strong rooms in which a patient suffering from delirium tremens can be temporarily placed, or a refractory patient properly dealt with. Regarding the duration of treatment, this will vary with each case and must largely be left to the discretion of the Medical Superinten-

dent. As a rule no good can be expected in less than six months, and there are but few cases receiving any permanent benefit short of a year. The American Association for the cure of habitual drunkards, after careful consideration and due deliberation, expressed the opinion that twelve months was the shortest time that an inebriate should be admitted for, and that it would be preferable to extend it for two years rather than curtail the period. They advised that in the commitment of habitual drunkards to an hospital, the sentence should be at first for one year, then if a relapse takes place the second commitment should be for two years.

The great drink cycle in this country has reached its highest point and started back on the descending scale. The internal revenue department indicates that for the year ending June, 1885, this decline was nine millions of dollars less taxes paid than the year before; showing a greatly diminished production of spirits. From the same authority it appears that the number of persons engaged in the liquor traffic who have paid special taxes to the State or Government have steadily declined since 1883. These are unmistakable hints of the operation of the laws which govern the rise and fall of the production and use of spirits in this country.

Prof. McKendrick of Glasgow, in a recent lecture on inebriety mentions that a very unusual sale of methylated spirits has been noted in Glasgow. One retailer purchased thirty gallons a month, which would make nearly thirty barrels of drinks to sell over the bar. These spirits had a peculiar flavor which was in large demand, and the intoxication was violent, profound, and long-continued. He urged that a very stringent supervision be exercised over the quality of the drinks dispensed. These spirits have been sold on Sunday more than on any other day, and the effects are so different as to arouse public attention.

ALCOHOLISM INCOMPATIBLE WITH AN ACCURATE PERCEPTION OF FACTS—THE VALUE OF LEGAL TESTIMONY UNSETTLED AND DEPRAVED BY ALCOHOLIC INFLUENCES.

BY T. L. WRIGHT, M. D., BELLEFONTAINE, OHIO.

The accuracy of the mental apprehension of facts depends very much upon the more or less complete consciousness of the mind when the facts were under observation.

In complete anæsthesia there is entire unconsciousness; because, there being no sensibility, there can be no perceptions offered or received.

In every subordinate *degree* of anæsthesia there must be a corresponding degree of imperfection in the perceptive function.

When the nervous system is in a condition of partial anæsthesia, such as always supervenes during the alcoholic impression, the knowledge of facts is infallibly darkened, and in several ways:

First, the insensibility of the nervous system causes the facts to be presented in a clouded manner. Events are enveloped in a mental haze which renders all conceptions of them undefined and often very incorrect. When the sense of vision is obscured by conditions exterior to the body, as, for instance, by a foggy atmosphere, the appearances are materially changed with respect to the actual situation of surrounding objects. Not only are outlines indistinct and deceptive, but objects appear to be placed in relative positions with regard to each other, and to the observer, such as greatly misinform the judgment as to the real facts. Not infrequently, also, objects appear wonderfully misshapen and of monstrous proportions.

If, then, the incapacity of a single sense dependent upon external causes, well known and appreciated at the time, so

greatly imposes upon the mind, it cannot be otherwise than that the incapacity of the whole nervous system through alcoholic anæsthesia should prove radically misleading in a vast number of particulars.

Again, the facts presented to the unstable or wavering attention, in a condition of alcoholism, are liable, through defective sensibility, to appear in *parts* only—that is, fragmentary, and, of necessity, lacking in that completeness and unity of character that is essential to a truthful appreciation of them.

But the mind, under the sway of alcoholic anæsthesia, is unconscious of its infirmities. The toxic power of alcohol, operating wholly from within, gives no appreciable sign of its impostures. There is no corrective to misinformation; as there may be in the case of enveloping mists, deceiving the eye,—that is, through the coöperative and conservative action of the several senses. On the contrary, the avenues to knowledge, in alcoholism, are all obstructed, and the senses operate in unison to betray.

The consequence is, that the convictions of the mind under anæsthetic influences are like mental convictions in brain disease. They are not fully amenable to the modifying influences of ordinary comparison and evidence. Like the delusions of the insane, they become imperative and unalterable.

And thus it happens that the sober and conscientious witness will testify to the truth of events which were largely illusions of the perceptions in intoxication; and which, moreover, give rise to delusions of the understanding when sober. In no respect, however, is the power of alcohol, in weakening judicial testimony, more aggressively prominent than in its invariable interference with the usual methods assumed by the mind to measure the passage of *time*.

In criminal jurisprudence it is well known that the effects of alcohol very often enter as prime factors, not only as to principals but also as to witnesses. But in all criminal investigations, the “time when” of an event becomes as important

a consideration as the "place where;" so that when crime is under investigation, the *time* of an occurrence is generally one of the decisive points in question.

There must be a normal and customary succession of events—or, perhaps, it might be said, a succession of perceptions—applied to the conscious mind, in order to appropriately arrive at a true conception of the actual passage of time. The mind, at stated intervals, must come, through the perceptive faculties, into immediate relationship with the world exterior to it, or the idea of time will be surprisingly erroneous. No matter if ideas are fixed or slow, no matter if they are swift or maniacal, there is no idea of the flight of time without this periodical return of the conscious mind to the material world,—to the "things of time and sense."

But, in alcoholism, anæsthesia prevents the regular and normal operations of the perceptive faculties. Nothing more astonishes an intoxicated man than to give him the true time.

How, then, can a witness, be he ever so honest, testify as to the time of an event observed by him while in a state of inebriation? He may say he informed himself respecting the time "soon" after the occurrence in question; but how can he know how long a period that "soon" occupied?

Alcohol is antagonistic to the right perception of facts, and, of course, also to accurate testimony respecting facts observed under alcoholic impressions. It mystifies facts, it distorts truth, and it annihilates time.

In all judicial proceedings of great moment, when stupendous interests in property, or liberty, or life are at stake, the testimony of witnesses respecting facts observed while in a state of intoxication should be viewed with the utmost suspicion.

Anna Parker recently died in the Glasgow work-house at the age of 35. She had been a confirmed inebriate from the age of 16, and had been arrested over four hundred times for drunkenness, and spent the larger part of nineteen years in the work-house and jails.

Abstracts and Reviews.

PATHOLOGICAL STUDIES OF INEBRIETY.

Dr. Formad has recently read a paper before the Philadelphia Pathological Society on an analysis of two hundred and fifty autopsies on inebriates, with specimens to illustrate the most prominent lesions present. He considered the most conspicuous lesions to be cyanotic induration of the kidneys, fatty infiltration of the liver, and mammillated stomach. His cases had been those in which there had been a history of a long-continued series of debauches, the subjects often dying in one of these debauches, and did not include moderate drinkers, or those who perished after imbibition of an enormous quantity of alcohol without any previous chronic excesses. He thought that the exposure, irregularity of diet, etc., incident to a state of drunkenness had much, probably more than the alcohol itself, to do with the production of the lesions; but it was not at all possible to separate one from the other. He gave a long list of lesions considered by various authors to be results of chronic alcoholism, among which the cirrhotic liver with contraction held a prominent place. He had himself at one time considered cirrhosis a very frequent, if not almost necessary concomitant of long-continued excessive use of alcohol; and had even testified in court that a certain person was not likely to have been a hard drinker, because at the autopsy no cirrhosis of the liver was found. He had thought, too, that the connection between the two was so close that it was impossible to have a case of cirrhosis without a previous history of alcoholism, as is held by various authors. Therefore it was surprising to him to meet, in his two hundred and fifty autopsies, with only six cases of cirrhosis of the liver with contraction. In two hundred and twenty cases the liver was considerably, or even very much

enlarged — the enlargement, in most cases, proving to be due to a fatty degeneration. Cyanotic induration of the kidney and chronic gastritis, with mammillation of the stomach, were found in nearly every case. This cyanotic induration is peculiar, and differs from the cyanotic induration due to heart disease. At a future meeting he will give a detailed account of the above lesions, and a more extensive analysis of the cases.

Dr. Tyson could not speak from a systematic observation of a large number of autopsies in the cases of confirmed drinkers, but he remembered distinctly being surprised in several cases by the absence of cirrhosis where he confidently expected to find it.

Dr. Wilson said that Anstie, in the article on alcoholism in Reynolds' *System of Medicine*, had called attention to the comparative infrequency of contracted liver in confirmed drinkers. This observer, in an extensive out-patient practice in London, had seen large numbers of cases of alcoholism, but very few among them presented the physical signs of cirrhotic (contracted) liver. The experience of the staff at Blockley Hospital sustains this view. There, many of the patients are soaked with alcohol; but even among those whose death is directly or indirectly due to alcoholic excess, fatty liver is much more common than contracted liver.

Dr. Osler thought the experience of pathologists and morbid anatomists with histories of patients is not of the most satisfactory character—he often having had cases to dissect where he knew very little of the history. Before saying these cases were chronic alcoholics, Dr. Formad should present more specific statements about them. His own experience with livers, in a large number of autopsies on cases of chronic alcoholism, had led him to divide them into four classes:—(1) Those in which the condition of the liver is pretty satisfactory; some of these cases may take alcohol for many years, and yet the liver pass muster. (2) Fatty cirrhotic liver; the cirrhosis may not, perhaps, be distinct to the naked eye, but plainly shown by the microscope;

this is the largest class. (3) Hobnail livers; these, he would say, were much more common than in Dr. Formad's series. (4) Hypertrophic cirrhotic livers. The difference between his observations and those of Dr. Formad might possibly be accounted for by a difference in the form of alcoholic beverage taken. He had not observed the special form of kidney described by Dr. Formad. In reply to a question he said, in order of frequency he would place them: fatty cirrhotic, hobnail, hypertrophic cirrhotic, apparently normal.

Dr. S. Solis-Cohen said that there were certain theoretical considerations which suggested themselves in this connection. The text-books teach that the lesions of alcohol are of two kinds—sclerosis and steatosis. It is known that in some organs the fibrous change precedes the fatty one. The latter is the higher grade of degeneration. The subjects of Dr. Formad's autopsies were confirmed whisky-soakers, in whom one would expect to find more intensity of degeneration than in those whose use of alcohol, though persistent and excessive, was not so outrageous. Another point which had not been alluded to was the fact that some lesions might result from a local action of the poison upon the tissues, while others might be due to its systemic action. No study of the subject could be complete in which these poisons were overlooked.

Dr. Randall suggested that the point touched upon by Dr. Osler—the character of alcoholic beverage—might be very important. In Vienna, among beer-drinkers, he had found the fatty liver much more common than the cirrhotic, while in England, where much gin is drunk, and he should suppose in Scandinavian countries, where they drink altogether strong spirits, the cirrhotic liver is doubtless comparatively frequent.

Dr. Musser had recently to go over the records of the Pathological Society, especially in liver diseases, and had found the total experience of different observers the same as Dr. Formad's; and also in those cases, cirrhosis was caused not so much by heavy drinking as by persistent drinking of spirits on an empty stomach — *Va. Medical Monthly*.

INEBRIETY FROM GELSEMINUM.

Dr. Caldwell, in the *Surgical Herald* of Joplin, Mo., writes as follows: "The subject of this communication was twenty-four at the time the writer first met him. He was robust, had lived a life well divided between work on the farm, study, and rational recreations. Mentally he was of that type we style *well balanced*. He was, therefore, not such a person as we would expect to see become the victim of a habit.

"He contracted chills; rheumatism supervened, and he refused the frequent offers made him of chloral hydrate and morphia. I may here state that his father had been addicted to the opium habit, and the son grew up with a horror of the very name of opium. In an attack of more than usual severity he took a large dose of fluid extract of gelseminum. Relief followed. The next day a repetition of the paroxysm called for a repetition of the dose. As with all quieting agents, the dose must be augmented, but during the year this increase was not very great.

"One hot night, while in great agony, the sufferer took a very large dose and lay stupid till noon the next day. The experiences he had were, as he said, 'wonderfully pleasant.'

"Now the habit became fixed. The victim grew to using as much as *a fluid ounce of the extract* as one dose. What would once have produced death was now only a gentle palliative. Still the dose must be increased.

"He became pale, emaciated, listless, and at times strangely uneasy. He became the prey of strange terrors, and was subjected to some hallucinations of the physical senses.

"Looking fixedly at any distant object he could discern all the colors of the spectrum—then darkness followed, and then a number of faint rays of light would precede the complete return of vision.

"His hearing became singularly acute. He was apparently regardless of what was passing; still he could detect whispers, he told me,—whispers uttered many yards away.

"Nothing could induce my poor friend to give up his dar-

ling drug. Seeing how the matter distressed his friends, he went away. During his stay of a year in Canada, he increased the dose daily. He returned far more feeble, and at times seemed positively idiotic.

“He fancied ghosts were around him; he could hear the shrill whispers of leering demons, and in his better moments saw the starry wings of angels hovering around his bed.

“After a year more of this strange habit he sank into a condition of hopeless idiocy, and died in the stupor induced by his idolized drug.

“The relatives of the unfortunate man never took care to prevent his obtaining the drug; but this neglect is seen in regard to the victims of the opium habit every day. It is to be hoped that in an advanced state of civilization—the true and better sort of civilization—such persons will be taken away from the care of neglectful and ignorant kinsmen, and placed in public institutions where judicious medical treatment and the proper moral suasion shall be exerted so as to redeem many a poor creature from those hideous vices that wreck the body and debase the mind.”

DISCUSSION CONCERNING ALCOHOL.

In the French Academy of Medicine, Beaumetz read a long paper giving some conclusions from various experiments made on animals with different kinds of alcohol. One of these conclusions was that the more poisonous results were obtained from those alcohols which were furthest removed from pure vinous alcohol. In a series of experiments made on pigs, having for its object the production of a slow intoxication, he demonstrated that slow continuous absorption of alcohol was followed by certain anatomical lesions consisting of congestion and inflammation of the digestive tract and of the liver without reaching interstitial hepatitis; although pulmonary congestions, arterial arterioma, and sanguineous infusions into the parenchyma of the muscles may be present. In the second part of his paper he dis-

cussed the modifications of alcohol which took place in the economy, concluding that one part of alcohol is eliminated from the body unchanged, and another part is altered; also, a certain part is sent off by the respiration and urine. A certain quantity undergoes acetic transformation, from which comes the alkaline acetates, which become later carbonates, and still later the reduction of the water and carbonic acid. Three cases are illustrated at some length. One where the quantity of alcohol is small, and one part is transformed directly into acetic acid, and enters into the circulation under the form of acetates. The other part enters unchanged into the blood and adheres to the globules rich in oxygen, and finally becomes transformed into acetates. In the second case, where the alcohol is considerable, only a part is oxidized and reaches the state of carbonic acid, the rest is eliminated unchanged. In the third instance, where alcohol is taken in toxic doses, it is no longer burned up by the hæmatoxylin, which, on the contrary, it dissolves. Hence we have interstitial hemorrhages.

In the discussion which followed M. Perrin denied these conclusions, and believed the results which were reached by the commission of 1880 had been fully sustained. These conclusions were that alcohol undergoes no transformation in the organism. It is returned or excreted in its natural state. No acetate is ever found in the blood, it is only outside of the body that one is able to transform a mixture of alcohol and blood into acetic acid. Why is one not able to find aldehyde in the blood of persons poisoned by alcohol, when alcohol is so often found in the blood after the injection of a small quantity? It has been urged that alcohol was transformed into aldehyde. If it were a fact that the alcohol were finally changed into carbonic acid, there would be an increase in the amount of this gas exhaled. Whereas the exactly opposite is observed. It is just this diminution of carbonic acid which indicates the true role of alcohol in the system. This diminution of carbonic acid is a certain sign that the general nutrition has been slowed up. Alcohol as

alcohol in the organism acts on the nervous system, particularly on the heat producing centers, and this slows up assimilation and all the other processes. M. Guerin remarked that a mistake had been made in not examining the eliminated matters in the feces. M. Bechamp stated that this subject was thickly beset with difficulties. In the first place, the materials such as the organism furnishes, the result of retrograde metamorphosis, are capable of undergoing certain alterations which may result in the production of alcohol by an entirely special and particular process of fermentation. Thus the organism itself may produce alcohol. He gave several examples of these phenomena.

RECOGNITION OF INEBRIETY.

The following is an editorial in the *Mississippi Valley Medical Monthly*, by Dr. Sim, the editor :

INEBRIETY. — The sooner the medical profession, the philanthropist, the Christian, and the State recognize inebriety as a disease, admitting of early diagnosis, classification, and cure, the better it will be for the unfortunate sufferers and the community that harbors them.

We have two insane asylums in the State of Tennessee, and a third—one for each geographical division of the State—about to be erected. This will be ample for the care of this class, and the noble work is but discharging a duty devolved upon the State by the strongest obligations that can possibly be imposed upon a government. But how about the drunkard? Any arrangement being made for his care? None whatever. He is treated as an outcast; is shunned by every one, and the announcement of his death would bring a sigh of relief. There is a class of periodical inebriates who show the epileptiform character of disease so plainly that the physician, though a mere tyro in psychiatry, must recognize it, even at a glance. Others suffer from local, nervous, or general disease from which the alcohol habit gives them temporary relief, and thus they are impelled, in many instances,

by the most intolerable tortures, to drunken habits. Yet another class maintains a diathesis, predisposing to inebriety, the same having been by heredity stamped in each individual.

But, say our good Christian friends, adopt this view of inebriety, and the drunkard is at once relieved of all responsibility as a criminal. Even so, and let the responsibility rest where it properly belongs, i. e., upon the broad shoulders of the State, the pious Christian gentleman, the noble philanthropist, and the self-sacrificing doctor.

Would either think for a moment of holding a crazy man responsible for crime, when he was known to be such? Would not the responsibility of such a person's acts rest upon the community that tolerated the risks, by allowing insanity to go uncared-for? The community has ample warning in the case of an inebriate, and he should no more be permitted to go at large than the man deprived of reason from any other source.

The physician should familiarize himself with the disease aspect of inebriety, and not only recognize it when fully developed, but in its incipient stages as well. There can be no doubt of the fact of a steadily increasing tendency upon the part of the profession to recognize inebriety as a disease, and to regard the drunkard as to be more pitied than blamed. In many places throughout the country, "Homes" are being established for the reclamation and cure of inebriates. Many of these institutions have been in existence for a number of years, and their reports of cures are indeed encouraging. More than fifty per cent. of the inmates are believed to be permanently restored to health, family, and citizenship. A number must remain wards of the State, either in these institutions or in lunatic asylums, with permanently unbalanced minds. Others, whose conditions are not well understood, gradually relapse into former habits, but often maintain more self-control than previous to treatment. Can we not have in Tennessee a Home for the Inebriate?

INEBRIETY IN CHILDREN.

Dr. Thomas, physician to the Sheffield Public Hospital, in a recent address, gives the following record of cases: Case 1, is that of a little boy who suffered from delirium tremens at the age of eight. His mother was a drunkard, and he having found a bottle of whisky which had been hidden, drank of it—no doubt frequently. When he was admitted to the hospital they found that he had drunk nearly a bottleful of port wine. He suffered from delirium tremens, was in the hospital dangerously ill for a month, and then sent to a reformatory. Case 2, a boy aged eight, was the son of a drunken mother, used to be sent for his mother's whisky, after which he was rewarded with a sip. He became a drunkard. Case 3. The child of an apparently healthy mother was given a tablespoonful of beer twice daily. The child died and was found to have the most typically cirrhotic liver.

The late Doctor Wood of New York, sent me the notes of two cases, as follows: A boy, aged ten, whose mother was a fashionable woman of the world, and had a sideboard of wines at command, the father being dead, was continuously delirious and stupid. He drank to intoxication every day for nearly two years, then died. No restraint or control could be exercised over him. The second case was a boy six years old, whose mother was in an insane asylum, and his father was a business man. The boy was left home with the servants, who gave him all the wine he wanted, and for nearly two years he was continuously under the influence of spirits, then died of brain fever.

A physician consulted me about a boy seven years old, whose parents had been inebriates and were now dead, who displayed great cunning to procure spirits, and drank at all times and occasions to intoxication. His guardian, a temperate man, was unable to prevent him from drinking. When the boy was locked up a short time he was sure to be intoxicated soon after regaining his liberty. The impulse to

procure spirits was remarkable, and exhibited a brain power and development far beyond his years in this direction.

Another case came under my observation. A child one year old, whose mother was an inebriate and father feeble-minded, who had probably been given spirits from birth in the food, suddenly displayed a passionate fondness for spirits from a certain bottle that the mother used. Every day the child cried bitterly, and could only be satisfied with a table-spoonful and more of whisky. This increased until two ounces of whisky were given every day. The child would sleep most of the time, but would be wild if the spirit was not given. It was literally intoxicated for the entire time, no effort to substitute any other drugs, or to take away the spirits succeeded. Finally, marasmus and death followed. In certain circles there are many such cases, who most fortunately die early, but they illustrate the principles of heredity in a very startling way.

We have received from George Stinson & Co. of Portland, Me., the well-known art publishers, a magnificent full-length steel engraving of General Grant. It is after Anderson's celebrated photograph, which was made while the general was in full vigor, and represents him in his sturdy, manly strength, as the people wish to remember him. It is undoubtedly the best portrait ever made of the general. Messrs. Stinson are in need of agents for several important, popular new publications, and offer inducements that should be heeded by those in need of profitable work; those who write to them will receive, free, full particulars.

Dr. Meylert's "Notes on the Opium Habit" has grown to the fourth edition. G. P. Putnam's are the publishers.

Heads and Faces, and How to Study Them. By Professor Sizer and Dr. Drayton. Fowler & Wells Company, New York city, 1885.

This is a profusely illustrated volume of 184 pages, and is a manual of phrenology and physiognomy, designed for

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popular readers. A great number of heads and faces of prominent men are given to illustrate the text, and the authors are clearly experts in this department, presenting an attractive work, which of necessity will command much attention. The popular character and general appearance of this book are most excellent.

The Descent of Man. By Charles Darwin. *J. Fitzgerald publisher, 393 Pearl Street, New York.*

This famous work, perhaps the most important scientific treatise of the present century, is now being published at such a price as brings it within the reach of all readers. It will be completed in four numbers of the *Humboldt Library of Science*, of which the first has now appeared, to be followed by the second on November 20th, and the third and fourth at intervals of one month. The price of each of the four parts is 15 cents, and they will be sent to any address, postage paid, on receipt of that amount in coin or in postage stamps.

Berlin as a Medical Center; a Guide for American Practitioners and Students. By H. R. Bigelow, M. D. *New England Publishing Company, Sandy Hook, Conn.*

This little book tells you where to go for medical instruction in Berlin, and what it costs, and how to find the best of everything; to enable you to secure the greatest advantages in the shortest time. No one should go abroad before reading this work.

Mind Reading and Beyond. By Wm. A. Hovey. *Lee & Shepard, publishers, Boston, Mass., 1885.*

This volume gives a most excellent summary of the four reports of the London Society for Physical Research. The experiments on thought-transference opens up a most wonderful field of psychology, that has a fascinating interest to all students. The reader obtains from this work a clear notion of the experiments and their results, and in the last chapter the author adds some suggestions of his own which are well worth consideration. The conception of this work,

to condense and popularize the facts of these reports, which are practically inaccessible to most readers, should be encouraged. The author has done his part well, and we trust will do more work in this field. The publishers have given this work an attractive dress.

The Nature of Mind and Human Automatism. By Morton Prince, M. D. J. B. Lippincott & Co., Philadelphia, Pa., 1885.

This little book of 175 pages attempts, in the first five chapters, to explain the phenomena of mind and its relation to matter. In three more chapters human automatism is described, and the final chapter is devoted to a very excellent and spirited description of "What is Materialism?" Consciousness is shown to be dependent upon molecular motions of the brain, and also the reality of physical processes: "Nerve motion in the sensory nerves becomes transformed into an equivalent amount of cerebral motion or consciousness, which in turn disappears to become nerve motion again. Cerebral motion and consciousness are one and the same thing." The last chapter, a defense of materialism, is the best in the book, and will well repay careful reading. The author is a very critical, acute thinker, and however much the reader may differ with his conclusions, he must admire his style and method of statement. This little book is a very suggestive contribution to the old subject of mind and matter, and we commend it most heartily to all our readers.

Psychiatry. A clinical treatise on diseases of the brain, by Dr. Meynert, professor of nervous diseases and chief of the psychiatric clinic in Vienna. Translated by B. Sachs, instructor of nervous diseases in the New York Polyclinic. Part I. G. P. Putnam's Sons, New York city, 1885.

This first volume is devoted to the anatomy, physiology, and chemistry of the brain. The contents of the 279 pages are: The structure and architecture of the brain; the minute anatomy of the brain; anatomical corollaries and physiol-

ogy of cerebral architecture; the nutrition of the brain; mechanism of expression.

The author starts from an anatomical basis, and attempts to show that all brain diseases are due to changes in structure and minute formation. His thorough familiarity with and minute description of the brain structure requires the closest attention of the reader to follow intelligently, but the rich array of facts and suggestions fully repay a most careful study. Every section of the brain and its relations to other parts are described with the minuteness of a "master anatomist," and running through these details are physiological conclusions and intimations, whose full significance will appear in the next volume. The chapter on nutrition and chemistry of the brain opens up a field comparatively new, and one that all students of insanity and inebriety should be familiar with. It may be said to be literally the outlines of mountain ranges of facts in a new continent of pathology and psychology, yet to be explored. This volume gives the reader a new view of psychiatry from the anatomical side, and the thoroughness with which this is presented indicates that the application of these facts to diseases of the brain will be a great advance to the study of this subject. Unlike many other works in this field, the critic who differs from the author's facts and conclusions must be himself a superior anatomist and specialist, or his criticisms will be evidence of his own non-expertness. This work is clearly destined to occupy a very large field, and be an authority far above the average text-books in this department. The translator deserves the greatest praise for his frequent improvement and clearness of the text, giving the English a better cast than the author in the original language. More liberty in this direction, and less strain to be literal in the language, would add to the work.

Both the author and his accomplished translator have, in Part I. of this work, presented a volume to the English reading medical public more complete and thoroughly scientific than most of the books which have gone before in this field. The illustrations are numerous, and many of them excel-

lent. The type and make-up of the book are also-attractive. We most earnestly urge our readers to put this work in their libraries as one that will prove indispensable.

SOME EXCHANGES.

The *Scientific American*, a weekly published by Munn & Co. of New York city, and the *American Inventor* of Cincinnati, O., a monthly, and the *Electrical Engineer* of New York city, are all current papers giving excellent summaries of the latest discoveries from the front lines of science. The *American Journal of Insanity* of Utica, N. Y.; *The Alienists and Neurologists* of St. Louis, Mo., and the *Journal of Mental and Nervous Diseases* of New York city, are the three great reviews of psychiatry, which describe the march of scientific research into the realms of mind and matter, both in health and disease.

The *Homiletic Review* for January begins the eleventh volume, and fully sustains its previous reputation as one of the best exponents of pulpit philosophy of the day. Funk & Wagnall's, Dey street, New York, are the publishers.

The *Popular Science Monthly* grows in excellence and value with each number. A year's subscription to this journal would be a New Year's gift bringing increased pleasure every month of the year. Send to D. Appleton & Co., New York city, the publishers.

The Journal of Heredity, a popular scientific quarterly published in Chicago, and edited by Dr. Burnett, who is superintendent of the department of heredity of the W. C. T. Union, has appeared, the first number dated October. The contents and general appearance give promise of a very vigorous and influential future. The facts in this field are very numerous, and a large audience is waiting for some one to serve them up; hence, Dr. Burnett will have the rare privilege of being a pioneer and leading public sentiment in this direction. This journal deserves a hearty support.

Editorial.

ANTE-MORTEM STATEMENTS OF INEBRIATES.

It is a fact new to science that the statements of inebriates under oath, or otherwise, are always more or less unreliable, and cannot be accepted as truthful unless confirmed by other evidence. The inebriate may be sober at the time, and yet his statements will lack that accuracy essential to truth. The use of alcohol so far impairs his perception and judgment, that no matter how honest and earnest he may be, an element of error will come in unconscious to himself. This is recognized in many chronic cases of inebriety, but in the moderate and occasional drinker, or the periodical inebriate with long free intervals of sobriety, it is not understood. Exaggeration or suppression of facts, faulty observations or perception, bad, impulsive reasoning, reaching conclusions not warranted by the premises, and almost every form of possible error, all of which are not realized by the person who is unable to correct his own mistakes.

An astronomer who, after a severe attack of malaria, continued to use spirits as a medicine, had so large a personal equation of error in his work that he was obliged to give it up; although he made great personal efforts to be accurate, he was unable to detect or correct his errors. A judge who drank regularly in moderation, was greatly astonished to find so many of his decisions overruled by the higher court. He was a careful, accurate lawyer, and at the time was confident of the correctness of his judgment. These cases are not uncommon, but have never received any special study, hence are largely unknown. The following case illustrates a phase of this subject that has a medico-legal interest.

The early history of W. H. was not ascertained. He served with credit as an officer during the war, and went into partnership with a comrade at Bridgeport, Conn., in the

grocery business. He drank at intervals, but this did not attract attention. In 1876 he became a soap manufacturer, was much respected as a member of a church, and wealthy. He traveled, selling his goods to New York and elsewhere. He was known to use spirits to intoxication at long intervals, but generally at home, or at some hotel away among strangers. In business matters he was correct, and his word was good among his associates. In one of his drink paroxysms at a hotel in New York, he had a personal encounter with a man who had been a boon companion on these occasions. His face and head were injured with flesh wounds, and for some years after he did not speak to this man. Then they became friendly again, although there was no evidence that he drank with him. The drink paroxysms increased in duration, but the intervals of five or six months remained. One day he was picked up in the streets of New York unconscious, with contusions about the head, and fractured skull. He was taken to a hospital, and next day became conscious, sent for his family, and made a statement under oath, and finally died. This statement described minutely his drinking at a certain hotel with his friend (who had injured him long ago); also certain differences of opinion which sprung up between them, ending in an encounter, in which this man struck him on the head many times, then threw him out into the street and took all his money. All this was described with great minuteness and under oath as his dying testimony. This man was arrested, but proved that on the day of the alleged assault he was at home in a distant city, and had not seen the murdered man for over a year, and had not been in New York for many months. It was clear that the injured man had described the assault which had occurred some years before, and did not realize that a long interval of time had elapsed. His memory of the events and injury preceding death was abolished, and the only thing clear was the recollection of the former injury, which seemed to his disturbed brain the event of yesterday. Had the accused man been in New York on the evening of the alleged assault, and

by accident met this man, to whom he was friendly, and left him soon after, it might have been difficult to show to a court and jury that he was not guilty as described in the dying statements of the murdered man. An examination showed that he had been robbed of only a small sum of money, his watch and pocket-book having been left at the hotel where he stopped. It also appeared that his injuries were, in all probability, caused by being thrown out of a low bar room, where he was drinking. A similar case occurred at West Troy, N. Y., the history of which was sent me by a lawyer. Two men, owners of canal boats, periodical drinkers, who, while drinking together, had frequent personal encounters. One day they were seen drinking together, and the next morning one was found unconscious from a fractured skull. The skull was trepanned, and the man recovered so far as to make an ante-mortem statement that his friend had struck him on the head, causing his injuries. This man was arrested, and protested that he had left him in the early part of the evening on the canal boat, that they had no personal differences, that he did not strike or injure him in any way. His own whereabouts was not clearly proven to the court during the night of the assault, and he was convicted and sentenced for three years. A year after this, a lawyer received in payment for defending a criminal a watch, which was identified as the one stolen from the man found unconscious on the canal boat. From this and some other circumstances it was clear that the assault had been committed by the criminal for robbery, and that the man then serving out the sentence for this act, was, as he protested, innocent of the crime. In this case the man's memory of recent events was abolished, and the acts of long ago seemed those of yesterday.

This condition is analogous to the dementia seen in old age, where only the past is clear and fresh on the memory, and events of the present make no impression, only so far as they seem to be a part of the past.

The possibility of grave injustice being done innocent

persons who are accused on the statements of drinking men is very great. All such testimony should receive careful scrutiny, and be open to grave doubts unless confirmed by a variety of collateral circumstances that are beyond question.

TERMINATION OF INEBRIETY.

Inebriety ends either in death, which may be due directly or indirectly to the action of alcohol, or merges into some other allied disease, of which the use of alcohol may have been only a symptom, or it may come to a long, obscure halt, that may last through life or terminate any time in a violent relapse and return of all the previous symptoms. A small number of cases die from delirium, paralysis, inflammation, hemorrhage, the result of alcoholic degeneration. A much larger number die from pneumonia, Bright's disease, dropsy, pericarditis, and gastritis, following and produced by alcoholic excess. Inebriety may be said to be allied to nearly every organic degeneration and disease of the body; the more common of which may be mentioned as the ataxies, palsies, and the various forms of insanities. The use of alcohol may end abruptly, and any of these forms of disease become prominent. Whether the use of alcohol was only a premonitory symptom of the brain degeneration preceding these diseases, or was the active and exciting cause of them, is often a difficult matter to determine. In quite a number of cases it is both a symptom and an exciting cause. A defective brain from heredity may speedily develop some organic disease from the use of alcohol. A brain organization made defective from bad nutrition, traumatism, or exhaustive demands on its functional capacity, is a most fertile field for inebriety. The demand for alcohol is merely the craving for a narcotic to quiet nerve pain and irritation. The use of spirits may be stopped, and various complex organic nerve and brain diseases appear which were marked before. Thus total abstinence reveals the real state; and while it gives nature a better chance to antagonize dis-

eased tendencies, new types and symptoms spring up, and go on slowly or rapidly to their natural termination. Often, in periodical cases, total abstinence is followed by paroxysmal nerve storms, and psychological changes that are peculiar and fixed. Thus, in one case, outbursts of insane anger, or extreme suspicion, or great benevolence, or miserly hoarding, or religious anxiety; in brief, almost every psychological symptom of changed character and conduct, which is often of short duration, and seems to take the place of the former drink paroxysms. Thus brain energy gathers and explodes in these abnormal directions. Such cases merge into epilepsy from the slightest causes, such as head injury, or violent and prolonged strain, or develop insanity from apparent trifling conditions. In such cases the brain soil is charged with the germs of insanity, which only needs some exciting cause to spring into great activity.

In a certain number of cases inebriety ends abruptly from the most insignificant causes, and a life of total abstinence follows, which may end in a sudden return of the disease, as mysterious as it disappeared. In one case, an inebriate signed the pledge and remained a sober man for ten years, then suddenly, in the most adverse circumstances, drank again to great excess. In another case, an inebriate who had been the subject of much prayer and entreaty, all with no results, suddenly signed the pledge at the request of a child, and was a strong temperance man for fourteen years, then, from the invitation of a stranger, drank again to great excess. Another man, an inebriate, who had been in political life and exposed to great temptations, and who had successfully resisted for a long time, began to drink with his coachman in the barn, and died after great excess. These halts are more significant and uncertain in persons who have used spirits for years, and may be termed chronic cases. In other cases, where the drink excess is limited to a short time, these halts may be considered more permanent. They are practically cures, only their duration is a matter of uncertainty, and may terminate any time, should some peculiar combination of

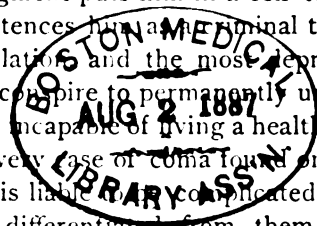
causes intervene. As in insanity, the same causes will produce the same disease, with slight changes; so in inebriety, the physical conditions which produced inebriety at one time will do the same again in the same state and condition. When the causes of each case are fully studied, its natural termination may be anticipated with some certainty; then the mystery of these sudden changes of type and symptoms will become clear, and the tables of cases restored and cured will be better understood.

SICK AND INTOXICATED.

We have often referred to the blunders so commonly made by police officers, in arresting and confining persons in the station house, who are suffering from cerebral hemorrhage, or other disease. Yet, notwithstanding all that has been said and written on this source of danger, the same mistakes are repeated over and over again. A valued correspondent sends us the notes of ten cases which he gathered from the daily papers of two weeks, where persons who had been arrested for drunkenness were found dead in the cells, or were removed a day or more later to die in the hospital. Three of these cases had Bright's disease, and were suffering from coma; two evidently had concussion of the brain, following direct injuries from being thrown out from saloons. One was a case of heat apoplexy, and one was found to be fracture of the skull and compression, and the remaining cases were clearly cerebral hemorrhages. In eight of these cases, autopsies were made. In the other two the diagnosis was made by the jail physician. In one of these cases the man was brought before the police judge, and sentenced to ten days for drunkenness, and at the time was supposed to be still under the effects of spirits. In jail Bright's disease and uræmia was discovered, but he died before any treatment could be applied. It is difficult to realize why the judgment of the average officer on such cases should be accepted as final, when the most expert discrimination by leading medical men have failed to determine the nature of such cases. In

cases of suspected insanity, officers and judges are very careful not to act on their confessed inability to determine the condition of the case. The same caution should be observed in these street cases of coma, where the only sign, an alcoholic breath, can not be trusted. It is the false view that inebriety is a self-induced sin and an innate depravity, that consigns the diagnosis and treatment to the officers of the law. The result is neglect and precipitation of the victim into more incurable conditions. The law, public sentiment, and the officer who arrests a narcotised inebriate and on his judgment puts him in a cell to recover; also the judge who sentences him a criminal to jail, where is bad diet, bad ventilation, and the most depressing mental surroundings, all conspire to permanently unfit, and make him more and more incapable of living a healthy, temperate life in the future. Every case of coma found on the street with an odor of spirits is liable to be complicated with the following, and must be differentiated from them before the exact condition can be determined: Fracture of the skull, concussion of the brain, cerebral hemorrhage, embolism, and thrombosis; uræmia from Bright's disease, epilepsy, narcotic poisoning, heat apoplexy, hysteria.

It is the duty of physicians to insist that all men who are brought to the station house in a state of coma should have a medical examination, in the same way that a maniac or an injured man are treated, and not, because he is supposed to be intoxicated, turned over to the officer as not needing such care or skill. Police officers should be taught that it is an exceedingly dangerous thing to strike an intoxicated man on the head; the liability to cerebral hemorrhages is very great. No experience or observation will ever enable an officer to determine that the coma of the man he arrests is due alone to the spirits used. The reckless indiscrimination which places all men in the station cell who are stupid and have an odor of spirits about them is fatal in many cases. Clearly it is a question of duty that is sadly neglected, and no man should be confined in a cell overnight until his real condition is determined.



SCIENTIFIC JOURNALS.

There are in the world eighty-eight different journals and papers devoted to the commerce, science, and art of spirit, wine, and beer making. Many of these journals treat the chemistry of the subjects exhaustively, and are constantly enlarging the boundaries of science in this direction. In all, there are about one hundred and eighty journals in the world (over a hundred of which are in this country) devoted to temperance, total abstinence, prohibition, and the cure of the evils from the use of drink. Not one of all these journals has risen above the dogma that the excessive use of spirits comes from a moral and spiritual degeneration of the man. Not one of all these temperance journals discusses the subject from the teaching of modern science. The brewers and distillers are alert to take advantage of all new discoveries, and are even pressing scientific inquiry in their departments to its utmost limits, sustaining and conducting journals for this special object; while the temperance journals content themselves with theories, which are contradicted by all scientific progress and research.

In 1876 the *JOURNAL OF INEBRIETY* appeared as the first, and is the only journal in the world to-day especially devoted to a scientific discussion of injuries from the excessive use of spirits.

The British *Medical Temperance Journal* came into existence three years later, and occupies a very confusing field of half science and half morals. *La Temperance* occupies a similar field in France, only more devoted to statistics. Why all this temperance zeal, energy, and enterprise displayed in so many journals should be so completely dwarfed, and restricted in their efforts, is simply due to the failure of recognizing any other than a moral causation for this evil. Inebriety and its evils will remain as long as the subject is only studied from the moral side. The *JOURNAL OF INEBRIETY* stands alone in its study of this subject from the standpoint of science, and from the teachings of modern science.

THE DISEASE OF INEBRIETY—A NEW DISCOVERY IN SCIENCE.

For two thousand years the scientists and philosophers of the world pronounced the inebriate a madman, and many facts concerning the disease of inebriety were fully recognized. But not until 1840 were there any attempts to group these facts and bring them into the realm of practical science. In the same way, for long ages, the facts concerning the stars were known, but finally *Copernicus* organized them, and brought out the science of astronomy. For centuries the Northman landed on our coasts, but *Columbus* discovered America, and placed the facts in possession of the world. Vaccination was known long before, but *Fenner* applied this knowledge to the principles of science and was truly the discoverer. *Franklin* and *Morse* were also great discoverers, but they simply grouped and applied the facts of science, bringing them into common use for mankind. *Simpson* and *Morton*, who first used chloroform and ether, were simply expert organizers of facts long known. *Darwin*, another great discoverer, has gone over the same fields where thousands have passed before, and opened up great mines of fact, and pointed out their meaning and their application to the problems of life. Thus, that which was known and was old in the experience of the world is new when organized on the lines of science and the practical relations of life. Thus history repeats itself, and the time had come when the facts of the disease of inebriety must be recognized, and the true meaning pointed out. Armies of miners and prospectors had gone over the field, but no one had opened up the rich veins of facts, and pointed out the laws which governed and controlled them.

To Dr. J. E. Turner the world is indebted for this great work. He first formulated and organized the knowledge of the past, and placed it at the service of mankind. He both planned and built the first inebriate hospital in the world, and demonstrated that inebriety was a disease and could be

cured by physical means. From that time a steady procession of facts have been constantly arriving on the front line of science, and the reality and value of this discovery is slowly and surely taking its place among the great events of the age. As in all other discoveries and advances of science, it is challenged and must pass the ordeal of indifference and fierce denial before final acceptance. This first stage is past, and the second stage of contradiction, denial, and opposition is rapidly drawing to a close. Dr. Turner's discovery that inebriety was a disease and curable in special hospitals, is a fact generally accepted by the scientific world to-day. By-and-by contests of priority will begin. Some one will come to the surface to show that this was no discovery, and that Dr. Turner was not the first one to organize and give vitality to the facts concerning inebriety. But happily all this tumult of criticisms and sneers comes from untrained intellects and non-experts in science. The pioneers whose lives have been one exhausting struggle with the facts gleaned on the hill-tops of science speak with bated breath and downcast eyes of the mysteries yet to be solved, while those who know nothing of the disease of inebriety or its relations to science still deny all this grand array of truth that is steadily centralizing around this fact. To the scientists this new discovery of facts has opened up a new continent, and revealed new phases of mind and matter, and pointed out wide ranges of physiological and psychological facts, the application of which will change the race-march and the history of civilization. From the date of Dr. Turner's discovery, inebriety has come into the realm of science, and the great facts can no more command attention along the levels of supernaturalism and superstition; they have passed up above the fogs and mists of theory and delusion.

In the presentation and discussion of facts and laws relating to the brain and its diseases, the physician who dogmatically commits himself to a statement or theory, which on examination is found to be without foundation, loses his repu-

tation in some degree. But if he is guilty of the same error often, both his intellectual and moral standing may be justly questioned. Intellectual failure to comprehend the real facts and state them is often a physical defect that is excusable, but persistent misstatements and misconception point to a moral weakness that places such statements beyond the pale of scientific recognition. Books, sermons, and lectures, by persons not trained to scientific accuracy of facts and statements, are not supposed to enlist full confidence in their truthfulness. But scientists, who simply record facts and the laws controlling them, should, unless fully confident of their accuracy, state them as appearing to be so and so from the best evidence at their command. Then, should further study disprove or confirm them, their reputation can not suffer.

SENILE DEMENTIA IN INEBRIETY.

In all cases of inebriety many and varied degrees of dementia and degeneration are present. The following case is given as an extreme type, and unusual, except where associated with other well-marked insanities. James P. was brought to me for an opinion, with this history: He was twenty-one years of age; came from a neurotic ancestry. His grandfather on his mother's side died an inebriate and his father was a moderate drinker. He graduated at Yale College at nineteen years of age; and soon after entered upon a career of general dissipation. He traveled and drank to excess continuously for the next two years. He was sent to an insane asylum in England, and finally was returned home. His condition was one of restlessness and suspicion of injury from others. His memory was very defective, and he alternately laughed and looked grave and angry. He would commence some remark, and leave the idea and go on to some other topic, always ending with a boast of his powers and capacity to commit some great deed. He exhibited some muscular strength for a few moments, then would be exhausted. He would start out for exercise and would have to procure a carriage, being unable to walk

back. He insisted on having spirits every day, and was given about a half a pint of whisky or brandy in twenty-four hours. All efforts to withdraw this provoked violent opposition and shouting. Nearly a year after his return home he was brought to me, with the following appearance: His face was that of a man over sixty, covered with lines and wrinkles, thickened and in folds; the hair was nearly gone; the beard was short and straggling, the nose was flat and shrunken, and the eyelids and eyebrows had fallen out; the teeth were decayed, and the abdomen enlarged, also the muscles of the leg and arm were emaciated. The facial expression was one of vacancy and vacuity. He was also bowed over, and walked in a trembling, hesitating way. He talked slowly and would stop in the middle of a sentence, and seemed to have a mixture of *aphonic*, *amnesic*, and *paretic* symptoms. When spirits were refused he would shout some sentence or word in a loud discordant tone, and keep it up until, for the sake of peace, it would be given him. He never seemed intoxicated, but would be quiet and stupid when given a quantity of spirits. His friends succeeded in gradually withdrawing the spirits and substituting bitter drinks in the place, but the same mental enfeeblement and dementia ended in death from pneumonia a few months after. This case was noted for the profound degeneration and dementia unattended with any special delusion or mania. It is common observation that inebriates who inherit a very defective organization, always have symptoms of dementia and senile degeneration.

Many of the characteristics of brain failure common in extreme old age are present. Thus, the instability of the mental operations, the failure of memory, and the alternate credulity and suspicion, and often great buoyancy or depression, associated with the appearance of age, are unmistakable signs.

It is clearly evident that these symptoms of profound degeneration and dementia have not been studied or noted as common to inebriety, and yet they are present in all cases, more or less, and furnish very significant diagnostic indications.

HYPNOTISM AND INEBRIETY.

Prof. Myers, in the *Fortnight Review*, brings out some very curious facts showing the power of a dominant idea impressed on the mind in a state of hypnotism. In one case DuMagne hypnotized a man who was an inebriate, but sober at this time, and impressed upon his mind very strongly the idea that he could not use alcohol, that it was poisonous and very dangerous. After coming out of this state, this idea continued for many months, and he was a total abstainer, although exposed to temptations. Dr. Leibvauld tried the same experiment on many cases with success. He found that men under the influence of spirits could not be hypnotized, and that in some cases the impression made on the mind was very transient, in others it lasted a long time. He supposed that if the hypnotic impression of repulsion against alcohol could be repeated often it could be made permanent and in this way made practical in many cases. Prof. Beamis reported a case where a great smoker was told, in a hypnotic state, that he must not drink or smoke again. He followed this idea and was able to break away, but was hypnotized and impressed in this way many times, and the repeated suggestions came at last to be fixed thoughts.

A theory mentioned to explain this is that alcohol paralyzes the higher inhibitory centers, while hypnotism strengthens these centers; also, hypnotism paralyzes the appetite centers, and thus counteracts the alcoholic action. It is further stated that repeated pressure of the idea of alcoholic repulsion produces a shock to the brain centers, and thus alterations take place, causing permanent changes of character.

No doubt certain sensitive organizations, under the influence of hypnotism, may be profoundly impressed by dominant and single ideas.

To apply this in a practical way to inebriates is a new field of psychology that may have a wide future. The laws of mind over body are as yet scarcely known, but we can rest on the conviction that science is on the track, and sooner or later the facts will be discovered, and their application made to the affairs of every-day life.

Clinical Notes and Comments.

OPIUM DISEASE.

Dr. Hamlin, in a very suggestive paper on the opium habit, read before the New York State Medical Society, makes the following statement of causes of the increased demand for opium in this country: "How can we account for this wide-spread and enormous increase? While it is evident all the causes cannot be known, there are some so apparent as to need mention only. First, the greatest of all is the great increase of the so-called nervous affections. The victims of these diseases are not only likely to become addicted to the habit themselves, but they are begetting a class of neurotics who are prone to morbid cravings and excesses of every kind,—their choice of alcohol, opium, chloral, or hash-eesh as a stimulant seemingly almost dependent upon accident. Then there is a class composed of the victims of disappointment and despair, the reckless and the vicious, those who resort to it as a drunkard to his cup to drown sorrow or remorse, or to seek some new source of pleasure" In speaking of the history of each case he says they may be divided into three parts or stages: "The first or formative stage is of uncertain length, beginning with the first continuous dose and ending with the establishment of the habit. This in one case was only a few days' duration, in another many months. I think there are but few persons who can take the drug regularly for more than three or four weeks without finding it more or less difficult to refrain from its use. A continuance of as many months is given to establish the habit firmly."

The second stage is one of progress, in which the victims keep increasing the size and frequency of the dose.

The third stage is one of poisoning, and the craving for the drug is continuous and persistent, etc.

These various stages are very clearly described, and the paper is a valuable contribution.

INSANITY AND INEBRIETY.

“Large doses of alcoholic drinks may act like a shock, and render the person taking them powerless, or suddenly maniacal. When this excess is frequently repeated, the nutrition of the body suffers, and a progressive loss of mental power comes on resembling the general paralysis of the insane. The higher power of self-control is earliest lost; the moral sense and social and domestic feelings suffer in turn; later on, memory and reasoning power, until finally the simpler organic nervous actions are suspended. Delirium tremens not unfrequently passes into an attack of acute mania, which persists long after the poison of alcohol is eliminated. Persons are admitted to the insane asylum, where drink was supposed to be the cause of the insanity, when later it was found that the drink was only a symptom. It is a common experience among the insane, that one of the earliest symptoms or tendencies is to seek relief from pain, general discomfort, or any special form of excitement, from alcohol or some other narcotic. It is a curious fact, that among the lower orders of English workmen, when wages are high and work abundant, inebriety and insanity are more common. Total abstinence is no certain prevention of insanity. In some instances the sudden change to total abstinence is a sign of oncoming insanity. It is an evidence of melancholy and mental depression that indicates a changed character and mental perversion, etc.

“Inebriety may be the predisposing cause of insanity or the exciting cause, or it may be only a symptom. Almost every symptom or variety of insanity may be started by drink. But there are special symptoms from this cause, and forms of nerve and brain lesion. Often inebriety comes on during pregnancy, or at the climacteric period. It may be a direct inheritance, or the result of neurotic inheritance. Persons who have received head injuries very often have both inebriety and insanity, a slight excess of drink being followed by acute mania.

"I believe that there is a cirrhosis of the brain as well as the liver, and a similar cause may start both inebriety and insanity. Dipsomania may be an inheritance, an insane symptom, or the vestige of an attack of insanity. It is more common after thirty, but is met with in persons at all ages. Its chief characteristic is profound moral perversion, weakness of will, and emotional instability. The prognosis is unfavorable, yet a careful study of these cases show that some are curable."

Extract from Dr. Savage's *Manual on Insanity*, published by Lea Brothers, Philadelphia, Pa.

STATISTICS FROM GERMANY.

The *Voice* publishes the following facts, which come from the English consul-general at Frankfort :

In Prussia, in eleven years, the population increased 13 per cent, while the places for the sale of beer and spirits increased 38 per cent. Of 6,523 insane persons admitted to the asylums in 1878-79, 4,013 were traceable to distinct causes. Of this, 27 per cent. were dipsomaniacs. Sixteen per cent. of the whole number had reduced themselves to this state from excess of drink. 9,319 cases were admitted to the general hospitals for treatment, in three years, from 1877-79. 5,212 of these cases were traced to alcoholism. In crime statistics 41 $\frac{7}{10}$ per cent. of all prisoners were committed for acts done under the influence of spirits.

POISONING FROM THE INTERNAL USE OF CHLOROFORM.

In the *Medical Record*, Dr. Eliot groups some of the symptoms of fifty-seven cases where chloroform was used internally, with toxic symptoms. The first stage of transient excitement was most marked in inebriates and athletes. Muscular relaxation, abolition of sensibility and consciousness, profound narcosis, stertorous breathing, and abolition

of reflex actions are the prominent symptoms. Many of these cases occur among inebriates where the chloroform is taken with a suicidal intent, and is most always fatal. The first symptoms are often mistaken for alcoholic intoxication, and the gravity of the case is not recognized until a later and more dangerous stage has begun. Some of these cases have contracted pupils, and closely resemble opium poisoning; in others a profound coma comes on from the first. The mortality is very large, and these cases require very prompt early treatment.

INSANITY IN ROME.

In an exhaustive report on insanity, by Dr. Fiordispini, Director of the Insane Asylum at Monicomo, near Rome, some very suggestive facts are given. From 1873 to 1880 an enormous increase of insanity has been noted. This he thinks is due to the spirit of the age, over-work, and continuous excitement, and a constant, superheated existence, which he terms positivism and unnaturalism. The revolution at Rome, in 1878, has been the direct cause of a great increase in insanity, and to every one hundred men who are insane, there are fifty-eight women. Alcohol is a very active cause, and the number who become insane and drown their reason in wine, and who commit suicide for the same reason, have been steadily increasing. He thinks this to be due directly to the use of distilled spirits, such as whisky containing amylic alcohol, and brandies and rum with their butylic and propylic alcohols. Also the many new kinds of fortified spirits which are so commonly used, of which absinthe and vermouth are prominent. This modern change in the drinks used commonly by the people has resulted in a large increase of mania and dementia, and many new forms of insanity not observed before. In his opinion the former use of fresh wines would not have caused such results. He thinks many of these alcoholic maniacs infect others by a species of mental contagion (a fact which I made the subject

of a paper read at the May meeting of the Association for the Cure of Inebriates, in 1884, and published in the October number, 1884, of the *Alienist and Neurologist*). He cites some strange figures among the staff of attendants of his asylum, where nearly four per cent. became insane from contact with maniacs. He refers to Dr. Richardson's statements, "that the insane exhale an essence of madness which may infect other persons in constant contact with them, and of peculiar nervous organization."

INCREASE OF INEBRIETY.

In the last quarterly report of the Washingtonian Home at Boston, Mass., Dr. Day, the distinguished superintendent, remarks, "that of the one hundred and sixty-five new cases admitted, thirty-four had delirium tremens. The increase of patients each year brings a larger number of cases of disease of the kidneys. Formerly not over one in six cases which came under treatment had disease of the kidneys. Now, one in every three have this affection, which I believe to be owing to the great increase in the use of beer. Many of these cases try to substitute beer for stronger spirits, and in this way tax the kidneys severely. Those who have used beer for years always have diseased kidneys. I am also confident that phases of insanity are more common in the cases which came for treatment during the last four years. My experience sustains the views of Dr. Crothers and others, that inebriety is increasing, and the insane types of inebriety are also increasing. This I believe is due in part to beer-drinking and increased nervousness. Nothing can be done, practically, until society recognizes the physical nature of inebriety; then its cure and prevention may be expected."

A firm who advertises McMunn's Elixir of Opium gives certificates of its value as a remedy for opium-taking. One of these is signed by a physician.

A gentleman sends us some facts about inebriety in Mexico two centuries ago. If a common man became intoxicated after any great occasion, such as a funeral or wedding, or from extreme grief, he was excused, unless he committed crime, when he was punished with a less severity than if sober. The idea seemed to prevail that among the common people less responsibility was to be exercised. But if persons of this class continued to drink to intoxication they were taken up by the military and sold into slavery for a period of years. Then, if they still continued to drink and appear intoxicated in the streets, they were shot as offenders beyond all possibility of restoration. If an officer of rank, or person occupying a high position, were found guilty of drinking to intoxication, they were shot or hung, and their bodies treated with great severity as a warning to others. The higher the offender, the greater the offense.

The man who drinks at intervals or continuously to excess, although he may not be intoxicated, has no right to be considered free and capable of acting rationally, or realizing the claims of duty. Freedom for him is a misfortune to both himself and family, and the society he lives in. He is practically a madman, and needs restraint more positively than many inmates of insane asylums. He is an object of increasing peril to his family, and a terror to society. He is bankrupting both body and mind, and a future of ruin is a positive certainty. To restrain him in the future, when his disease is apparent to all, brings no relief. The only hope for the future is early, positive restraint and treatment.

The Russian government has ordered all the small places for the sale of spirits in their country closed, and the number limited to one for every twelve hundred people. The license fee has been raised to over eight hundred and fifty dollars each. The government believes in beginning at the bottom of this evil.

The manufacture of alcohol from wood has increased very rapidly within a few years. No taxes being paid on it to the government it has been substituted for other alcohols. The bad odor and taste having been removed it has come into use for patent bitters, Jamaica ginger, and many other alcoholic compounds. It is a notoriously dangerous alcohol, and produces many and grave disturbances of the brain and nervous system.

A writer in the *Bibliotheca Sacra* for October, says that \$125,000,000 were spent for opium in China, in 1884; that over fifty millions of persons were computed to be using this drug, and that the mortality was not less than six hundred thousand a year. Seven thousand tons of opium were sent from India to China last year. This does not include the amount raised at home.

The first regularly organized asylum for the care and treatment of inebriates in Sweden has lately been opened at Bie, under the care of Dr. Levin. The prospectus is emphatic on the question of disease, and announces that it is to be an asylum for dipsomaniacs and the insane drunkard, and not a place for the religious treatment of physical disorders.

The phenomena of mind and human conduct has always found a ready explanation in spiritual and supernatural causes in exact proportion to the ignorance of physiological laws. The insane and inebriate were possessed of the devil until a clearer knowledge showed that they were diseased.

Dr. Devoes.

Moral lapses and failures in the parents are transferred to the children, and appear as physical defects of the brain and organism. The sins of the fathers must of necessity appear in the children. The quality and force of the organism has been perverted and its reproductions cannot be perfect.

Papine is the particular anodyne principle of opium. It has been found more valuable than any other form of opium, and is less dangerous. It is prepared by Battle & Co., chemists, St. Louis, Mo.

Fellow's Hypophosphites have already taken rank with opium and quinine as remedies of established value in all general practice.

Lactopeptine is called a constructive and digestant for all stomach troubles. Many eminent medical men use it largely in these cases with most excellent results.

The *Anglo-Swiss Food* has been tried in cases of gastric irritation from alcohol and opium, bringing relief when every other means failed.

Colden's Liquid Beef Tonic will be found of great value where highly concentrated food is needed. We urge that it be tried in the exhaustion from inebriety and opium cases. *Colden's Soaps*. Samples of Soaps will be sent free upon application in person, or by letter (enclosing card), to any physician in regular standing in the United States. C. N. Crittenton, 115 Fulton street, New York. Please mention THE JOURNAL OF INEBRIETY.

Jamaica Dogwood, in solid and inspissated extract, in doses of from two to eight grains, should be tried in those cases of severe neuralgia and brain exhaustion coming from alcohol. *Park, Davis & Co's* preparation should be used as the most reliable in the market. The same firm make several most excellent preparations of cocaine, which we have found to be valuable. We urge our readers to send to this firm and make a trial of some of these wonderful anæsthetics, about which so little is even now known.

Whceler's Tissue Phosphates is the name of a preparation which has been before the public a long time. It is very highly recommended as a tonic for nervous debility.

Horsford's Acid Phosphate, as a remedy, needs no extravagant praise wherever it is used; it wins its own way, and becomes an established remedy beyond all controversy.

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ALCOHOLIC PARALYSIS.

By J. DRESCHFIELD, M. D., F. R. C. P.,

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England.*

I have divided clinically this peculiar affection into two groups: the alcoholic ataxia, and the alcoholic paralysis. In considering the ataxic form, a distinction must be made between those cases of marked inco-ordination without much paralysis, and those where the gait resembles the ataxic gait, but is in some measure due to the paralysis of the muscles of the lower extremities. Of the purely ataxic form I have observed three cases, two of which have quite recovered, while the third died of uræmia, due to contracted gouty kidney.

The first case was a man aged 32, who had been for many years an excessive drinker, and had also indulged to a morbid degree in venereal excesses, but has never had syphilis. Complained of severe lancinating and shooting pains in lower extremities, sometimes in upper extremities; both lower extremities showed some spots of anæsthesia and of retarded sensibility, the muscles of the calf were painful on pressure; no atrophy or paralysis of either the upper or lower extrem-

ities, but there was marked inco-ordination. With his eyes open, the patient could walk fairly well and lifted the feet well from the ground, the heels coming down first; with the eyes shut, he showed marked ataxia, there was also distinct inco-ordination for finer movements in the upper extremities; tendon reflexes absent; no ophthalmoscopic changes. The patient gave up the use of alcohol and completely recovered. The tendon reflexes, which were absent, have now returned.

The second case was a patient suffering from dipsomania at Cheadle Asylum. He was single, age 33. Had an attack of sunstroke at Ceylon when 26, and after became very nervous and took to alcohol. He returned to England and drank heavily, then went back again, and finally returned and went into an inebriate asylum, and then into an insane asylum. He has never had syphilis. His brothers are hard drinkers, and one of them has epileptic mania. In May, 1884, he began to complain of pains in both legs and feet, especially on dorsal surface of the feet, near the toes, which were swollen; the pains were shooting in character. There was hyperaesthesia of the skin over these parts, and some spots of anaesthesia; he had also pain in his fingers, became very irritable, lost his memory for recent events, and refused food. There was loss of tendon-reflex, some slight atrophy of both legs, and marked ataxic gait. No bladder or rectum symptoms; atrophy increased, the pains, however, became less, and patient walked better. Towards the end of September, 1884, the pains ceased altogether; the atrophy, however, remained, yet the patient walked much better. At the beginning of March, 1885, he had pains over the distribution of the left supra-orbital nerve; again complained of pains in his legs, burning sensation in the soles of his feet, and cramps in his legs. In May, 1885, I saw the patient myself. I found him somewhat irritable; otherwise, but little affected mentally, except that he had lost his memory for recent events. The gait was feeble and slow; walked with the help of one stick, but his gait was distinctly ataxic, and became more so when he attempted to walk with his eyes shut.

There was some emaciation of lower extremities, but no marked paralysis of the muscles; movements of extensors of toes were, however, sluggish. Some slight atrophy of the muscles of the back and also of the arms, but the patient could flex and extend both fingers and wrists very well. The patient complained of shooting pains down the legs to the toes, occurring in paroxysms, and leaving a numb feeling behind. Firm pressure on the soles of the feet, and on the legs, was very painful. Patient also noticed a cold feeling when touched by any object. Limbs showed no vaso-motor disturbances. Tendon-reflexes were absent. The galvanic reactions were taken; the contractions were slow, and followed by fibrillar-tremens. A very strong magnetic electric current was necessary to get contractions of the extensors of the toes and calf muscles. The muscles of the upper extremities reacted well. There were no eye or bladder symptoms. There was loss of appetite, craving for drink, the tongue was furred; there was morning vomiting and occasional hæmatemesis. The bowels somewhat constipated. The liver and spleen were not found to be enlarged. The pulse was feeble and irregular.

As the patient refused to eat unless he had some drink, he was allowed beer. For the pains he had morphia injections at night, which gave him great relief. The patient soon began to improve and is now quite well. Has gained flesh, has no pains; there is no ataxia, and he shows no abnormality in walking. The tendon-reflexes are normal, and the patient is now only kept as a boarder at his own request. He has never discontinued to drink beer, but avoids all other stimulants.

The third case was a female, age 53, complaining of pains of shooting character in lower extremities. Three years ago suffered from gout in her hands. For some time she has been troubled with paroxysms of pain in her legs, without any swelling of the toes or any of the joints; has also noticed that her gait was awkward, and that she could not walk well in the dark. She had a typical alcoholic appearance; skin was dry, there was a nodular swelling on the metacarpo-

phalangeal joint of left index finger. Patient looked thin; no œdema, and no marked paralysis of any of the muscles. Could walk, but felt weak on her legs; walk was ataxic, and it was impossible for her to stand or walk with her eyes shut. Could move her limbs freely when in bed, tendon-reflexes absent; some anæsthesia of skin of lower extremities, but very marked hyperæsthesia of muscles of the calf and of the muscles of the forearm; pressure on these parts caused most excruciating pain. The heart was found hypertrophied; urine sp. gr. 1010, profuse in quantity, contained albumen and granular casts; anorexia with vomiting. Pupils reacted well; fundus of the eye normal. Some time after admission the patient became delirious; there was incessant vomiting for twelve hours, and then the patient had a convulsion and died. At the post-mortem, the kidneys were found small and granular: left $1\frac{1}{2}$ oz., right 1 oz.; on section, the cortical substance was found very much diminished, and streaks of urate sodium were seen passing to the medullary part. Microscopically, marked interstitial nephritis was seen, with extensive deposits of urate sodium crystals in the renal tubes. The heart was very much hypertrophied, and weighed $13\frac{1}{2}$ oz.; the myocardium was healthy, the valves normal. Liver 3 lbs, and microscopic examination showed marked amyloid changes, together with monolobular cirrhosis, the fibrous tissue being still of very embryonic type; spleen 11 oz.; brain, anæmic; the ventricles contained more fluid than usual; the membranes of the brain were healthy; the pia-mater, however, slightly opaque. Pons, medulla, and spinal cord, had a perfectly healthy appearance, and were of firm consistence. Muscles of the leg and forearm were thin and pale. The spinal cord, examined carefully, after having been hardened, was found perfectly normal in all its parts. The sciatic nerves appeared thin, grayish, and were surrounded by a great deal of adipose tissue. Vertical sections showed, when treated with perosmic acid, and stained afterwards with picrocarmine, a moniliform appearance of the nerve tubes, due to breaking up of the myelin; the nuclei were increased, and there was also some interstitial cell infiltration. Trans-

verse sections showed in some few places an increase in diameter of the axis-cylinder, and again the interstitial infiltration. The muscles showed chiefly, increase of the muscles nuclei and an interstitial deposit of small round cells, and in some few places the striation was not well marked.

The following case, which was admitted only a few days ago, shows the combination of alcoholic ataxia with alcoholic paralysis. W. B., age 41, November 10, 1884. Had been very intemperate and has a distinctly alcoholic appearance. Has had rheumatic fever, and has lately been very much troubled with pain in his limbs. Has had three attacks like the present, but not so bad, from which he recovered, after rest and abstention from drink. Looks strong and stout, some of the muscles feel flabby, but there is no marked atrophy, though paralysis of some of the muscles is distinct. In the upper extremity there is marked paralysis of the extensors of the fingers and of the wrists on both sides; some of the other nuclei are slightly affected; the flexors act very well. Such movements as the patient is able to carry out show some inco-ordination. In the lower extremity, the extensors of the toes and of the big toe are but slightly affected; the peronei on both sides, however, are considerably paralyzed; the arch of the foot is flattened, and the inner border is raised, while abduction is impossible. Is able to walk with some assistance, but walk is ataxic; keeps his legs apart, and looks to the ground for fear of falling; cannot walk with his eyes shut. Isolated movements with either of the lower extremities, show equally marked inco-ordination. With the eyes shut the patient does not know exactly the position into which his limb is put. The sensory phenomena are those of alcoholic paralysis; shooting pain in the legs; cutaneous anæsthesia in both upper and lower extremity. Irregularly disturbed, with extreme muscular hyperæsthesia. Also great pain if the skin apart from the muscles is firmly grasped. Rightly distinguishes a cold body, but contact with a hot body gives him a sensation which he compares to those of an electric shock. Some analgesia, and the prick of a pin is felt only after some time. Tendon-reflexes absent;

superficial reflexes fairly normal. Pupils normal, and react to light and accommodation ; the special sense organs are normal. The mental condition of the patient shows symptoms which are often found in cases of alcoholic paralysis. Answers questions rationally ; memory, however, is very defective, and he suffers from delusions. Thus he tells you that he gets up every day, goes into the next ward, and converses with the other patients, though as a fact, he has never left the ward since his admission. When further pressed, he even gives a description of the ward, details his conversation with the patients with a minuteness and readiness which is astonishing. I have noticed exactly the same peculiarity of the mental state in some other cases. The condition of the other organs calls for no special notice. Heart sounds normal, but weak ; pulse 120, compressible ; appetite fairly good ; liver normal ; urine free from albumen. We have so far been able to take the electric reactions to the galvanic currents only once, and muscles showed degenerative changes. The other cases which I have yet to describe belong to the typical class of alcoholic paralysis, characterised by well-marked paralysis with atrophy, affecting chiefly the extensors of the fingers and toes. The paralysis and atrophy sometimes come on very acutely, at others more slowly. When these cases come under observation, the patients are as a rule unable to stand or walk, and it is therefore not easy to make out whether the paralytic stage is here preceded by an ataxic stage. As the sensory phenomena in these cases are the same as in the first group, it is highly probable that where paralysis comes on slowly, pseudo-ataxic symptoms, as in the case just given, precede it. Of this group I have within the last twelve months seen four cases, all females, two of which have quite recovered, one is beginning to improve, while the fourth, when last heard of, had as yet shown no signs of improvement. Case 1st. Lady, age 25, August, 1884. The patient had freely partaken of spirits, and had a constant craving for stimulants. Had complained of pain for some time ; the pains were soon followed by paralysis and atrophy of extensors of both fingers and toes, with

paralysis of the other muscles, so that the patient could neither stand nor walk, and could raise herself only with difficulty from the recumbent posture. Cutaneous anæsthesia and muscular hyperæsthesia were well marked. Tendon-reflexes absent, superficial reflexes much diminished. Exhibited the same peculiar delusions just referred to. When I saw her she told me she could walk very well, that she had paid several visits that morning, and minutely described all she had seen and done when visiting her friends. When her helpless condition was pointed out to her, she became highly emotional and burst into tears. She was kept from drink and completely recovered in three months. Now walks very well, and the tendon-reflexes have re-appeared. Case 2. Lady, age 42, Sept., 1884. Symptoms somewhat resembled those of Case 1. The paralysis had come on rather more slowly, and the atrophy was much more marked, and affected the greater part of the body. Also had the same peculiar delusions. Though entirely confined to bed she told us that she went out every afternoon for a walk to the seaside; that she sits on the sand at the seashore, watching the waves and the passing steamers. (Her residence was at least twenty miles away from the sea.) It was astonishing to listen to the account she gave of her seaside rambles, which had every semblance of truth, and yet was entirely imaginary. We advised the patient's removal, as we were sure that the patient, unknown to her husband, was still supplied with stimulants. Our suggestion was, however, not acted upon, and when I last heard of the patient, she was still in the same helpless state, and rather more emaciated. There is no difficulty in diagnosis; the peculiar form of delirium is almost as characteristic, though by no means as constant as the muscular hyperæsthesia. As regards the pathology, we have now abundant evidence in the post-mortem appearances that alcoholic paralysis is a multiple peripheric neuritis. This view is again supported by the third case of alcoholic ataxia given above. For an analysis of the results of the post-mortem examinations in alcoholic paralysis, I must refer to Shulz, *Neurol, Contralb*, 1885.

INEBRIETY AND HEREDITY.

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

Two thousand years ago the inebriate was declared to be a madman, to be diseased, to be suffering from a fearful malady. But only within the last forty years has any effort been made to formulate this fact, to organize it into the realm of practical science. This was a discovery in science, and its truth is evident from the sharp contradiction it has provoked. Thus, whenever a great fact bursts through the soil of ages, storms of denial and opposition only give it firmer root and surer growth.

If we were to gather a large number of inebriates, from all ranks and conditions of life, and make a careful study and comparison of the histories of each one, the following are some of the facts which would appear :

1. Inebriety would be found to be one of a family group of diseases. The other members of this family would be insanity, consumption, epilepsy, idiocy, paralysis, hysteria, and many others not so clearly related. Thus, whenever we find one of these diseases, the others are very likely to appear, or be closely associated with them. Inebriety is very often followed by insanity, epilepsy, or consumption, and these diseases often precede inebriety. All these affections may be associated as forms of disease, and some one or the other be prominent. Nervous diseases, brain disorders, and degenerations of a great variety, very commonly go before and frequently follow inebriety.

2. Among the causes, heredity is prominent. Then comes injury to the brain and spinal cord from falls, blows, etc ; brain shocks from fear, grief, joy, or great excitement of any kind ; great strains and drains on the body and mind ; imperfect nutrition, bad surroundings, bad training, over-

* Part of a lecture delivered before the Temperance Institute of Presbyterian Churches, N. Y., Feb., 1886.

work and under-work. These and other causes will appear in most cases.

3. When the history of each case is compared with others, they are all found to follow a uniform line of march. Beginning at a certain point they all pass down the same road, and cross the same bridges, and reach the same destination. Of course there may be halts, variations, and changes, but the main body move along one line, — the same as in consumption or typhoid fever, a regular progressive history from one stage to another. The expert has only to find out where the case started, and where it is at present, to predict the future, and how far it can be changed by treatment.

4. From a great variety of evidence, as yet in outline, it appears that inebriety moves in waves and currents, prevailing like an epidemic, then dying away. The statistics of persons arrested for inebriety extending over years, show that during certain years this epidemic has prevailed with great activity, then declined to a minimum point. In Sweden two of these high points were noted at intervals of seventeen years; the last occurring in 1879. In England, France, Australia, and in Massachusetts, this steady increase of inebriety up to a certain point, then a regular decrease to a low level, has been noted. The mortality statistics from spirits, and the history of the consumption of alcohol, both indicate high tidal waves of drink excess and then a regular ebb and decline. These are mere hints of some of the forces which govern the march of inebriety. They throw light on those strange temperance revivals which spring up from the slightest causes and sweep over the country, dying away with the same mystery and suddenness. These wave-like temperance movements are more than the rumblings of revolution in the public sentiment; they are re-actions of inebriate waves, the backward swing of some great cycle or drink orbit.

Alcoholic Heredity, or the transmission of a special tendency to use spirits, or any narcotic, to excess, is much more common than is supposed. In the study of a large number of cases, several distinct groups will be apparent.

First will appear the direct heredities. Those inebriates whose parents and grandparents used spirits to excess. The line of the inheritance will be from father to daughter, and mother to son; that is, if the father is a drinking man, the daughter will inherit his disease more frequently than the son. While the daughter may not, from absence of some special exciting causes, be an inebriate, her sons will in a large proportion of cases fall from the most insignificant exciting causes. About one in every three cases can be traced to inebriate ancestors. Quite a large proportion of these parents are moderate or only occasional excessive users of spirits. If the father is a moderate drinker, and the mother a nervous, consumptive woman, or one with a weak, nervous organization, inebriety very often follows in the children. If both parents use wine or beer on the table continuously, temperate, sober children will be the exception to the rule. If the mother uses various forms of alcoholic drinks, as medicines, or narcotic drugs for real or imaginary purposes, the inebriety of the children is very common. Many cases have been noted of mothers using wine, beer, or some form of alcoholic drinks, for lung trouble or other affections, and the children born during this period have been inebriates, while others born before and after this drink period have been temperate.

The second group of these *alcoholic heredities* are called the indirect. They are cases where the inebriety of some ancestor has left a stream of diseases, such as minor forms of insanity, consumption, and various nerve defects, which may have run through one or two generations, then suddenly develop into inebriety, with or without any special exciting cause. In such cases the moderate or excessive drinking parents will be followed by nervous, feeble-minded, consumptive, or very precocious children, or eccentric and odd people who are born extremists in every relation of life. They are persons who die early, and leave a large progeny, who suffer from nerve and nutrient troubles, and neuralgia, and find in alcohol and opium a most seductive relief from all their troubles. About one-fourth of all cases of inebriety are examples of this form of indirect heredity.

A third group of heredities in these cases of inebriety, are the complex borderland cases. They are persons whose ancestors have been insane, epileptic, consumptives, criminals, paupers, and had other forms of degeneration. Victims driven along by a tide of degenerate heredity, which burst out in varied forms and phases of diseases. This class are seen among the very wealthy and the very poor. Fully one-fourth of all inebriates are of this class, and their inebriety is only another stage of profound degeneration in the march to dissolution. In these cases there seems to be in certain families a regular cycle of degenerative diseases. Thus in one generation great eccentricity, genius, and a high order of emotional development. Extreme religious zeal, or unreasonable skepticism, pioneers or martyrs for an idea, and extremists in all matters. In the next generation, insanity, inebriety, feeble-minded, or idiots. In the third generation, paupers, criminals, tramps, epileptics, idiots, insanity, consumption, and inebriety. In the fourth generation, they die out, or may swing back to great genius, pioneers, and heroes, or leaders of extreme movements.

In the study of a large number of cases of inebriates, a *physical* and *mental heredity* will appear. Thus the children of inebriates for one or two generations will be found to have, as a rule, physical defects and deformities. Bad-shaped heads and bodies, an inharmonious development, retarded or excessive growths, club feet, cleft palate, defective eyesight, great grossness of organization, or extreme frailty of development. This can be seen in the observation of almost anyone, and indicates the defective nutrition and cell growth caused by injuries from alcohol transmitted to the children. The *mental heredity* from inebriate parents is equally clear and apparent to any close observation. Mental instability, and mental feebleness are common signs. Impulsive, excitable, emotional persons, who are on the two extremes, either buoyed with great faith and hope, or depressed to the verge of despair. Extravagant self-esteem, boundless faith in the most absurd schemes of politics, religion, and science.

Men and women who are called "border liners," meaning those whose good judgment and reason alternate back and forth over the line where sanity and insanity join. They are found in the great army of the irregulars, the intellectual and moral quacks, the badly-balanced, and weak, unstable mentality. Genius and precocity often appear in these persons. They frequently come into prominence like blazing comets, dazzling for a time, then disappearing in some cloud of insanity, inebriety, or other disease. This mental heredity will be often seen in the perverted nutrient tastes of children, the impulsive appetites, and dominant animal desires. With the very wealthy and very poor, these signs of alcoholic heritage are prominent. One of the reasons are the excessive nutrient stimulation from excess of quality and quantity of food, among the wealthy, and the opposite among the poor; also the underwork and overwork of those classes.

These are only hints and intimations along the shore of a great continent of facts, which some future explorer will reveal. It will be of interest to point out some of the results which follow from alcoholic heredity. *First*, the *longevity is diminished*. It is impossible for a generation with this entailment to have the same vigor to resist disease and death. Exhaustive physical and intellectual exertion is not repaired, and overcome so readily, and death from slight causes are more common. Thus exposure merges into pneumonia, and other fatal conditions, more quickly than in others without this entailment.

In epidemics of fevers and other diseases these children of alcoholic parents, and inebriates themselves, die first. They die from injury, shock, strain, worry, and care. In brief, this alcoholic legacy from ancestors means a shortened life, an early death, from varied insignificant causes and general incapacity to bear the strains and drains of the ordinary activities of life. *Second*, by a wise limitation of nature the race with this heritage must die out. Only by a prudent ingrafting and marriage with a healthier stock can it be con-

tinued into the future. A family with this heritage is on the road to extinction, it is switched on a side track, and is moving on a down grade of rapidly-increasing degeneration. Nature seems to often make an effort to put on the brakes and check the speed in some remarkable fecundity.

Thus in these degenerate families you will often see a great number of children who, as a rule, exhibit many of the defects of the parents, and are short lived.

The large families of children in inebriate parents may be taken as a hint of the approach of extinction for that race. In the same way, great genius in certain directions, as for instance a poet, an orator, an inventor, or a reformer, starting far away above the levels of his ancestors and surroundings, are often the last members of families far down towards the rapids that precede the final plunge into oblivion, like the flicker of a lamp bursting into full blaze before extinction. *Third.* Where this alcoholic heredity is retarded or accelerated by the union with different currents of heredity, very strange compounds are the result. Thus, if to this alcoholic heredity are united a heritage of insanity, idiocy, or any other pronounced defective influence, all grades of criminals, paupers, and mixed insanities follow. While most of these defects are apparent to ordinary observation, yet there is a class of defectives springing from this soil which may be termed moral paralytics, which will be the subject of bitter controversy in psychological circles in the near future. Along this frontier line the great questions of free will and moral responsibility must be settled. The injury from alcohol first numbs, then finally paralyzes the higher brain forces, which includes all the moral elements. This paralysis goes down into the next generation as a congenital deformity, a retarded growth, in the same way that in some families cross-eyes, hare-lip, defective hands or legs, are seen in every generation. This form of heredity produces criminals of the most dangerous type; men and women born without any consciousness of duty, of right and wrong, of obligation to live a moral, consistent life. From these mixed heredities

some central brain region has become malformed and degenerate, and the victim is without power to change or comprehend the normal relations of mental or moral life. Many of these persons occupy places of wealth and influence in society, holding positions of honor and respect, by force of surroundings and absence of opportunity to reveal their incapacity to follow lives of truth and justice. . . .

If this subject is seen higher up, other and more startling conclusions appear. *First*, this *heredity from alcohol is intensified and increased by the misapplication of the educational forces of to-day*. The highest culture of the best colleges applied without regard to the natural capacity of the individual, and along unphysiological lines, most clearly unfits and destroys him. Often this higher culture is abnormal stimulation and growth, particularly for the entailments of past generations.

First of all, the educational systems do not always build up healthy brain and nerve force. *Second*, they ignore all heredity, and influences of food, climate, surroundings, and natural capacity, and the result is that all abnormal impulses are intensified in certain directions, and the power of control is diminished in a positive substratum of exhaustion from which there is no relief. The highest modern culture applied indiscriminately to children of inebriates, will result in their ruin as positively as any degree of ignorance. This is seen in the inordinate self-esteem, feeble common sense, unstable will power, extravagant idealities, and general mental dyspepsia of many college graduates. In actual life the college graduate who has an alcoholic heredity, and is an inebriate, is more incurable than his brother who has never had a college culture. It has been truly said that ignorance will give more promise of longevity, and a final triumph over this heredity than the highest indiscriminate culture of to-day.

Another view reveals the fact that the present legal methods to restrain inebriety, and the result of alcoholic heredity, produce results exactly opposite. Thus the army of

inebriates and irregulars of this family group are held accountable as healthy, responsible beings, and confined in most dangerous mental and physical surroundings, actually intensifying their defects and removing them farther from all hope of recovery. The police courts and jails are to inebriates literal training stations, for mustering in armies, that never desert or leave the ranks until crushed out forever. A Chinese law enacted a thousand years ago, and in force to-day, contains a flash of truth. When a criminal comes before the courts, careful inquiry is made into his ancestry. If they are found to have any of the traits common to the prisoner he is killed and they are punished. His death ends all possibility of transmitted crime, and their punishment and recorded history puts a check on any farther propagation of the evil. Common law and public opinion are far behind the march of science in a practical knowledge of this evil and the means to correct it. Not far away in the future this terrible shadow will vanish before a larger, clearer intelligence, and all our blind efforts of to-day will be found to be but a repetition of history—the stage of empiricism, quackery, and superstition, which precedes every great advance of humanity. *From a higher point of view*, civilization and the increasing complexities and changing conditions increase this heritage. Thus every new invention which changes the direction of human activities, brings greater strain on the brain and nerve force, demanding new energies, which the alcoholic heredity victim cannot give. He is unfitted and crippled for these new conditions of life by his forefathers, left dismantled and without strength for the race, and by that great law of our being is crushed out, driven out, and crowded out in the struggle and survival of the fittest.

One great fact comes out prominently in this outline review, namely, that alcoholic heredity or a predisposition to inebriety, and many other nerve and brain degenerations, will certainly follow in the next generation from the moderate or excessive use of spirits. Parents who do not recognize this fact, practically, are committing unpardonable sins, by

crippling the coming generations and switching them on the side-tracks, away from the main line of development.

Another fact appears: education and marriage should be governed by a knowledge of heredity. Education should be determined by the family physician, and have for its object to control and antagonize all the predisposition of heredity. Marriage should be under control of law, and from the judgment of the family physician. The time is coming when every family will have its scientific medical advisers, and these vital questions of heredity and practical life will be determined from a scientific basis. Still another fact comes up prominently. The great armies of the insane, inebriates, criminals, and paupers are largely the doomed victims of the sins of our forefathers. Our duty to them is to house them, to protect them from perpetuating their defects and injuring others. Science tells us that this army of hereditary defectives are wards of the State, and should be housed, quarantined, made self-supporting, and forced into conditions of healthy living. The present indiscriminate freedom of this class is a sad reflection on the intelligence of this century. The study of alcohol heredity furnishes not only the strongest reasons for total abstinence in each person, but reveals the laws and forces which govern its march in each individual, revealing a wider range of the subject. Along this line of heredity will be found the practical solution of many of the mysteries and remedies of this great drink problem. To those who make heredity a study, and discover its laws, and apply them, is given the key to fathom greater mysteries and control larger destinies than any king or warrior that ever lived. Here we shall find some of the great central forces of life which have controlled the race yesterday, and will go on to-day, and forever.

This great procession of human life may have begun in some more favored period, and crossed the earth with less loss and suffering. But to-day the scientists can see abundant intimations and gleams of light in the present, that more favorable conditions of the march can be obtained.

INEBRIETY IN AUSTRIA.

BY CHEVALIER MAX PROSKOWETZ DE PROSKOW-MARSTORFF,
of Vienna,
*President of the Austrian Society for the Study and Cure of
Inebriety.*

(a) The Austrian Anti-alcoholism Society tries to have the number of brandy-shops settled by authority in a strict and appropriate manner proportioned to the number of the inhabitants. The margraviate of Moravia contains 9,700 brandy-shops for 2,153,000 inhabitants — viz., one brandy-shop for 222 inhabitants. We try to establish, as a rule, that *one* brandy-shop should be licensed to 500 inhabitants — that is to say, our work endeavors to diminish the brandy-shops by more than one-half.

(b) The number of drunkards arrested in Vienna by the police department was: 5,955 in 1881; 6,349 in 1882; 5,878 in 1883 = 5,338 men + 540 women; 6,555 in 1884 = 5,771 men + 784 women.

(c) We try to generalize a regulation for factories, by which the introducer of brandy is punished by a penalty equal to twice a day's wages. A drunken workman is punished with four times a day's wages. The high commissioner of manufactories seconds our propositions.

(d) The society has distributed a large number of pamphlets in the German and Bohemian languages.

(e) We promote the selling of warm tea (one penny a cup), by means of circulating cars, in the suburbs of Vienna. From January 1, 1880, till April 30, 1882, 246,842 cups of tea, 8,816 a month in average, was sold.

(f) We try to prevent the selling of spirits of a bad quality. We held investigations on the qualities of liquor, and found that liquors were sold which contained above 17 grammes of corrupt constituent parts in one gallon. Our

law not forbidding the keeping open of brandy shops on Sunday, we forwarded petitions to the representatives of the empire to shut all brandy-shops from six o'clock Saturday night to seven o'clock Monday morning. We endeavor to have the taxes increased for spirits in the towns, the small trade in brandy being a very lucrative one. It is a fact that shopkeepers of that kind earn $2\frac{1}{4}$ shillings clear gain by one gallon of spirits. The brandy-shops ought to be shut at ten o'clock at night till seven o'clock in the morning. Payment to workpeople to be given on Mondays to prohibit drinking. Debts for consumption of spirits are not to be prosecuted in law-suit. Retailing liquors to individuals under the age of sixteen, to drunkards and other persons not in their full mind, to be punished. The regulations regarding retailing liquors to be placarded in every shop and brandy-house. Retailing of spirits to be strictly separated from retail shops and those dealing in other wares. Habitual inebriates to be declared minors, and transported to medical establishments (in the German style). Brandy to be prohibited in canteens, works, men-barracks, and so forth. The taxes of distillers to be raised. The tax for distilled wares is but the twenty-second part (in Germany) of the corresponding English tax.

There is one brandy-shop to 59.21 inhabitants (children and women included) in Bohemia. The courts of justice in the dukedom of Bukowina (Austria) have punished (in the years 1878-1883) 20,713 individuals a year for inebriety. The kingdom of Galicia (Austria) had (from 1878-1883), 132,403 individuals punished on account of inebriety. The leading men of Carinthia (Austria) held a meeting, the Governor of the Dukedom, Baron Schmidt, presiding, in the month of September, to consider Chevalier Edlmann's motion on checking inebriety. The Austrian Parliament followed a motion on the fatal consequences of inebriety, seconded by Chev. de Proskowetz, on March 13, 1885. The industrial town of Trautenau (Bohemia) has a consumption of 3.6 gallons a head of brandy. The law of March

8, 1885, prohibits very strictly the giving on credit brandy to workpeople, on account of their due payment.

(This short paper presented before our sister society in England is of great interest, as showing the activity of medical and scientific men to understand the origin and nature of inebriety. It is a pleasure to note the organization of another society on the same basis as our own.)

THEINE AS A NARCOTIC.

In the *Medical News* of Philadelphia, Prof. Mays concludes a series of studies as follows :

“Theine is the active principle of the leaves of Chinese tea, and is generally reputed to be identical with caffeine, both in chemical composition and in physiological action. My experiments show that it differs very markedly in physiological action from that of caffeine. Caffeine principally affects the motor nerves, while theine chiefly influences the sensory nerves, and clinically proves itself a most valuable analgesic, surpassing morphia in promptness and permanency in relieving pain in some affections, without producing any, or at least very little, disturbance of the general nervous system. It paralyzes sensation before motion ; it impaires sensibility from the centre to the periphery and not, like brucine and cocaine, from the periphery, to the centre ; it produces convulsions which are spinal and, not cerebral ; it has a more powerful action on the sensory nerves, and less on the motor nerves than caffeine.

“From the results of theine in these cases it will be seen that it is a powerful anodyne without producing any intoxication of the higher nerve centres, which is so common with morphia and all other agents belonging to this class. Its influence is both quick and persistent, and it manifests an almost exclusive affinity for the sensory nerves. It relieves pain by acting from the centre toward the periphery, and showing its effects but very seldom above the seat of injection. In $\frac{1}{10}$, $\frac{1}{5}$, and even $\frac{1}{3}$ grain doses it is entirely free from dangerous consequences — the only inconvenience which it causes is a slight, but transient burning at the point of introduction. I use a one per cent. watery solution of Merck’s preparation — ten minims of which equal one-fifth of a grain of theine. Larger doses are required in some individuals in order to bring out its characteristic action.”

INEBRIETY, AND HOW IT CAN BE CURED.

BY DR. NORMAN KERR, LONDON, ENGLAND.

The following is a part of a recent lecture before the Total Abstinence Union of London :

Dr. Kerr said that there were in the United Kingdom half a million inebriates ; that at least forty thousand died every year prematurely from personal intemperance, and probably double that number of innocent persons indirectly, from disease, accident, violence, or starvation consequent on the excess of others. To inebriety we owed three-fourths of our pauperism, more than one-third of our insanity, and at least one-half of our crime. The present deep distress would be speedily relieved, the prevailing commercial depression would be rapidly superseded by the revival of financial prosperity, a renewed vigor of trade and commerce providing ample work, at good wages, for all the industriously disposed unemployed, if only the people of England would abstain from intoxicants for twelve months. If, as Dr. Kerr believed, each average man's value to the community might be put at £1,000, their half million of inebriates involved a national loss of £500,000. In addition, inebriety increasing among females was a growing cause of prospective danger, as inebriate mothers would render our successors still more susceptible to the physical sorcery of the narcotic power of alcohol, while endowed with less ability to resist this increased alcoholic tendency.

Inebriates might be classed as constant and periodic, the periodical outbreaks of the latter varying from once every three days to once in every six months. In inebriety there was an entire crushing of the man. This was still more true of the woman. The habitual inebriate was a wreck, unreliable, shifty, unstable, a real slave, with little if any self-control left, bereft of power to abstain from the poisoned chalice

which he loathed, with no inclination to do honest work for the general good. The confirmed drunkard was the victim of a fell disease, the possessor of a degenerated *physique*, a paralyzed brain, a broken-down will power, a wasted life, and the soul in peril.

The general causes of inebriety were the temptations presented by drinking customs, at births, marriages, and deaths, and other festive occasions, from which many inebriates dated their fall. Hospitality was a prolific cause, doctors especially (who formed nearly ten per cent. of the whole number of the patients at the Dalrymple Home), and mostly those practicing in the country, who in their long rounds of visits were repeatedly pressed to partake of intoxicants. "Nips" before business hours, and the bottle kept handy in the office, were a frequent occasion of the declension of merchants, clerks, and others. Commercial travelers were strongly tempted. The custom of drinking intoxicating liquors at charitable, religious, and other public dinners, was also a feeder of inebriety. Licensed temptations were powerful factors. The power of public houses, beer houses, hotels, billiard-rooms, all but omnipotent as it was, must have seemed to some statesmen insufficient, for they had actually added the additional temptations afforded by grocers' licenses, by which hypocrisy and secret drinking were fostered. He knew ladies who would not have dreamt of entering a public house, begin by getting bottles home from their grocers under name of other articles, unknown to their husbands, and end by losing all sense of shame and womanhood, drinking in public houses with the lowest of the low. He also knew of ladies who regularly frequented confectioners' and other establishments, and drank large quantities of strong liquors there.

Habitual inebriety was a disease, like gout and epilepsy. Men and women lapsed into habits of intemperance, not because they intended to do so, but in spite of their determination to the contrary, mainly from the fact that from some inspired, or other physical condition, they were more

susceptible to the narcotizing influence of alcohol. Heredity, nerve shock from bereavement, business anxiety, or other exciting cause, were leading factors. Sunstroke and other diseased conditions, injuries to the head, and other accidents, were often the starting point. Excessive brain work and worry, as exemplified in the person of clergymen and literary men, also operated. Though doctors were often unjustly blamed, there could be no doubt that the loose medicinal prescription of intoxicants had much to answer for.

Strong drink of all kinds should be excluded from our festivities, and from our tables — public and private. There should be no “nips” before, during, our after business hours by business men. In short, our drinking customs ought to be non-alcoholic, unintoxicating beverages being substituted (when the observance of the custom is desired) for the ordinary inebriating drinks. Medical men, nurses, and friends should be very chary of recommending strong drink (beer, fermenting wines, and spirits) to the sick.

Total abstinence, complete and unconditional, was the basis of cure. Occupation should be found; and Dr. Kerr was happy to say that this difficulty had been effectually grappled with at the Dalrymple Home. Religious influences should be brought into play, and the reformed should be encouraged to enter upon temperance and Christian work. The original diseased conditions leading to inebriety ought to be sought out, and, if possible, remedied. The selection of a proper home for an inebriate was very delicate and difficult, many of the so-called homes for inebriates being really inebriate homes — training schools in inebriety. Punishment was worse than useless. Public ridicule, wearing the tub, tarring and feathering, thrashing and imprisonment, had all been tried in vain. Inebriety ought to be recognized as a disease, the inebriate as a diseased individual. Their legislation should be improved. The Habitual Drunkards Act should be made permanent, the compulsory appearance by the inebriate before two justices should be dispensed with, a simple contract with the license of a retreat, as in America,

being sufficient. Patients escaping should not, as at present, have to appear before a magistrate, but might be conveyed back to the home at once for cure and care. These measures were for voluntary applicants for admission into a home. But there were inebriates who were ruining themselves and families, and who would not of their own accord seek protection for themselves. There ought to be power given to the authorities to commit such to a home, and provision ought to be made for the poor at the public expense. We were far behind America in this. The rescue of the drunken is a noble and God-like enterprise. Rescuers are urgently needed. The cries of the lost and the sinking through strong drink are rising loud to Heaven. To be efficient, the rescuers must be abstainers. In abstinence lies the safety of the inebriate. Bearing in mind our own weakness amid other temptations, the diseased condition of our fellows who have, through inherited and other physical states, been conquered by the awful might of a potent and imperious tyrant, let us not treat the drunkard with scorn and abuse, but, following the example of our blessed Lord, let us take the erring one by the hand, let us bid him (and alas, her!) be of good courage, let us invite him to stand by our side on the safe platform of abstinence, that his lost manhood may be redeemed, and that the Divine which is in every human being made in the image of God, may be freed from its environment of sorrow, shame, and sin.

Whenever an inebriate is incapable of reflection his liberty is dangerous to himself and others. He is most thoroughly irresponsible for his conduct, when poisoned by alcohol, and should be treated as a child and as a sick, insane man.

Medical Inspector Spear of the navy, mentions a rare case of a sailor who used cocaine by hypodermæ for the cravings for the spirits, and fell into a state of coma which resembled opium poisoning, from which he recovered with difficulty.

THE HABITUAL DRUNKARDS ACT, 1879.

BY A. PEDDIE, M.D., F.R.C.P.E., EDINBURGH.

On the 6th of January, 1858, I led the way to a discussion on the Personal and Social aspects of Insane Drinkers, at a meeting of the Medico-Chirurgical Society of Edinburgh, by communicating a paper entitled "The necessity of some Legalized arrangements for the treatment of Dipso-mania or the Drinking Insanity." The discussion on it was opened by the late Sir Robert Christison, who, after stating his conviction as to the need of such arrangements, said,— "Dr. Peddie had a somewhat Herculean task before him in attempting to obtain legislation on this subject, but he must not be discouraged by the want of success that had attended the feeble effort of the Lunacy Commission, etc."

The prophetic utterance of Dr. Christison as to the difficulty of settling this question, has, notwithstanding much ventilation and discussion, been fully verified; for after the lapse of twenty-eight years, no satisfactory legislation has yet been obtained.

For two years following the publication of that brochure, much criticism and correspondence appeared in newspapers and periodicals, almost unanimously favorable to the plea advanced; and since then from time to time I contributed various other papers on the subject to societies and the journals, while up to the present day much has been published by others in different journals and separately; and lectures have been delivered, and meetings held, maintaining that in many cases inebriety is a disease—a form of insanity, or having a close affinity to it, seriously affecting the power of the will through an impulsive desire for intoxicants; and requiring for individual and social interests, physical, mental, and moral treatment, under more or less personal control, which can only be accomplished by legisla-

tive enactment. An additional interest was given to the subject in 1870 by the formation in the United States, of "The American Association for the Cure of Inebriety," of which Dr. Parrish has been one of the most active and influential members; while in Australia the subject was warmly and effectively agitated by Dr. McCarthy of Melbourne.

At the time when the present feeble act was passed, it was considered by some a great step gained, in having something of a principle recognized in the definition given in it, namely, that "a habitual drunkard means a person, who, not being amenable to any jurisdiction in lunacy, is, notwithstanding, by reason of habitual intemperate drinking of intoxicating liquor, at times dangerous to himself or herself or to others; or incapable of managing himself or herself, and his or her affairs."

No doubt the principle so affirmed by law — so far as it went — was a good thing abstractly considered; but of what value was such to be reflected on for the ten years granted by the act, without its being available in actual practice? Consequently, the act being only permissive affords no greater facility for the care and cure of dipsomaniacs than formerly existed.

There is a very general consensus of opinion that in whatever way the wretched condition has originated, been acquired, or produced, the insane impulse for intoxicants is, or in time becomes, the physical manifestation of the abnormal change in the functions of the brain and nervous system. It is easy to perceive that an agent so powerful as alcohol, which by continued overindulgence produces in certain constitutions serious mischief in other organs, such as the liver and kidneys, through contamination of the blood, will act seriously as a toxic poison on the more delicate structures of the brain and nervous system, and especially on individuals of a nervous temperament. Ample proof exists that the malady is in a large proportion of cases distinctly constitutional and hereditary in origin, or apt to result from some injury to the brain or nervous system.

Those various ways in which it has its origin, action and reactions, are not inconsistent with experience and pathology, which, did my limits permit, might be amply illustrated by the analogies and transition states of other affections, such as gout, various forms of insanity, sunstrokes, blows on the head, and the remarkable production of other forms of mental disease—as well as the drink craving proclivity—in the offspring of inebriates. As I have elsewhere said, “whether the disease exists in its ordinary phases and intensity from the voluntary habit of intemperance, in course of time affecting the brain and nervous system, and begetting an advanced degree of moral obliquity, or whether it assumes its worst type from constitutional heredity, the psychological and pathological results are the same. These are impaired volitions, blunted moral feelings, notorious untruthfulness, and loss of self-respect and self-control. The sole desire of existence is to obtain stimulating drink; the highest degree of intelligence is evinced in the means to obtain the end; and to gratify for one moment the insane impulse, the victim of it could stake even his eternal welfare.”

The dipsomaniac is in the condition characteristic of, or analogous to, a large proportion of other insane individuals: “He has lost,” as has been aptly said, “the distinguishing attribute of sanity, the mastery of himself.” He cannot overcome by strength of will the desire for spirituous liquors which burns within him, which excites him to mischievous, sometimes theftuous actions, or sudden fits of violent conduct, or to suicide, or murder. The motives presented by religion and morality, or the ties of nearest or dearest kin have no sway over him; medical advice is still less availing without the power to enforce restraint; the law has no terrors to him; in a word, reason is dethroned, and he is alike regardless of his obligations to God and man.

As I have said in answer to those objecting to legislation in such cases by asking, is not this a free country and has a man not a right to do with his own as he chooses,

taking the consequences of his conduct? No, I reply; the State regards a suicide either as a criminal, or as insane, and the dipsomaniac therefore being more of the latter, having lost the power of reason in governing his will, must be regarded as laboring under a mental malady or as morally insane, and as much requiring treatment under restraint, as any other form of mental alienation. But besides, it is not only himself that the confirmed drunkard injures, but he is the cause of suffering and injury to others; and surely it is not the rightful privilege of any man to waste the means of those naturally dependent on him, perhaps to disgrace as well as ruin his own family and friends, or place them in personal danger, or be the cause of disquietude and annoyance to all around. The liberty of the subject is indeed a precious trust; and that it should be jealously watched over and protected is the ruling glory of the British Constitution; but the welfare of society is still more sacred. The defects of law sufficiently to meet the case of the insane drinker is in reality allowing a license for evil, when precautions are not taken to prevent grievous infringement of the liberties, rights, and privileges of others. It is certainly an overstrained delicacy in legislation which checks interference with a class of cases necessarily occasioning much private misery and public expenditure, as the records of the courts of law, the church, of our prisons, poor-houses, and lunatic asylums amply prove. Justice, humanity, political economy, and expediency all around therefore call for legal interposition, and for facility to control, and if possible to cure, the habitual drunkard, since medical and other advice, or moral suasion are of no avail in influencing his actions; and surely when such is the case it is the manifest duty of a wise government to exercise over all its subjects a paternal relationship.

I must conclude by expressing the hope that ere the decade of the present act terminates, there may be few who hold so strongly to the miserable mistaken and politically unwise view of liberty, as to oppose the desire for increased

facility to protect the habitual drunkard from the injury he or she inflicts on themselves by conduct which they have not the power to control; or if not with that beneficent view, at least for the protection of the sacred interests of others, and of society.

This paper was read before the English Society for the study and cure of inebriety at the January meeting, and is of interest to our readers as coming from a medical man who long ago took a very advanced position on this subject.

Never contradict or attempt to reason with an intoxicated man, tell him clearly and kindly what you wish him to do, then have power to compel obedience. This is an asylum axiom.

Sneers and denunciations of the disease of inebriety, and persecution of the facts are dangerous, for like dynamite, they will explode from pressure, and send their advocates into oblivion.

The defective memory of inebriates, always leaves an impaired power to reason correctly as to the nature and character of acts, or to draw proper conclusions from the experience of the past.

The damage to the central brain regions in inebriety is clearly seen in the perverted sensations, so often manifested in hyperæsthetic and anæsthetic condition of the skin, disorders of taste, and the special senses.

The French journal of *Hygiène* estimates the probabilities of life for moderate drinkers and total abstainers as follows: A moderate drinker at twenty years of age may expect to live about fifteen years; at thirty, twelve years; at forty, ten years; at fifty, eight years. The hope of a total abstainer is at twenty years, forty years of life; at thirty, about thirty-six years; at forty, about twenty-eight years; at fifty, twenty-one years; at sixty, fifteen years.

Abstracts and Reviews.

USE OF ALCOHOL.

The well-known author and physician of the asylum at Fort Hamilton, Dr. L. D. Mason, writes as follows on this subject :

As a prophylactic or abortive treatment for delirium tremens, I know no remedy so safe and so potent as alcohol properly administered. I believe that insomania is more readily overcome, and the end desired more promptly attained, than if we attempted to secure the same result by large doses of the bromides, chloral hydrate, or other hypnotics, and the risk that attends the use of these drugs avoided. If we have occasion to use these drugs also, less will be necessary, so that the quantities used may be administered in safer doses. I do not hesitate to assert that, by the too free use of these drugs in cases of delirium tremens, in the effort to overcome the persistent insomania, the convalescence of the patient has been greatly retarded, and life has been put in jeopardy and even sacrificed.

The method, then, of administering alcohol should be regulated by the condition of the patient. On the first appearance of sleeplessness, mental aberration, muscular tremor (and these should be watched for in all cases submitted to our care), a bottle of Bass's ale may be given every two, three, or four hours, lengthening or shortening the interval as the case demands, and then, after sleep is obtained and the patient reacts from his mental irrationality and physical depression, the use of the stimulant be suspended. In chronic alcoholic dementia—a low type of mental alienation occurring in alcoholics—the patient is anæmic, listless, and full of delusions; hears voices, and holds conversation with imaginary persons; appears to have sane moments, but readily relapses into his old delusions; his

appetite is capricious, his sleep irregular, and his physical strength poor; he moves about in a waking nightmare, he walks in a land of dreams and shadows. The judicious use of stimulants in these cases, a glass of ale at each meal and at bed-time, conjoined with tonic treatment, proper diet, and regular exercise, will do much good. The use of bromides and chloral to overcome the insomania will only add to the already profound mental disturbance and still further lower the physical tone. I have already referred to the fact that the too free use of the bromides and chloral and other depressing drugs in the acute forms of alcoholic delirium may plunge the patient into the more protracted forms of mental alienation to which the inebriate is particularly prone. I maintain that if, by the judicious use of alcohol in such quantities and at such times as we may direct, we can arrest the onset of an attack of alcoholic delirium, or abbreviate the duration of the more chronic forms, the result of the treatment certainly warrants its adoption.

MORPHIOMANIA.

Dr. Marandon de Montyel, in a late number of the *L'Encephal*, summarizes the results of his investigations of the production of morphiomania as follows:

1. Morphiomania has its origin either in a demand for intellectual excitation and physical pleasure or in the acquired habit.

2. Injections of morphia have as a result a double action: a benign and a special action upon the nervous system by which its natural function becomes impossible after a certain term without the assistance of the poison. These two effects are separated and distinct from each other; the second is manifested when the first is no longer exhibited. There, are, then, two kinds of morphiomania; the one resulting in temporary good effect, the other a vital necessity; and after a variable period the cases of the first pass over into the second.

3. This double action of morphia upon the nervous system renders it an extremely dangerous medicament, and it therefore should not be prescribed hypodermically except in cases of absolute necessity.

4. It also extremely dangerous to combat morphiomania by the substitution of alcoholics, inasmuch, as chronic alcoholic insanity may result therefrom.

5. Morphiomania may always be treated by abrupt withdrawal of the drug, except in conditions when such methods are contra-indicated by the vital forces of the patient or concomitant pathological phenomena. The method should also be abandoned if reactionary collapse result.

6. In the treatment of morphiomania by gradual suppression of the drug, it appears advantageous to combine with the progressive diminution of the dose the recoil of momentum by fusing two injections into one.

7. The medico-legal questions pertaining to morphiomania are certainly based more upon extra-judicial than upon judicial clinical observation.

8. Observation shows that a morphiomaniac may have great energy of will while the poison has not yet determined any disorder of intellect. There is here a serious proof of what has already been said, that responsibility only ceases with the period of psycho-physical marasmus.

9. Relative to the responsibility of morphiomaniacs who commit crimes or offenses to satisfy their passions, it is, perhaps, necessary to distinguish whether they have yielded to the simple appetite for a pleasant effect or to a physical necessity dependent upon the instinct of self-preservation. A conclusion of irresponsibility in the latter case seems justified.

10. In the exact appreciation of the intellectual troubles caused by the abuse of the hypodermatic injection of morphia, it is important correctly to appreciate the existence of predisposition to insanity, and the delirium produced concurrently by the absorption of other substances, such as alcohol and belladonna. — *Technics.*

NOTES ON ALCOHOLIC PARALYSIS.

Dr. Buzzard, in his Harveian lectures on forms of paralysis dependent upon peripheal neuritis, makes the following reference to alcohol as a causation in these cases. After referring to the literature of the subject, he mentioned a case which came under his observation, of a lady who had used large quantities of spirits and was suffering from loss of power in both extremities. The hands were dropped at the wrist, and the feet were in the same condition, and there was no power of dorsal flexion. There was much mental disturbance, and such a loss of memory that the patient could not give an intelligent account of her past. She could move her arms and raise her knees, but with difficulty. The functions of the bladder and rectum were not interfered with. The feet were projected out of the bed and so sensitive that she could bear nothing on them. She complained of constantly agonizing pains in the legs, and appealed for relief. Under the care of good nurses, a small amount of stimulant, and careful feeding, she recovered.

There was much muscular atrophy of the hands and forearms and of the anterior tibial muscles, with complete reaction of degeneration. She went out a year later restored and drank to great excess, dying soon after.

Dr. Broadbent mentioned a form of alcoholic spinal paralysis, where in several cases he had noticed the following symptoms: Insidious onset, progressive weakness of the extensors on the forearms, with double wrist drop, inability to stand, loss of knee jerk, retention of plantar-reflex. The sensations were unimpaired, except tenderness on pressure, and also occasional lancinating pains. Oedema was present in the lower extremities. The symptoms increased; death followed by asphyxia in consequence of paralysis of the diaphragm and intercostal muscles. Dr. Oettinger, who has lately written a book on this subject published in Paris, thinks the prognosis always grave, and is surprised that English physicians should report cures in cases where pro-

longed abstinence from alcohol had followed. This, Dr. Buzzard thinks, comes from the fact that many such cases pass unobserved and are ascribed to other causes. An observer, whose experience was derived from a certain number of fatal cases, might easily overlook the true origin of comparatively slight cases. On the other hand, one who had associated alcoholic paralysis with cases which uniformly recovered, might frequently fail to find the true cause of rapidly fatal cases. The art which a secret drinker, especially if a female, will conceal her vice is well known. There is an absolute concealment of all traces of alcohol, and a dexterous suggestion on the part of the patient of all the possible causes of the illness, it is not surprising that the medical attendant is sometimes deceived. This must evidently be especially liable to occur in hospital practice, on account of the difficulty of obtaining accurate information as regards the habits of the patient. There is now enough evidence from histological examination to show that in alcoholic paralysis of the kind which I have described the essential lesion consists in parenchymatous neuritis of the peripheral nerves. It is evident, as a result of chronic alcoholism, more or less extensive lesions may be expected to be found in various parts of the body, especially in the liver and intercranial membranes. But there can be little doubt that the degenerative changes in the peripheral nerves are the immediate causes of the paralytic symptoms. In these cases, as has been shown by Lancereaux and others, the spinal cord and the roots of the spinal nerves are found normal. It is in the periphery of the nerve fibres that the changes are discovered; there are cases, indeed, which come in the category of multiple neuritis. The clinical features of this alcoholic form of multiple neuritis may be grouped in this way. In the nature of things, the patients usually exhibit more or less intellectual disturbance. The memory is especially weakened; there is a tendency to incoherent talk; and it may be found on inquiry that the patient suffers from nervous symptoms suggestive of incipient delirium tremens. I have found that

pains and hyperalgia have been, as a rule, extraordinarily pronounced. So, also, the degree of muscular atrophy seems to me to be frequently greater in this than in other forms of multiple neuritis. It is remarkable to see the extent to which in many cases the muscles of the legs and forearms are wasted. The muscular tissue seems to have almost entirely disappeared. This is especially to be seen in the extensor group so that the feet as the patient lies drop helplessly forward. As has been already pointed out when dealing generally with the symptoms of multiple neuritis, the varying degree of muscular atrophy in a limb may easily give rise to contracture of rigid character. You may thus at one stage of the disease find a patient lying in bed with powerless, wasted, and flaccid limbs—the feet and hands, as mentioned, helplessly dropped, and in another stage find the same patient with the tendo-achillis rigid, the foot unable to be brought into dorsal flexion by strong passive movements, the hamstring muscles contracted, whilst the hands, perhaps, share the claw-like character described by Duchenne. Pains and extreme sensitiveness to touch are, as I have said, of extremely frequent occurrence in alcoholic paralysis. It is interesting to note that when recovery takes place, and the second attack occurs later on, the symptoms in this respect may vary in the same individual. A lady, given to great alcoholic excess, lost power in her legs, the feet being “dropped,” and reaction to induced currents absent in the anterior tibial muscles. She complained of dull aching pains. Two years previous she had recovered from an attack of paralysis of similar kind, except that on that occasion the pains had been of excruciating character. The pains and inordinate sensibility of the skin may, I believe, be altogether absent in alcoholic paralysis, as happens likewise in some cases of multiple neuritis of non-alcoholic origin.

The absence of knee phenomenon is so common in these cases that we may almost confidently expect to find this symptom. It will now and then happen, however, that we may find the knee-reflex not only present, but somewhat

exaggerated. I do not see how to explain this as the result of neuritis, and as, I believe, it is only in alcoholic examples that the anomaly is observed, it may be due to interference with the inhibitory influence of the cortex cerebri, caused by the action of alcohol.

A man, age 88, had drunk heavily of beer and whisky since 12 years of age. He walked hurriedly, unable to steady himself while standing still, the legs stiff and widely separated, only touching the ground with the ball of the foot. The calf muscles were contracted, the reflexes in some excess. Induced currents gave no reaction in the muscles below the knees. There was tenderness on pressing the nerve trunks in the hams. The group was weakened under abstinence and use of the constant current, the muscles regained their excitability to Faradism, and the patient recovered. The absence of the knee phenomenon which is so generally observed in all forms of multiple neuritis, coupled with the lightning pains so often experienced by the patient, may be strongly suggestive of tabes dorsalis. This resemblance is sometimes increased by occurrence of a notable amount of ataxy. In the case of my patient, — T. O. — there were sharp pains, sudden, and of momentary duration, like a knife stab in the thigh and knee. His gait was ataxic, and he said the ground did not feel natural to him. His legs seemed to spring under him. His knee phenomenon was absent. At a certain stage of his illness the superficial resemblance to a case of tabes was very striking. A noticeable point of distinction was to be found in the behavior of the muscles to electrical currents.

It is well known that in tabes dorsalis there is essentially no change from the normal condition in this respect. In certain cases, no doubt, the anterior grey matter of the cord may become invaded, and cause muscular wasting with loss of Faradic excitability in limited parts, but this is quite, as it were, an accidental complication, and is not an essential part of the disease.

Now, in my case of multiple neuritis, there was very slight

reaction to strong, induced currents in all the muscles of the lower extremities, and almost total abstinence in the interosscie and the thenar muscles of the right hand. This of itself, to say nothing of other differences, was sufficient to distinguish the case from one of tabes. More than one case of this kind has been published as an example of tabes recovering under treatment. Dèjerinne, in France, has drawn attention to cases in which pains, inco-ordination, absence of knee phenomenon, and anæsthesia have produced a striking resemblance to tabes, in which after death no lesion of the cord was found. He has suggested for these the title of "nero-tabes peripherique." This very important observation requires to be borne in mind ere we conclude of a case marked by the characteristic symptoms described, that is, one of the sclerosis of the posterior columns. Dèjeinne's cases, I can not help thinking, that alcohol was an important etiological factor. Considering that the toxic influence of alcohol must be brought about through the medium of the circulation, it is not surprising that the upper, as well as the lower extremities, should be affected in cases of alcoholic paralysis. Indeed, it might be anticipated that the effect would display themselves equally upon all the voluntary muscles of the body. But this is not the case; it is upon the lower extremities that the brunt of the mischief falls. They usually suffer the most, and may possibly, perhaps, be occasionally alone affected. But I am disposed to think that their immunity is not nearly so great as has been supposed, and that careful observation would show that in cases where the patient only complains of loss of power in his legs, the arms are also, though to a less extent, likewise affected. The patient's attention is apt to be so engrossed by the preponderating disorder in his lower extremities that he takes little or no notice of the weakness in his hands. An observation which I made many years ago, in a case of lead-poisoning, very much struck me. Although the patient only complained of one arm and one leg (which were manifestly paralyzed), and asserted that there was nothing

wrong with the other extremities, I found in the muscles of the latter a very well-marked decrease of Faradic excitability. I have also many times noticed a similar condition in cases of infantile paralysis. In general terms, it may be said that just as in a case of lead paralysis we expect to find dropped wrists, so in case of alcoholic paralysis we look for dropped feet. I would go farther even, and say if we met with a case of dropped feet — a paraplegic condition affecting, with marked preponderance the anterior tibial group of muscles — we should be on the alert to inquire respecting the possibility of alcohol being the cause. Let me not be misunderstood. The existence of this condition is not alone the proof of habits of excess, but it is so extremely constant in cases of alcoholic paralysis that we should be wanting in our duty if we failed to bear this in mind, and direct investigation accordingly. This is, of course, a delicate matter, and on more than one occasion I have observed a look of somewhat indignant surprise on the face of the medical attendant of whom the inquiry has been made. But we have no more right to omit the inquiry than we should have to avoid examining into the possibility of lead-poisoning when a case of dropped wrist came under our observation. It is especially when we find not only the extensors of the feet and those of the hands paralyzed, and also when there are some sensory disturbances as well as motor, that we should do well to bear in mind the possibility of alcohol being at least a factor, where careful observation shows that the lower extremities are alone involved, the upper extremities being quite normal as regard strength, sensibility, and electrical reaction, it will usually, I think, be found that the influence of alcohol may be put out of the question. It is evident that there is but little likelihood of the effects of alcohol being limited to certain extremities. But, as I have said, it is very common for the legs to show the disorder before the arms. And supposing that the abstinence takes place at this point, it is, perhaps, conceivable that the latter might escape. This, I should think, must be extremely uncommon. I am not able to

explain the greater tendencies of the lower extremities to suffer in this affection. It is an interesting circumstance that a similar proclivity for the lower extremities to be most affected. Sometimes (indeed, exclusively so), is shown as I have remarked, in the case of the endemic disorder *bèribèri*. But is not only in connection with alcohol and *bèribèri* that this preponderance is observed. Several cases have fallen under my observation, marked by characteristic symptoms of peripheral neuritis, which have been entirely confined to the lower extremities, and I should have wished, had time permitted, to bring these under your notice.

In some of them I have not been able to satisfy myself as to the probable originative cause of the affection of peripheral nerves; syphilis, alcohol, lead, and diphtheria being out of the question. They have been characterized by loss of power in the anterior tibial muscles, so that one or both feet are "dropped" with cutaneous hyperæsthesia or anæsthesia, limited usually to more or less of the leg below the knee, and sometimes by œdema.

Such cases constitute a peculiar form of paraplegia, which needs extended investigation.

THE NECESSITY OF HOSPITALS FOR TREATMENT OF INEBRIATES OF THE NAVY.

The following extract from Dr. Horner's paper, lately read before the Naval Medical Society at Washington, D. C., calls attention to a grave abuse in both army and navy, that of punishing men who become diseased in the service, as morally responsible. Dr. Day, in a letter to the author, says: "It is fortunate for this subject of institutional treatment for these victims of inebriety in the army and navy to be agitated. During the thirty years past I have treated a large number of these cases, and they are the best men in the service. A government asylum for the treatment of this class would lessen the insubordination and disgraceful conduct in this service, and would save a large number of these cases

that are now lost. My long experience has convinced me that this is a work of as much need as the care of the insane, and is becoming more and more imperatively demanded every day."

Dr. Horner writes: "It required three-quarters of a century before naval authorities established a hospital for the insane of the public service. The suggestion first made by that great philanthropist, Miss Dix, was successfully carried into effect in 1858 by Dr. Charles H. Nichols. There can be no question from the facts presented that for nearly thirty years the experiment of hospitals for inebriates in nearly every State in the Union has been successfully demonstrated in this country as well as in Europe. The naval surgeon should, in the practice of preventive medicine, be convinced that the disease of inebriety, occurring in the line of duty to officers or seamen, should have the benefit of special treatment in a hospital instituted for this special disease.

"The annual report of the Surgeon-General of the Navy notices a certain number of cases of acute and chronic alcoholism, and of delirium tremens, says one-fifth, rightly included under the head of 'poisons,' as occurring in the various squadrons at home and abroad, at the navy yards and in naval hospitals. Among this number there must be cases discharged uncured. In the North Atlantic squadron, under the head of 'poisons,' which includes acute alcoholism, the ratio per 1,000 of this class in this report is set down as 10. In the European squadron, under the head of "poisons," 17 per 1,000 is the number given; 13 admitted, 12 discharged, and 1 invalided. The report concerning the sanitary condition of the various hospitals also furnishes examples of acute and chronic alcoholism, and ebrietas, 31 cases admitted, 30 discharged, and 1 invalided. Such facts are suggestive that, whatever precautions may be adopted by the medical staff of the navy to eliminate inebriety from the public service, the experiment has failed. The attempt at treatment on board ship, as in civil practice, has also failed, but not so has institutional treatment. Already the navy surgeon has won

an advanced position in the departments of sanitary science and of preventive medicine. Indeed, he is fully qualified to discharge all professional duties as a surgeon and physician according to all the light which medical and surgical science has reflected upon the human mind. Hence the query, will he not be derelict to fail to apply the most enlightened medical and institutional treatment to an inebriate on board ship, as well as in a special hospital, rather than to furnish testimony before a court of inquiry or a court marshal as a witness, thereby insuring the summary disgrace or expulsion from the public service of an efficient officer or valuable seaman? The latter cruel, and, in many instances, unjust method, was practiced in 1859, though it cannot be sanctioned at present. In one case, of which the writer was cognizant, the greatest wrong was inflicted upon a talented and efficient naval officer, whose valuable services saved a sloop of war with her crew from shipwreck. His exposure to a tropical sun, in an open boat, to discover a safe channel for the escape of the vessel, was, of course, the occasion of great mental strain. On returning to the United States subsequently, can there be any surprise that this officer in an evil hour was tempted to acts of intemperance? And yet the decision of the court-marshal convicted him of drunkenness, and sent him into the world a disgraced and ruined man. Finally, the suggestion may be ventured that, at least one of the various naval hospitals now appropriated for the treatment of the sick and wounded might be judiciously set apart for the special care, relief, and cure of the unfortunate victims of inebriety of the American naval service."

ALCOHOLIC HEREDITY.

The *Journal of Heredity* gives the following selection from Dr. Mathews report, as superintendent of the department of heredity for Rhode Island:

"The passion for alcoholic stimulants, if not reproduced in the immediate descendants, may show itself in the successive

generations, and in all cases is the most prominent factor in insanity, epilepsy, idiocy, hypochondria, hysteria, neuralgia, nervous degeneration, and its kindred ailments — often manifesting these maladies in a vicious circle — with the effect of exhibiting insanity in one, epilepsy in another, intemperance in a third, idiocy in a fourth, hypochondria in a fifth, hysteria in a sixth, and so on until the circle is completed, each generation increasing in numbers, and contributing in a direct ratio to the filling of our jails, penitentiaries, inebriate asylums, insane retreats, and poor-houses. That this is not a conjectural statement the following facts will abundantly prove: In a Swedish asylum it was found that 50 per cent. of the patients had been addicted to the use of alcoholic beverages. After the removal of the heavy tax on alcoholic drinks in Norway, the percentage of increase during eleven years was: In mania, 41 per cent.; melancholia, 69 per cent.; dementia, 25 per cent.; and idiocy, 150 per cent. Of the last, 60 per cent. were the children of drunken fathers and mothers. In the insane hospital at Vienna, Austria, probably one of the largest in the world, the superintendent informed me, personally, that from 50 to 60 per cent. of the insanity was due to spirituous liquors. This percentage in a country where it is claimed alcoholic drinks do no harm, is well worth noticing. In our own State insane asylum, of the now present inmates, numbering 364, 75 per cent. can be ascribed to habits of intoxication, either on their part or that of their ancestors. I am also authorized in making the statement that fully two-thirds of those persons requiring aid from city and State are descendants of inebriate parents. In one of our prominent lunatic asylums 637 cases were traced to intemperance as the assignable cause of their insanity. The statistical accounts of the State of New York give the following facts: In the poor-house of Ontario county there were 113 inmates. These, together with their ancestors for three generations, living and dead, represented 90 families, and in these families there were 168 dependents, 26 insane, 12 idiots, 103 inebriates. In Columbia county, 118 inmates, representing 114 families,

had 143 dependents, 12 insane, 32 idiots, 127 inebriates. In Yates county, 32 inmates represented 26 families, of whom 59 had been dependent, 4 insane, 2 idiots, and 31 inebriates. In Kings county, 1,876 inmates represented 1,668 families, 2,039 dependent, 755 insane, 23 idiots, and 973 inebriates. Herkimer county had 77 inmates, representing 67 families, 128 dependents, 21 insane, 12 idiots, and 64 inebriates. The total in the alms-houses of the State was 12,614 inmates, who represented 10,161 families, whose members for three generations, living and dead, had among them 14,901 dependents, 4,968 insane, 844 idiots, and 8,863 inebriates. In round numbers, here are 10,000 families who have produced 15,000 paupers, or 3 paupers for every 2 families—of insane, about 1 for every 2 families; of insane, inebriates, and idiots combined, about 15,000, or 3 to every 2 families."

The Second Annual Report of the Dalrymple Home at Rickmansworth, near London, gives very pleasing evidence of solid scientific growth.

The superintendent, Dr. Branthwaith, writes as follows: With the exception of the months of June and July the home has been quite full through the twelve months, and it has been a painful necessity to refuse many applicants for admission, the applications having averaged from fifteen to twenty in the month. On January 30, 1885, there were seventeen patients in the home under treatment. Since that time twenty-nine have been admitted, a decrease of three on the previous year, explained by the fact that many of those previously admitted have remained until the present time. Of those, twelve entered under the Habitual Drunkards Act, and seventeen privately. Of patients under the act, four entered for twelve, five for six, and three for three months. Of private patients, six entered for twelve, one for nine, six for six, and four for three months. This year, as before, some have remained much longer than they originally intended, and I am glad to note an increasing tendency to extend the time even longer than twelve months.

Some patients on admission have not been suffering from any acute form of alcoholism, but others have entered in the midst of heavy drinking. In all cases I have cut off intoxicants at once. Two cases entered complicated with functional paralysis (in one general and in a slight degree, and in the other confined to the hand and arm with complete loss of power), two cases of impaired vision, three cases of gout, and three of chronic rheumatism. All other patients entered in fairly good general health. A general review of the year shows complete immunity from any serious acute affection, and no case of delirium tremens.

Four patients admitted during the year were medical practitioners, one barrister, one retired military officer, one retired civil servant, one tutor, seven clerks, one civil engineer, one marine engineer, five merchants, one farmer, and six gentlemen of no occupation. All were heavy spirit drinkers; two were in addition morphia takers, and three others had habitually taken opium or chlorodyne at times. All were smokers.

Twenty-eight patients have been discharged, twenty-four from efflux of time, one for illness, and three as unsuitable for treatment. With these exceptions all derived benefit from their stay, and left much improved in general, mental, and functional condition, and consequently better able to withstand the temptations to which they would be subjected.

Heredity as a predisposing cause is much more clearly marked than in our previous published statistics. Of the twenty-nine cases, twelve have a family history of inebriety, besides others obscure and not to be relied upon. In eight cases the father or mother was inebriate (in four cases combined with inebriety in brothers or uncles) grand-parents in one case, brothers in two cases, and uncles alone in one case. In the remaining sixteen no history of inebriety was obtainable, in two cases there was a history of insanity, and in others of hysteria, neuralgia, and other neurotic affections. Three cases are traceable to severe physical injury. The remaining predisposing and exciting causes I have

classed under the former headings of *nerve-shock* from overwork, and business or domestic disappointment or loss; *influence of occupation* or the inducement to excess afforded by various employments; and sociability or good fellowship.

Adding the figures published last year there has been a total of seventy-eight admissions, and sixty discharges since the opening of the home.

In the after history of those discharged, twenty-one are doing well, and thirteen more are decidedly improved, while ten have been discharged without benefit, and three cases were re-admitted. Occupation and employment for the patients were as follows; general carpentry and cabinet making, photography, electrical engineering. A full set of meteorological instruments have been loaned them and observations are taken daily. Winter and lawn tennis, boating, bathing, fishing, billiards, and music, etc., etc.

The income from patients was 2,321 pounds, and the expenses were somewhat less, and altogether this report shows that the Dalrymple Home is one of the best hospitals for the inebriate on the continent.

CLINICAL THERAPEUTICS.

Lectures on Clinical Medicine and Treatment of Nervous and Other Diseases. By Professor Beaumetz. Translated by Dr. Hurd. G. S. Davis, Publisher, Detroit, Michigan, 1885.

This work of twenty-two lectures, covering 490 pages, has already been translated into five different languages, and has won a place among the authorities of the practice of medicine. One distinctive feature of these lectures is their suggestiveness; and the possibilities which they open up; new lines of thought, new views, and new methods which are very stimulating to the reader. His clinical descriptions of disease are always brilliant, although often dogmatic, and incomplete. The French ring of these lectures are unmistakable, and really charming compared with the dry, solemn

statements of English and American authors. This work will have a peculiar value to all American readers for the comprehensive presentation of the treatment of nerve and brain diseases, also of typhoid and intermittent fevers. He will find here a rare store-house of hints and suggestions which he can continually draw upon. We commend this work as giving the best idea of the therapeutics and practice in France, and enabling the reader to avail himself of all that commends itself to his learning and experience. Both the specialist and general practitioner will find this work of great value.

The translator and publisher have presented a very attractive volume, and the low price of four dollars will give it a very wide circulation.

The Physiological and Pathological Effects of the Use of Tobacco. By H. A. Hare, M.D. *The Fisk fund essay.* P. Bakerton, Son & Co., publishers, Philadelphia, Pa., 1886.

This little work of one hundred pages is written by a scientific man, from a scientific point of view, and may be considered the last and most accurate statement on this subject. The following conclusions indicate the scope and value of the book, and we commend it most heartily :

“Tobacco smoking does not decrease the urine eliminated, but rather increases it. Tobacco does not retard tissue waste. Tobacco and its alkaloid cause convulsions in the primary stage of the poisoning, by depressing the reflex inhibitory centres in the cord. It causes the palsy of the second stage, by paralyzing the motor nerve trunks, or the motor tract of the spinal cord. That the sensory nerves are not affected by the drug. That nicotine contracts the pupil, by stimulating the oculo-motor and paralyzing the sympathetic, this action being peripheal. That nicotine primarily lowers the blood pressure and pulse rate; secondarily, increases pressure and rate; thirdly, decreases pressure. That the primarily lowering of pressure and rate is due to

pneumogastric stimulation, associated with vaso-motor dilatation. That the secondary stage is due to vaso-motor constriction and pneumogastric palsy. That the third stage is due to vaso-motor dilatation returning. That death in poisoning from this drug is due to failure of respiration, the action of the drug being centric. That the blood corpuscles are broken up and enervated by the action of the poison. That in death from nicotine poisoning the blood shows changes in spectra. That death can be brought about by the cutaneous absorption of nicotine. That tobacco increases intestinal peristaltis in moderate amounts, and produces tetanoid intestinal spasms in poisonous doses. That the liver seems to destroy the poison, although this destruction is participated in by any set of capillaries in other parts of the body. That tobacco smoking increases pulse rate and decreases arterial pressure."

Field and Limitation of Operative Surgery of the Human Brain. By John B. Roberts, M.D. P. Blackiston, Son & Co., Philadelphia, Pa., 1885.

The author gathers the very latest conclusions and facts, on the "principles of cerebral surgery," "cerebral localization," and "operative treatment of cerebral lesions," with his own observations, in a thoroughly scientific spirit of fairness and candor. Some of these topics are of exceeding interest to specialists of inebriety. The diagnosis of traumatic subcranial hemorrhage, and of arachnoid hemorrhage, are likely to be confounded with the stupor of intoxication, from alcohol or opium, or to be provoked by a blow on the head while in a state of intoxication.

Inebriates very commonly suffer from cerebral symptoms which have to be differentiated from abscess, congestion, hemorrhage, and other lesions. Traumatism from injuries followed by epilepsy and dipsomania are amenable to surgical treatment. Dr. Roberts points out some of the possibilities in this direction. This book may be called literally the most original contribution to surgery that has appeared for a long time.

Evolution and Religion. Eight sermons discussing the bearings of the evolutionary philosophy on the doctrines of religion. By Henry Ward Beecher. Fords, Howard & Hulbert, publishers, New York city, 1886.

The student of science will find great satisfaction and pleasure in this little work. The candor of statement and broad philosophy has the tone of true science, and if Mr. Beecher leaves nothing more for the world, this work will carry his name far down into the future as one of the great pioneer thinkers and preachers of the nineteenth century. For scholars and thinkers this book will be warmly welcomed, and we most heartily commend it.

Brain Rest. By J. L. Corning, M.D. G. P. Putnam's Sons, Publishers, New York, 1885.

This is a very pleasantly written little work of one hundred and twenty-five pages, discussing the following topics: Sleep, Blood, and Brain-force, the Hygienics of Sleep, Definition of Insomnia, Exhaustion of Brain Energy, Rest, Muscular Rest, Spinal Rest, the Therapeutical Significance of an Excessive or Inadequate Supply of Blood to the Brain, the Mechanical Regulation of the Cerebral Circulation, Internal Remedies, Baths, and Electricity.

Many very practical hints will be found in this book that can be applied to the treatment of inebriates.

Historical Sketch of the Distribution of Land in England.

By Prof. Wm. Lloyd Birkbeck, Cambridge University. Price 15 cents, post-free. J. Fitzgerald, publisher, 393 Pearl street, New York.

The question of land distribution is attracting attention all over the world, and in England its discussion threatens to produce, at no distant day, a profound and far-reaching social and political revolution. Hence a treatise on the principles of land distribution is most timely, and must be welcomed by every studious observer of the events of current history.

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The Medico-Legal Journal, under the care of Hon. Clark Bell, has attained great prominence in the world of science, and is the best journal published.

The Journal of Nervous and Mental Disease has become a monthly, under the charge of Dr. Sachs of New York city. Its value and usefulness will be greatly enhanced under this new management.

The Homiletic Review, published by Funk & Wagnalls, of 10 and 12 Dey street, New York city, increases in excellence from month to month, and ranks among the best reviews of theological thought in this country.

The Phrenological Journal, by Fowler, Wells & Co., New York, edited by Dr. Drayton, should have a place in every library of thinking men and women. They publish a very unique calendar, which will be sent to any one for ten cents.

The Demorest's Monthly Magazine of New York city, is a very attractive illustrated monthly, with a very distinct temperance ring in the editorial pages. The literary character is good and wholesome, and we most cordially commend it. Send for a copy.

Dr. Shepard's Turkish Bath Sanitarium on Brooklyn Heights, Brooklyn, New York, is one of the few places we take pleasure in commending at all times to our readers. The value and excellence of the bath, and the possible results, both physically and mentally, to all who avail themselves of it, fully sustain all commendation that can be given.

The Popular Science Monthly for March and April contains the famous Gladstone-Huxley controversy over the scientific nature of the Book of Genesis. Also Mr. Spencer's last paper on Darwin and Evolution. These and other very important papers are of great interest to all thinking men who are watching the front line of progress. No other periodical gives a better view of the march of science and thought in this country.

The Journal of Heredity for January, under the care of Dr. Burnet, is a vigorous and spirited number. To gather the facts of heredity and present them in a popular, scientific form, is a great pioneer work which this journal essays to do. The promises of success increases with each number, and we urge our readers to send for a copy to the office at Chicago, Ill.

Lend a Hand, published in Boston, Mass., is a monthly magazine of practical philanthropy. It is a record of all efforts to suppress crime, pauperism, and disease, and is intended to be the medium for the study of the best remedies of these evils. Its contents and management so far gives promise of a very attractive addition to the literature of preventive medicine.

The Descent of Man. By Charles Darwin. Part Second. Price 15 cents J. Fitzgerald, 393 Pearl street, New York.

This famous work is now for the first time brought within the reach of all readers. It is to be completed in four parts, 15 cents each, or 60 cents for the entire work. It is well printed from large, clear type, on excellent paper. The lowest price of this work hitherto has been \$3.00.

The following most excellent works are published by the Humboldt Library of Science, at 15 cents each, in paper covers. Address, J. Fitzgerald, 393 Pearl street, New York city. We commend them and only give a few names of the large number now published. Each work is complete. "Ribot;" "Diseases of Memory;" "Diseases of Will;" "Illusions," by Sully; "Mind and Body," by Bain; "Longevity," by Gardner; Huxley's works; Tyndal's works; Rawlinson's works; Clifford's works. These are printed in good type, and are unabridged. No library is complete without these great standard works of science.

Nitroglycerine is said to be a perfect substitute for alcohol in one drop of one per cent. solution, as a cardiac and cerebral stimulant.

Editorial.

THE CLASSIFICATION OF INEBRIETY.

Dr. Wilson has attempted in the *Polyclinic* to group some of the different forms of inebriety under the head of alcoholism. This effort suggests the confusion of opinion regarding the nature of inebriety. The doctor falls into the common error of regarding all forms of disorders in which alcohol is taken to excess, as alcoholism. Practically the man who has led a previously healthy life up to a certain point, then suddenly uses spirits to great excess, is not an alcoholic. Or one who, from a long course of neglect and irregular living, suddenly finds in alcohol a source of relief from all his aches and pains, and uses it freely; or the man who, after years of moderate or occasional use of spirits, begins to take it in great excess. In all these cases, and many others of like character, the use of alcohol is only a symptom, and not a cause. It is always an indication of some state of brain and nerve exhaustion, existing long before alcohol was used. Hence, clinically, the term alcoholism is not correct, but inebriety more nearly describes this diseased state, whose chief symptom is a craving for narcotic drugs. The various forms of inebriety may be designated by the drugs used. Thus we may have alcohol, opium, chloral, chloroform, and ether inebriates. These may all be distinct or run into each other so closely as to appear alike, and various forms of insanity may be associated or follow from each one. The symptomology of these cases are all marked by delusions, hallucinations, deliriums, and various states of exaltations and depressions. A classification from the symptoms would be difficult, because of their variability and dependence on local causes. Often the use of alcohol or opium springs from irritation or disease of some organ, with a chain of symptoms which may vary greatly.

Its first use at the beginning may develop some latent neurosis or state of degeneration with equally complex symptoms.

All classification must be made from the basis of causation. Heredity is one of the most prominent factors in the causation. Heredity not alone from inebriate ancestors, but following from other and allied diseases. Thus, the descendants of insane, consumptive, idiotic, criminal, epileptic, and a vast number of defectives, are born with all the favoring conditions to develop inebriety from the slightest cause, and often without any rational causes that are apparent. Dr. Parrish thinks some form of brain and nerve degeneration is transmitted, and the debility and exhaustion which follows, is relieved most quickly by alcohol or opium, hence these drugs are constantly sought for.

After heredity comes what may be termed physical causes, the most prominent of which are traumatism from injuries and diseases. The inebrieties from these causes are distinct in many respects. Then comes a range of physical causes which are due to varied emotional strains and drains, mental conditions, bad training, and bad mental surroundings, etc. In these cases some state of nerve and brain exhaustion finds in these narcotics a relief. Dipsomania is a real insanity, in which the morbid impulse to drink spirits, or take narcotics, is a delirium which so thoroughly permeates the system, and dominates every other impulse, as to be powerless to resist. The periodical inebriates are members of this family, and their stated recurrence at certain intervals are only lesser grades of dipsomania. The injury from the toxic use of alcohol is always positive, although it may be obscure, and the degeneration from this point is continuous and far-reaching. How far this disorder has grown out of the use of alcohol, or comes from previous disorder or degeneration, cannot be determined. Clinically, inebriety will divide into three groups. The first, where heredity, direct and indirect, are the most prominent causes. Second, traumatism from injury or disease are the chief causes.

Third, where the causes are physical, as mental contagions, emotional strains and shocks, and nerve and brain changes. Dipsomania and the periodical inebriates are to be included in a separate division.

It is clearly impossible at present to make any exact classification from the symptoms. Only some general division of cases based on the causes can be given, and even these must vary with the progress of exact study of the natural history and progress of these cases.

CRIME AND PAUPER WAVES.

Col. DuCane, the English inspector of prisons, has lately given some very interesting statistics on the tide-like movement of crime and pauperism. He found that from 1851 to June 1885, a history of increase of crime and pauperism up to a certain point, then a regular decline. Thus, in 1851 and up to 1853, a steady fall was noticed. Then a rapid increase took place. In 1856 the pauper population had reached its maximum, and the next year the criminal population attained the same point and went back. Both fell steadily until 1860, then turned to rise again. In 1863 both fell back to 1866, when they started up again. In 1869 the criminal tide turned and the pauper wave went back in 1870. Then a remarkable divergence was seen. The pauper tide went down to 1876, when the criminal wave went up to 1877. Then the pauper tide went up and the criminals went back. The paupers went up steadily until 1883 and the criminal population fell. Then both tides seem to come together again. In February 1885, the criminal population reached the lowest level known for many years.

The regular rise and fall every three years has changed, and the fall has continued going lower than before.

These facts point to a range of causes that are unknown, and indicate that criminals and paupers, like inebriates, are not chance products of civilization, but are thrown up in tide-like waves, by forces that are both mysterious and potent.

THE FUTURE FIELD OF MEDICINE.

If it was known that a single disease caused a weekly mortality of over one thousand persons in this country, the greatest scientific interest would prevail, to determine its cause and remedy. The complaint of the overcrowded ranks of the medical profession would die away, and each new physician would find ample room for all the labor and skill he could give to the world. To-day more than one thousand are dying from inebriety; dying of a disease that is positive and unmistakable, as it is curable, and yet no interest is excited except among moralists and reformers, who consider it a sin. The possessed of the devil, in the past ages, were passed by the physicians as only fit subjects for clergymen and priests. Now an army of specialists and every general practitioner finds in these neurotics the most fascinating field for medical practice.

Instead of punishment, persecution, and death, these poor victims are cured and restored to health and society. The inebriate is passing through the same stages of history. In the near future he will be recognized as diseased, and the crowded medical profession will find a new field at their doors, now unsuspected. The despairing physician who feels himself crowded by others in the profession, has only to turn his efforts to this ever increasing army of inebriates, who are suffering and dying all about him, unknown and uncared for, and the horizon of practical labor will expand into immense dimensions. To determine the cause of inebriety and the means of cure and prevention, is to enter upon the new and most important field of the practice of medicine for the future.

INEBRIETY IN FRANCE.

It is evident from a great variety of evidence, that inebriety is rapidly increasing in France. Wine was formerly the only drink used. Now large quantities of brandy from beet roots and potatoes are made and consumed. German

beers have come into the market, and vermouth and absinthe are used in large quantities. The cheap pure wines are disappearing, and these stronger and more irritant drinks, with the manufactured wines and other compounds, take their place. This is thought to be owing to the destruction of the grape vine, and the changing habits and customs of the people. In Paris and other cities more intoxication is apparent every year. This is traceable to these new and stronger drinks. The late Dr. Lunier thought that as long as the pure cheap wines were used very little danger would follow, but the advent of the complex alcohols, as found in brandy and absinthe, excited his gravest apprehensions for the future. The French temperance society made this point very prominent, and total abstinence was confined to these complex alcohols, and did not include pure wines. Insanity and complex nervous diseases are increasing from this cause. This subject is beginning to attract attention. The bureau of statistics have called for the number of persons who are known to be intoxicated in each province and the kind of spirits they use. From this report some facts will appear that will show how far this change of the drink customs of the nations has gone on. If the temperance agitators of this country would make a census of the inebriates in every section, it would be an argument that would enlist interest and sympathy at once.

HOMES FOR INEBRIATES ASSOCIATION.

This association is an English organization for the purpose of stimulating public sentiment in the building and support of asylums for the care and cure of inebriates. They have been very active in building the Dalrymple Home, and are now urging the benevolent to help them in securing a hospital for indigent inebriate women, and also one for men who are homeless and unable to pay. In the report of the year's work before us occurs the following reference to the statistics of the Dalrymple Home :

Of the sixty who have been discharged since the opening

of the Home, leaving out of reckoning one who has become insane, three who have died, and twelve who have not been heard from, nearly one-half have done well. Over thirty per cent. additional have been improved; so that between seventy-five and eighty per cent. have received decided benefit. Of the twenty-nine admitted during the year, the committee are glad to record that ten entered for the term of twelve months, the shortest period of residence which can be unreservedly recommended.

INEBRIATES PASSING COUNTERFEIT MONEY.

The general rulings of judges, that inebriety is no excuse for crime, results in great wrong and hardship, and the object of punishment to reform the offender and deter others from committing crime practically fails. In the wide ranges of cases of inebriates, who having violated the laws, constantly coming before the courts, the application of this legal theory must vary widely, as the intelligence and mental capacity of judges differ. The rulings of the lower courts exhibit more intelligence and freedom in the recognition of the special conditions of each case, while all the higher courts of last resort, adhere tenaciously to the old theory of responsibility in most cases, and sustain their rulings by citation of long lists of cases, where similar views were held.

The injustice and confusion seen in the reports of cases where inebriety comes in question indicates clearly a transition stage, which happily is passing away. The insanity of inebriety and its total and limited irresponsibility is forcing a recognition, in courts, as justice to the victim, and as opening a door of escape now closed against him.

The following cases are interesting, and suggestive of a change. Pigman was convicted of passing counterfeit bills, in Ohio. The case was carried to the Supreme Court on the plea that the prisoner was an inebriate and intoxicated at the time of the act, and did not know or realize his crime. The judge ruled on this as follows: "Drunkenness is no excuse

for crime; yet in that class of crimes and offenses which depend upon guilty knowledge, or the coolness and deliberation with which they shall have been perpetuated to constitute their commission, or fix the degree of guilt, it should be submitted to the consideration of the jury. If this act is of that nature that the law requires it should be done with guilty knowledge, or the degree of guilt depends upon the calm and deliberate state of the mind at the time of the commission of the act, it is proper to show any state or condition of the person that is adverse to the proper exercise of the mind and the undisturbed possession of the faculties. The older writers regarded drunkenness as an aggravation of the offense and excluded it for any purpose. It is a high crime against one's self and offensive to society and good morals; yet every man knows that acts may be committed in a fit of intoxication that would be abhorred in sober moments. And it seems strange that any one should ever have imagined that a person who committed an act from the effect of drink, which he would not have done if sober, is worse than the man who commits it from sober and deliberate intent.

The law regards an act done in sudden heat, in a moment of frenzy, when passion has dethroned his reason, as less criminal than the same act, when performed in the cool and undisturbed possession of all the faculties. There is nothing the law so much abhors as the cool, deliberate, and settled purpose to do mischief. That is the quality of a demon, while that which is done on great excitement, as when the mind is broken up by poison or intoxication, although, to be punished, may, to some extent, be softened and set down to the infirmities of human nature. Hence, — not regarding it as an aggravation — drunkenness, as anything else showing the state of mind or degree of knowledge should go to the jury. Upon this principle in modern cases, it has been permitted to be shown, that the accused was drunk when he perpetrated the crime of killing, to rebut the idea that it was done in a cool and deliberate state of the mind, necessary to constitute murder in the first degree. The principle is un-

doubtedly right, so on a charge of passing counterfeit money; if the person was so drunk that he actually did not know that he passed a bill that was counterfeit, he is not guilty. It often times requires much skill to detect a counterfeit. The crime of passing counterfeit money consists of knowingly passing it. To rebut that knowledge or to enable the jury to judge rightly of the matter, it is competent for the person charged to show that he was drunk at the time he passed the bill. It is a circumstance, among others, entitled to its just weight."

The judgment of the lower courts was reversed and new trial granted. This was in January, 1846. In 1885, in the United States court at Boston, Morrison was tried for passing a counterfeit fifty-cent coin on a saloon keeper for spirits while intoxicated. On the defense it appeared that the prisoner was of good character, at intervals he had used spirits to excess, but he had never possessed or attempted to pass spurious coin before. The act was a mere freak while intoxicated with others, and the coin was given him for this purpose as a joke. Yet in view of these facts, he was convicted and the judge thought he was showing great justice, by imposing a short sentence. Crimes committed by inebriates can never be adjusted on any basis of equity, unless the nature and character of the crime, and all the circumstances entering into it, are studied, from a scientific point, and not from some legal dictum of the past.

DELIRIUM IN PNEUMONIA FROM INEBRIETY.

Several observers have noted the greater frequency of delirium in pneumonia occurring in cases of inebriates. This is very likely the result of meningitis, due to various causes. The pneumonia of inebriates is very largely due to the profound exhaustion, and fatty degeneration of the system, which furnishes favorable soil for acute inflammation from the slightest exciting causes. Such inflammation is rapidly suppurative; and this puriform, broken-down mate-

rial, passing into the arterial current, would be carried to the *pia*, and set up purulent inflammation. Or it may be caused by emboli, which are so common in chronic inebriety. I think it will be found that delirium will appear more frequently in the acute inflammations of any organ in persons who are inebriates. The form of delirium will be characteristic, depending on the exhaustion and feebleness of the patient. In two cases under my observation, a low delirium of fear and alarm of personal injury was present. Hallucinations of sight and hearing were also present in another case. Are these deliriums peculiar in such cases, and do they indicate the alcoholic origin? Are deliriums associated with pneumonia following inebriety more often than in pneumonia seen in other cases? These and many other questions must be answered from future study.

INEBRIETY AND TUBERCULOSIS.

The very intimate relation between these diseases receives additional evidence in a paper by Dr. Crook, lately published in the *Medical Record*, entitled "A Contribution to the Natural History of Consumption," based on an analysis of fifty-nine cases. Of fifty-five of these cases whose habits were studied, thirty-nine were found to have used alcohol more or less to excess, nine of this number had evidently drunk to great excess, and twenty-six claimed to be only moderate and occasional users of spirits, and four were evidently periodical drinkers. In reality, they were all inebriates, only in different stages of the disease, while the consumption was merely another form of the same degenerative disease, which followed the inebriety. The name consumption is used in its broadest sense to express the various lung diseases whose prominent symptoms are wasting, degeneration, exhaustion, and death. The frequency with which these diseases appear among inebriates have sustained the conclusion that they were of the same family group, and interchangeable one with another. Clinically, this is appar-

ent in cases like the following: Moderate or excessive drinkers will suddenly abstain from all use of spirits, and soon after develop tuberculosis, which may run a course of years before death. In some cases the inebriate impulse will gradually die out, and the lung disease come on in a marked obscure form, and only be recognized by some severe hemorrhage. When organic disease begins in the lungs, the drink impulse subsides. In some cases where chronic inebriates have signed the pledge, or for some insignificant cause ceased to drink, and suddenly changed the manner and habits of life, incipient tuberculosis have been diagnosed. In all these cases of sudden conversion and cure of inebriety, a very careful examination of the lungs will often reveal the real cause. Pneumonia seems to be a common favoring cause; thus in cases of inebriety where pneumonia comes on, and the person recovers, still using spirits as before, tuberculosis frequently follows, and in the four cases I have noted, terminated rapidly in death. The pneumonic lesions are the starting points for the graver diseases of the lungs.

Some cases have been noted where the inebriety has suddenly terminated, and dullness at the apex of the lungs, with other characteristic signs, appeared, which remained in abeyance without change for some time, then burst out, ending fatally in a few weeks. Some of the cases of acute tuberculosis (or galloping consumption, so called) are noted in reformed inebriates who have had premonitory symptoms for a long time unobserved. Other cases are observed where previously temperate persons have had pneumonia, pleurisy, or severe bronchitis, and been treated with larger quantities of alcohol, developing inebriety that is generally of short duration, ending either in organic disease of the lungs, or fatal, acute inflammation of some organ. The facts as yet are only in outline; the exact relationship between these diseases must be determined from clinical records at present wanting. So far, all observers have noted the facts we have presented, and also the frequency with

which lung diseases are seen in children of inebriates. It has been also observed in consumptive families, that inebriety seemed to take the place of consumptive diathesis. Thus some members would develop consumption, and others would become inebriates. In one instance, two daughters of consumptive ancestry reared large families, then died of this disease, while their children were both inebriates and consumptives. Often these consumptive families will be marked by inebriates in the male members, and consumption in the females. The use of alcohol as a prophylactic, simply develops the disease into other channels, both increasing and intensifying the ultimate degeneration. The case with a consumptive heredity who uses spirits to prevent its development may not die of this disease, but he will certainly develop organic disease of other parts of the body that are incurable.

In most cases the use of alcohol stops suddenly, and acute tuberculosis follows. The use of spirits after tuberculosis has developed in some instances seems to retard the acute symptoms of the disease, but it will be found in most cases to have only masked the organic degenerations, which may have turned in some other direction with equal intensity and fatality.

An assault and even crime committed by an inebriate should always be considered a symptom of diseased brain, and one that is incapable of judging of the nature and character of his acts. Such symptoms are as significant as larceny is a symptom of general paralysis.

In 1885 there were 3,430 arrests for crime of all grades in the city of Hartford, Conn. Of this number 2,121 were arrested for drunkenness. If these cases were recognized as diseased and treated by means suggested by science, from 40 to 50 per cent. would be cured; but treated by the present legal means, no one recovers, and all are made worse: precipitated into incurable conditions from which recovery is almost impossible.

Clinical Notes and Comments.

NEW HYPNOTICS.

Prof. Beaumetz of Paris, in a clinical lecture on the above subject, says: Means for alleviating pains may be divided into four groups. Hypnotics which produce sleep. Analgesics addressed principally to the element of pain. Anæsthetics which extinguish sensibility in whole or in part. Sedatives, or antispasmodics, medicaments which diminish the excitation of the nervous system.

Medicines which slow up the cerebral circulation are more clearly hypnotics. Opium and morphine are not true hypnotics, but are stimulants and analgesics. They tend to congest the encephalon, and stimulate the circulation. The continuous use provokes cerebral hyperæmia, and this is followed by a state of sopor resembling natural sleep. Chloral and paraldehyde are prominent hypnotics. Chloral acts by causing anæmia of the cerebro spinal axis. It acts directly, and not as supposed, by being decomposed into chloroform and formic acid. In alcoholic delirium and rebellious insomnia chloral is the hypnotic to use.

Paraldehyde is a dehydrogenated alcohol. It acts like chloral by causing anæmia of the cerebro-spinal axis, bringing on sleep, which in some cases is preceded by a short period of agitation and excitation. In experiments it was shown that a special antagonism existed between strychnine and paraldehyde; also that between alcohol and strychnine the same antagonism was present. Chloroform, either chloral and alcohol, act directly unchanged on the nerve cell. In all my experiments I have shown the presence of undecomposed alcohol in the cerebral substance.

I have also found that when a nervous element is impregnated by a medicament it refuses within a certain limit to receive the impression of another medicament, and this

explains the antagonism which exists between different substances. Going further to explain the tolerance and intolerance of certain medicinal substances, it is found that medicines which have an elective action on the nervous system, ought to act on the nervous elements in a healthy state. Whenever there shall be a cellular impregnation by another medicament, or a molecular modification, there you may expect great tolerance of certain drugs. Thus in delirium tremens, large doses of opium and strychnine may be given without bad results.

The author urges paraldehyde in all cases of inebriety from alcohol or opium, and in insomnia and convulsive neuroses as a hypnotic of rare excellence.

ASYLUMS AND SANITARIANS.

Some of the places which are advertised in our pages deserve a passing comment. The Inebriates Home at Fort Hamilton, New York, and the Washingtonian Home of Boston, Mass., have long ago passed the period of youth into a vigorous manhood, and are the great pioneer asylums of the world. Walnut Lodge of Hartford, Conn., has become known as a scientific and literary center for the study of inebriety. Dr. Mattison of Brooklyn, New York, has been before the public as a specialist in the treatment of opium cases, and his success in the care of these cases at his home has given him a wide reputation and large patronage. *Dr. Brown of Barre, Mass.*, has one of the oldest and best institutions for feeble-minded children in the country. The *Battle Creek Sanitarian*, under the care of Dr. Kellogg, is one of those palace homes for inebriates of all descriptions, where every appliance of science is used with care and skill. The *Homewood Retreat at Guelph, Canada*, is the largest and best asylum for inebriates and feeble-minded persons in the provinces. The *Green Spring Sanitarian, at Green Spring, Ohio*, combines a valuable mineral spring with all the aids of science in the treatment of inebriates and others. The Mil-

waukee Sanitarium is finely situated, and receives a large number of cases of these "border liners."

Dr. Bradner's Kirkbride Villa at Burlington, N. J., is an attractive place for the exact treatment of mental diseases and inebriety, and is largely patronized. Lastly, Dr. Parrish, so well known to all our readers, has opened his elegant house for a few cases at Burlington, New Jersey. These are only a few of the ever-increasing number of homes and asylums for the cure of inebriates and others.

COCAINE IN INEBRIETY.

Dr. Brower, in the journal of the American Medical Association, writes of the effects of cocaine on the central nervous system:

"Cocaine in small and moderate doses is a cerebral stimulant, but produces derangement of the digestive and assimilative functions, and diminishes the elimination of waste.

"The use of cocaine in the alcoholic and opium inebriates is not satisfactory; while it is a more or less perfect substitute, yet its use is attended with greater danger than alcohol and opium.

"The use of cocaine in mental depression will often give better results than any drug hitherto used. It is also valuable in neurasthenia. If it is administered in large doses persistently, very marked deterioration of the central nervous system follows, producing profound cerebral neurasthenia, and malnutrition, often ending in insanity.

"Cocaine occasionally, in doses heretofore regarded as small, produces alarming depression of the central nervous system."

Dr. Beaumetz, in a recent lecture on the new hypnotic called hypnone, concludes as follows:

1. Hypnone is a mixed acetone of the aromatic series, obtained by submitting to distillation a mixture of benzoate and acetate of calcium.

2. This acetone is toxic and its greater or less degree of purity seems to have a notable influence on its toxicity.

3. Hypnone in toxic doses produces in animals sleep, analgesia, and anæsthesia. It diminishes the neurility of the nervous elements, lowers blood pressure, modifies the respiration, and alters the composition of the blood.

4. In a dose from twenty to forty centigrammes hypnone has never produced in man any other appreciable physiological symptom than sleep. It is a hypnotic, especially applicable to nervous insomnia, or that produced by alcoholic excesses, or too prolonged intellectual labor.

Fellows' Hypophosphites may be called a reconstructive remedy whose value can not be overestimated in many cases.

Wheeler's Tissue Phosphates is another of those remedies that are followed by the best results.

Hosford's Acid Phosphate has taken rank with quinine as a tonic for nerve disorders.

Lactopeptine should be used in all cases of stomach trouble; its value increases as it comes into general use.

The *Maltine Preparations* made by the Maltine Company of Yonkers, N. Y. are very valuable remedies in the treatment of opium and inebriate cases.

Beef Peptonoids are exceedingly valuable remedies for certain cases.

Coca Cordial, by Parke Davis & Co., is a new form of this popular remedy, that will come into very general use in the future.

Bromidia is a *hypnotic* containing to one drachm, fifteen grains each of chloral and bromide pot. and one-eighth of a grain of cannabis ind. and hyoscyam. This combination is found from long experience to produce the best results without any injurious effect. It is prepared by a reliable firm, Battle & Co. of St. Louis, Mo.

Colden's Liquid Beef Tonic is invaluable in all cases of exhaustion from alcohol or other causes. Samples of *Colden's Soaps* will be sent to all physicians who may apply by addressing C. N. Crittenton, 115 Fulton Street, New York. Please mention JOURNAL OF INEBRIETY.

Anglo-Swiss Food will relieve most cases of gastric irritation from alcohol and opium when other remedies fail.

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SOME ASPECTS OF DIPSOMANIA.

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The dominating influence in dipsomania is heredity. An occasional cause may have a certain action upon particular seizures, but the disturbance is secondary ; it has to do only with the manifestation present at the time of attack. Upon the morbid centers of action, it has not the importance often attributed to it.

Some writers, instead of seeing in the morbid impulse to drink the manifestation of an interior condition of profound disturbance, regard it as developing only after long periods of alcoholic excess. This opinion, together with that which would make of dipsomania a distinct malady, in an otherwise healthy individual, does not withstand careful investigation. Esquirol saw in dipsomania a distinct malady characterized by an unusual desire to drink, and paid no attention to antecedents. But in order to comprehend dipsomania, this inquiry must certainly be made. Nothing can be more certain than that dipsomaniacs, at various periods of their lives, and many years before the development of their disease, have presented eccentricities of character and serious intellectual difficulties which their after lives have amply ac-

counted for. Other writers have confounded the symptoms of dipsomania with its causes. Dyspepsia, so often regarded as a cause of the drinking impulse, is only a consequence of the malady, though it afterward aids in giving rise to the drinking seizure. The same is true of certain curious conditions to which writers have too readily applied the term hysterical, and which constitute in reality the habitual condition of the physiological life of the dipsomaniac. So also with the periods of melancholy. Far from being the causes, they are the first manifestations of the disease. To menstruation and the menopause have also been attributed a large importance in the causes of dipsomania. Their influence is slight, however, and only at the time of the access, the return of which is sometimes hastened. But, even if menstruation has a certain action upon the periodicity of the access, it would be a gross exaggeration to say that it had anything to do with the cause of the trouble.

Marie D——, 45, had been in bad spirits for four years since her husband's death. For eighteen months, she had been seized at intervals with a violent desire to drink. Then followed a period of deeper sadness and discouragement, which immediately preceded her first seizure. She complains at the time of attack of a constriction of the stomach and the throat. As the impulse increases, she reproaches herself and tries desperately to surmount her desire to drink. Incapable, however, of a prolonged resistance, she obtains a supply of liquor and locks herself up for the sole purpose of secret and unrestricted drinking. The melancholy continues to increase and symptoms of alcoholic poisoning appear. Hallucinations take the place of sleep; she sees skulls with flaming eyes and hideous faces grinning at her; objects assume all colors by turns, and dance around her bedside. Her skin is troubled with sensations which she ascribes to vermin. The symptoms disappear in a few days, and the patient remains sober, perhaps for three months, without even a desire to drink. The odor of liquor then becomes so disagreeable as to be almost nauseating.

The patient denies that she has a liking for drink. She says that she proceeds wholly against her will. "This is not," she said to us, "a passion with me; it is in spite of myself that I drink." During the attack she becomes irritable and has rushes of blood to the head. In each succeeding seizure the impulse to drink is more imperative, and the resistance less powerful. Of this particular case I am unable to speak with certainty concerning hereditary predisposition. Of eight cases now with us, however, two receive the impulse from both parents, and five from either the father or the mother.

The term monomania, introduced into science to explain "a kind of mental alienation characterized by a partial obscuration of the intelligence, of the affections, or of the will," is daily losing its force. In a general way I reject monomania absolutely, without denying that certain impulses may be the most striking features in certain forms of insanity. But they can have only a symptomatic value. Monomania is but a mental condition in the midst of which a particular tendency manifests itself. It is not the essential disease, though it sometimes so dominates and absorbs the patient's mind as to give his trouble a special appearance. Enough will be shown to prove that, if the necessity of drinking is, in the dipsomaniac, the most striking act, it does not constitute the disease. It is an episodic syndrome of a more profound mental state which is governed by heredity. One of my patients had suicidal melancholia, followed in turn by religious mania, nymphomania, and homicidal impulses. Observers should be able to understand from such a case that all these manifestations, far from being monomanias, are different presentments of a single pathological state.

Dipsomania is essentially intermittent in character. The alcoholic delirium which becomes associated with its seizures after they have become very frequent, is a complication, not a symptom. The attacks of dipsomania leave behind them a cerebral restlessness, which lessens by degrees when the patients, regretting their excess, return to a habit of sobriety.

The attack is always preceded by similar prodromas. Some of the important symptoms are noted in the following case:

Louise B., 23, daughter of a drunkard whose father was a suicide; mother intelligent; patient's brother died of hydrocephalus. At 20, Louise had periods of melancholy, nervous twitchings of the stomach, and a feeling of weight in the hypogastrium. The phenomena increased at the catamenial period. She had already remarked that a little wine allayed the uneasy feelings in the stomach. She married and became pregnant. She then became more melancholy and lost much of her interest in life. She felt a disgust for solid food, and began to have an incessant thirst which would not be allayed, together with extreme heat and dryness of the throat. She began by using peppermint water, but soon commenced to take wine freely, and finally decided upon small quantities of spirits. The relief she experienced caused increased drinking, and within a short time she became on one occasion completely intoxicated. Then she remained absolutely sober for fifteen days. Melancholy soon seized her again, and, after a short struggle, she found that she must soon give way. Fearing the reproaches of her friends, she left home with her portable property, which she soon disposed of at insignificant prices. Then she bought a bottle of brandy and, taking a room at a hotel, drank until she rolled to the floor unconscious. Her husband found her and took her home, but his protestations were useless; she continued her habit at intervals until her child was born, an event which, strangely enough, took place at term and without accident. She now carried her excesses still further, and added absinthe to her list of excitants. Then this woman, so chaste and reserved in her intervals of sobriety, lost her modesty with a very remarkable facility, not only when under the influence of liquor, but when simply dominated by a desire to drink. For a drink she would give herself to the first comer. The saloons of the lowest order served her on these occasions as a place of refuge, and it was in the midst of the most degraded people and in the company of the lowest prostitutes that she

gave herself up to the most shameful forms of debauchery. Sometimes she was obliged to leave a considerable portion of her garments to pay the cost of her potatoes.

The agents of police had found her, more than once, lying in the street in a state of almost complete nudity. The crisis past, the lady regains her self-possession, becomes profoundly grieved and makes resolutions which beyond question are sincere. She was then docile and ready to assist her friends in any effort they made for her. They placed her in a commercial house, hoping that regularity of life and constant surveillance would benefit her. She did well for a time, but a single glass of wine broke through all of her precautions, and in twenty-four hours she was in the gutter. She was now sent to the house of a relative—a physician—where she improved for a short time. Soon afterward her husband, on entering his house, found her lying fully intoxicated and almost nude upon the floor of her home. On one occasion she remained four days from her friends, without food, but almost wholly intoxicated with absinthe. She sometimes went into the streets at night, and wandered about while waiting for the opening of a liquor saloon. At another time her husband found her at the prefecture of police—she had been found drunk and nearly naked, lying in the street. Once, when apparently free from her appetite, she went to walk, taking her little child with her, in the belief that she would thus have the firmness to resist any temptation. She thought it no harm to take a glass of wine on the way, as she felt some bodily distress. Her distress was in reality a seizure. She confided her child to a drunkard—a stranger whom she encountered—and did not return until the next morning when she was accompanied by a workman whose services she had requested. Some days afterward she was sent to friends who agreed to watch her; but she soon escaped and wandered to a distant part of the city, where she was arrested and fined for drunkenness, twice in two days. To-day, the effects of these excesses remain profound and durable. Louise has lately drunk

habitually until she has fallen unconscious into a condition of complete prostration ; she often remains in a state of hebetude for five or six days. Since she has been brought to the Saint Anne Asylum, she has been calm and reasonable. She fully understands her terrible situation, and has often, she says, made up her mind to destroy herself. But she drinks alcohol to give her the necessary courage, and takes so much of it that she soon loses recollection of her intended suicide, and gives herself up to debauchery.

Although in dipsomaniacs the impulse to drink is preceded by the same prodromes, persons of education soon perceive their malady, and, for a long while, show much ability in concealing their habit. The struggles these people often make against their impulses indicate in the clearest manner how widely they differ from ordinary drunkards. The latter seek occasions to drink. The dipsomaniac avoids them, reproaches himself deeply for his impulses, and often seeks by a thousand means to destroy his desire for liquor. He even soils his drinks in the most disgusting ways, in the effort to sicken himself with his destroyer. The ordinary drinker does not do this.

Madame N. was a woman of a serious character, regular, and of irreproachable habits. She became suddenly seized with a drinking impulse, which became irresistible. She put in her wine substances calculated to inspire disgust — even excrement — yet she still craved for more liquor, and finding such to be the case would curse herself terribly.

“Drink, then, drink, miserable drunkard !” she would exclaim. “Go forth, dishonor yourself and your family.” And she would do so, though often sober at the time.

When the dipsomaniac ends by succumbing, he does not behave like the ordinary drunkard. In the early stages of the disease, he drinks furtively, and generally conceals himself. The professional drinker is noisy, seeks companionship, and in most cases disputes, or relates his own exploits. The one is insane before he drinks, the other becomes so because he drinks.

Marie T., 51, maternal grandfather a suicide; mother at forty was affected with melancholia. Patient was a "Child of the Regiment" (*Cantiniere*), and sometimes drank a little *eau de vie*, not because she cared for it, but, as she said, "it belonged to the business." The curious point in this case is that though it was in reality a latent dipsomania, the disease did not then seize her, and when she left the business the habit of drinking ceased. At thirty-four, however, she complained of cramps in her right hand so severe as to compel her to learn to work with her left. Then the sensibility of the member slowly left it. Two years later, without apparent cause, she had an attack of melancholy. She tried to dissipate it by using a moderate quantity of brandy, but only succeeded in losing her sleep. This attack was not yet, properly speaking, a well-characterized seizure of dipsomania, but some time afterward the woman fell into another condition of melancholy, and suffered acutely for two days. Then followed stomachical spasms, and at the same time a desire to drink strong liquor which soon became irresistible. She left her locality to escape observation and began the "run of the cabarets." These attacks were continued and brought about, she thought, by horrible burning sensations in the stomach, and a feeling of obstruction in the throat. Alcoholic accidents brought her at last to the Pitie Hospital, where, however, despite her abstinence, the mental disease which brought about the dipsomania steadily continued its course. Ideas of suicide pursued her steadily. She succeeded on one occasion in precipitating herself from a staircase. Finding that she was not seriously injured, she crawled higher up, and was about to jump when she was restrained. "A voice," she said, had commanded her to do this. On the following night she attempted to strangle herself with her clothing. Her hallucinations became terrifying. For eighteen months this condition was not modified.

As showing how dipsomania may exist without any alcoholic excess for months previous, the fact may be cited that she was once seized in the middle of the night with an

attack of the disease accompanied by frightful hallucinations. When the attack was over there was left but one hallucination, a voice was continually saying to her, "It is vain to resist; you will end by killing yourself." This patient has developed a remarkable peculiarity; when she walks with another patient, she is always careful to place her at her right side, for it is impossible for her to feel the presence of any one at the left. All objects that she looks at with the left eye seem to her to oscillate. Her arteries are athermotic; all of her organs of sensibility on the left side are weakened.

As to the liquors chosen by dipsomaniacs, all are good enough if they contain alcohol. One patient, however, the Count de R., who is well known in the medical world, has a preference for ether and sugar. His mother — also a dipsomaniac — has the same habit, and sometimes bathes herself in ether. Both of them, however, will seize any intoxicating liquor which comes to hand when the fit is on. A marked difference between the dipsomaniac and the drunkard is, that between their potations the latter has no special dislike to a favorite drink, while the dipsomaniac feels for it an almost insurmountable repugnance. Our first-mentioned case cannot, when sober, support the odor of her customary drink; of the two other patients, one drinks water habitually, and the other will go for days without taking any liquor whatever.

The state of exhaustion and self-humiliation in which the dipsomaniac finds himself after he has recovered from his seizure, should not be confounded with the phase of melancholy which precedes the attack. The prostration is a consequence of mental and physical fatigue, and especially of the repentance and despair which followed his act. His discouragement often leads to suicide, and his contemplation of such an end is almost always persistent. Sometimes he becomes very dangerous, from the fact that the suicidal impulse is often complicated with the homicidal mania.

Louis H., 35, father drunkard, attempted suicide; mother hysterical. Patient has always had a predisposition to mel-

ancholy, and his sadness is increased by the belief that he is a natural child. He knows "how it will all end," for his mind has for several years been haunted with ideas of suicide. In Lyons he threw himself into the river through fear of entering the barracks after one of his attacks. Later, after the rupture of a long-contemplated marriage, he had a period of melancholy, during which he drank for four or five consecutive days. He then hung himself above the door of the lady to whom he had been engaged, but was rescued. Four years later, from a motive *which he does not even remember*, he attempted suicide after one of his seizures. Later, he was stopped as he was about to leap from the Austerlitz bridge. The following year, during another seizure, he attempted to open his veins in a bath-tub, but was surprised in the act by the attendant, who had been struck with his wild appearance. He tried to poison himself, but his stomach rejected his mixtures; he afterwards made a further attempt at suicide, which was equally abortive. Every three or four months he appears progressively melancholy, and the seizures are much more marked. He loses appetite, complains of pain and constriction in the stomach; his head feels as though bursting; his sight is troubled — he feels as if trying to see clearly in a fog — and then comes the irresistible thirst for liquor. After drinking for three days he resumes work, and his ordinary appetite returns. Apart from his attacks of alcoholic delirium this patient has some of the ideas of persecution. He often believes himself followed by men in the street who menace him with knives. Sometimes he hears at his left ear threats and insults of all sorts, simultaneously at his right ear he hears agreeable things. For three years he has been troubled with an interior voice which urges him to strike at the life of some one. He fears that he may one day give way to this impulse as he has to the others. The sight of a knife causes in him a painful impression; he never touches one when he can avoid it.

The attacks of dipsomania last from two to fifteen days. At the commencement of the disease they occur generally

but once or twice in a year, and grow in frequency until they become separated by an interval of a few days only. Writers have altogether too strongly insisted upon the resistance of the constitution of dipsomaniacs to the effects of alcohol. When the quantity taken is sufficient these unfortunates will, sooner or later, be subject to the toxic delirium of the ordinary drinker in addition to their own special symptoms. At first, drunkenness, which alone accompanies the seizures, leaves no trace, but as these cases come so nearly together as to act continuously, toxic symptoms will develop. Sometimes a true dipsomaniac comes to the asylum suffering from common alcoholic delirium, and it is only after the acute symptoms have disappeared that we find the profound indications of the principal malady. The co-existence in the same patient of several species of delirium is a demonstrated fact.

Hortense B., 53, whose father was a suicide, remained temperate until forty. She married at twenty, and was a widow eight months afterwards. From twenty-one to twenty-seven she suffered from irregular attacks of gastralgia, followed by vomiting. At thirty-one, remarried; became greatly troubled through business losses. Drank occasionally, but was rarely intoxicated. It was much later when the gradual development of dipsomania attracted her attention. The symptoms were pain in the head and stomach, pressure upon the back and epigastrium, repugnance to food, and insomnia. She was restless, sad, and discouraged; was filled with strange fancies. Everything wearied her; trifles exasperated her; a hallucination, which seemed to her "an image of death," pursued her without ceasing. So great were her other troubles that she hailed this last appearance as an object which would soon bring deliverance. It was in this condition that she felt her first irresistible impulse to drink. She soon went from wine to brandy without being able to quench her thirst, and in a few days had an attack of alcoholic delirium — apart from the dipsomania affection — and while suffering from hallucinations of sight and hearing, she believed she saw the dread shadows of the Commune

and heard the musketry. She thought all who met her in the street reviled her. Life became insupportable, and she had been taken to the asylum in toxic delirium after a determined attempt upon it. Discharged in three months, she quietly and soberly resumed her work, and remained in good health for fifteen months. Then an attack like the first one led her to drink for several days and sent her again to the asylum. After her discharge came a further period of perfect sobriety for eight months, followed by a further attack, which ended in deeper mania and more terrible hallucinations. She believed herself about to be cut into pieces, thought she was to be arraigned for assassination, and even falsely complained to the police that a person in her house had killed a child. She was again taken to the asylum and again discharged, and continued in this way for four years with perfectly sober intervals, lasting six, eight, and fifteen months, when she was troubled with neither melancholy nor unnatural thirst. The fourth time she was admitted she had attempted suicide, and on the fifth was suffering terrible anguish from hallucinations in which she believed that dead persons whom she had known when living were talking with her. She thought her mother was not only reproaching her but beckoning her to follow her shade to the regions beyond.

There are some dipsomaniacs who, outside of their periods of impulse, behave at times like common drunkards, and live under the worst possible hygienic conditions. These patients frequently end their lives in chronic alcoholism. But it is always possible to determine whether the person drinks from unhealthy impulse or because he has adopted drunken habits. Impulsive drinking is always preceded by a phase of melancholy, and is characterized by a thirst which causes the victim to drink glass after glass in quick succession; he is filled with shame and constantly makes desperate efforts at reform, hoping, on each occasion, never to fall again. His resolves are pathetic in their perfect sincerity. Our last patient has sent us a note in which his promise never to drink again is written in his own blood.

The mental state of some dipsomaniacs is such, in the intervals of the attacks, that on a superficial examination one would believe them wholly cured; their frequent lucidity of mind gives a misleading impression as to the real condition of their faculties. These appearances have caused them to be considered, even by some of the most eminent chemists, as subject to a sort of partial delirium. But a careful investigation of the patients' lives shows that there is no need of creating for them a special malady, whose chief characteristic is an irresistible passion for fermented liquors. It is always possible, thanks to an attentive observation of pathological facts, to reduce these depraved tendencies to their true generative causes. These are simply hereditary predispositions.

The acts of the dipsomaniac always demonstrate that he is unbalanced. "But they are only insane," say some of the writers, "when their attack comes on." This is an error. Dipsomanics present a host of other weaknesses which make them beings having a tendency to act from perverted instincts (*êtres instinctifs*), and are possessed with all sorts of evil tendencies whose objective point varies according to education and surroundings. The essentially unhealthy nature of these beings should be too clearly understood to need demonstration. Among their most salient impulses are those which lead to robbery, suicide, homicide, and the erotic predisposition. It appears as though chance may decide the particular direction of their morbid disposition, but none escape their logical ending. All are subject to similar impulses, though it may be under different forms. All, or almost all, have insane antecedents; many present peculiarities of mind from infancy. A man, now an ether drinker, states that in childhood he had already made two attempts at suicide, the first at nine years because he had been punished unjustly, the second at sixteen because he had been separated from a friend. When his family vexed him he used to push pins into his body knowing that they feared he might open a vein.

The physical development of the dipsomaniac also pre-

sents certain peculiarities in infancy. They develop too early or too late in the matter of intelligence, and show phenomena of a nervous, convulsive nature; they often develop chorea. It is not rare also to find certain hysterical manifestations, which explains to a certain extent why dipsomania is more frequent in women than in men.

If dipsomaniacs are not always in delirium, they constantly keep one part in the domain of insanity — without doubt the patient is wholly different in his paroxysmal state from what he appears in his remittent period; but many, even in their lucid intervals, conduct themselves like the veritably insane. Most all of them are not only unbalanced but fantastic; with the ever present tendency to sadness, they exaggerate in all things; with few exceptions they are reasoning fools. To interrogate them is sufficient to demonstrate this fact. It is harder to imagine a more dramatic and tempestuous life than it is the destiny of one of these unfortunates to lead. I will give a case in point:

Eugénie M. is a school-teacher of forty-eight; her father was a drunkard, and her grandmother (maternal) drowned herself. Has two brothers in good health. Her early youth was passed without notable illness. At twenty she felt drawn to a religious life, entered a convent, and gave herself with fervor to a monastic life. Was nourished poorly, practiced fasting and abstinence, and slept little, giving up a portion of her nights to self-discipline. The Superior pointed her out as a model. Eugénie's first hallucination soon appeared; she thought herself surrounded with the heads of angels. This soon gave place to a shadowy appearance of one of her religious companions, the extreme tenderness of whose expression affected her so profoundly that she fell into a condition of ecstasy which lasted for some hours. The circumstance naturally created a strong affection between the two, and at times of religious ceremony, when they were unable to speak to each other, they spent hours in looking into each others eyes. But their affection did not remain confined to those straight paths of mysticism

in which it took its rise. I will not speak at length of the details in this matter. They secretly held continual conversation, and after a time Eugénie and the other Carmelite abandoned themselves to mutual caresses, and gave themselves to masturbation. Thirty years have passed, yet Eugénie in relating the circumstances to us, stated that the thought of them, even now, made her almost beside herself. "I have a remorse mingled with shame," she said to us, "which after all gives me a certain kind of pleasure." At another time she said: "You would hardly believe how painful it is to be obliged to reproach myself for the most agreeable souvenir of my life." Following these practices, she fled from the convent one day and looked for a husband. But the man of whom she dreamed was in no great hurry to marry. Then she was sorry she had broken her vows, and this fact, followed by the threatened rupture of her negotiation of marriage, led her to despair and she attempted suicide. Saved from this, she was the victim of further troubles, and then she commenced to drink, though in very small quantities. Married at last, her husband excited her by taking a mistress, and she drank more freely. This condition increased and she commenced to talk injuriously of her neighbors and to create scandal. One day she struck her husband, and on another occasion she struck him brutally in the midst of a large company at a dinner party.

Eugénie gives an excellent account of her condition at that time. At present we observe the continued growth of dipsomania; she feels the irresistible longing; yet, once it is satisfied, may go for many days without the least desire to drink. The symptoms of attack in her are not unlike those of the other. She becomes sad and irritable, has headache, contraction of the stomach, and a choking sensation in the esophagus. She is one of those who mix fecal matter and petroleum with their liquor without bringing about the disgust they hope for. After the suicidal impulses become pronounced, homicidal ideas appear. Sometimes she wishes to strangle her husband. Sometimes even, as she states, the

idea occurs to her to kill persons for whom she has no enmity. Her husband finally became discouraged. Fearing that his wife might not always resist her desire to kill him, he left suddenly for Australia and has not since been heard of. Eugénie, although assisted by her brothers, could not resist the force of her predispositions. One night her brothers became entangled in a crowd who were watching a drunken woman lying in the gutter. It was their sister. Hastily writing on a piece of paper the words: "If you have any heart left, you will, for the honor of the family, disappear to-morrow." One of them put the billet in her pocket. The consequence was that Eugénie forthwith jumped into the Seine. She was rescued, and made many other attempts at suicide, which also miscarried. She was arrested many times, and often wandered for days without eating, but drinking all she could obtain. She was now subject to terrible hallucinations and impulses. The latter took physical form: One day she armed herself with a knife and attacked the brother who had written her the note. This brought her again to the asylum. "I reason well enough," she remarked, "yet no one is more crazy than I am." She easily returned to a lucid interval, became reasonable, and resumed her habits of work. But the inevitable attack occurred. This time she made desperate resistance, prayed with fervor, and passed days in the churches. But the hallucinations redoubled, and one morning she was picked up completely drunk, and lying upon the steps of a church. Since the departure of her husband, Eugénie had been living with another man. This individual always tried to restrain her by force from drinking. At such times the woman would not hesitate to implore the assistance of her brothers to shake off the man, declaring in such moments that he was a perfect stranger to her. Once her attack was over she would write him the most affectionate letters, imploring his pardon and promising not to recommence her habit. On one occasion, after a stay of three months in the hospital, she had a very marked attack.

She felt it coming and purged herself, though with no preventive effect. She was extremely restless and went to bed, but rest was not to be had; nightmares awakened her almost as soon as she had commenced to sleep. A cold sweat covered her and her body grew icy. This condition, counting from the first day of uneasiness, lasted for nearly a week before she felt the need of drinking. Her thirst was very great, and her throat so parched as to leave her hardly enough saliva to enable her to speak. She ran at last to a rum-shop, where she hastened to intoxicate herself, and then took refuge in a partly demolished house, where she spent the night. At dawn she returned home and went to bed for three hours without taking anything but some milk and a little broth. Both wine and beer disgusted her, and it looked as though the attack would prove abortive. Three days afterward, however, the seizure returned in full force; she drank all day, slept in a cellar away from home at night, and on the following day locked herself in her chamber for ten days without drinking a drop of liquor. In one of her attacks she determined not to give way, and accordingly soiled her quart of mixed wine and brandy with fecal matter. She slept awhile, but when she awoke she swallowed the frightful mixture with avidity. In the short time between the good resolution and the full onset of the disease her sufferings had become insupportable tortures. Taste, hearing, and smell were involved, her body burned in agony, and her mind was filled with fears and hallucinations. Her curious experiences have been almost numberless, and they continue to grow worse. At this time she has an incomplete hemianesthesia, with a general weakness of the functions of sensation. The pricking of a pin is almost unnoticed, and the sensation of cold produced by ice water cannot be felt. The right ear seems to be reserved for the constant hearing of all sorts of supposed revilings from those she meets, while the pardons of an offended Deity and the encouragements of friends seem to be heard only on the left side. "It has always been so,"

she said, "even when I was at the convent twenty years ago"; *that is, before she had tasted liquor at all.*

There are two indications for the treatment of dipsomania: first, to combat toxic accidents, and afterward to attempt to modify the course of the disease itself. As to the first, the patient must be protected against himself and from doing injury to others. Elimination of the poison must be favored in every way; the physical forces must be sustained. For the modification of the deeper malady, moral treatment is useful, no doubt, but is insufficient. Distractions, affectionate advice, and the ablest reasoning have little effect during the active period. Hydropathy methodically used, and particularly the cold douche applied upon all parts of the body except the head, give good results. The action of arsenic upon the general nutrition commends it greatly in these cases; and if its use is continued there will be more or less long intercalary periods of repose. My formula is:

℞ Aq. dest. gram. 200;
 Iodii arseniates, centgr. 10;
 Aq. dest. prun. laurocerasi gram. 4. M.

When excitation and insomnia persist, recourse must be had to warm mucilaginous baths — those of elm wood, for instance, — and doses of 4 to 6 grammes brom. pot. at night. Preference should be given to the polybromides if the treatment is to be long continued. Sometimes the patient is deeply depressed, and sulphur baths are indicated. Great benefit will also be derived from vapor baths of warm turpentine, followed by immersion in cold water or an application of the douche. This is one of the most powerful alteratives, and the patient rarely fails to be favorably influenced by so energetic a therapeutic method. Good hygienic treatment and a tonic medication are necessary in using this system of alleviation. The isolation of the patient is indispensable. This will in time attenuate the impulsive predispositions, and if it does not prevent a reproduction of the attacks will delay them. Patients have had attacks of dipsomania with delirium despite the total discontinuance of spirituous liquors. Do not

forget that patients must always be watched for suicidal or homicidal indications. The daily use of bitter drinks is recommended; it calms the desire of the patient for "something stronger."

A large number of medico-legal questions arise in connection with dipsomania. We have seen that these patients have tendencies which are susceptible of interpretation through impulses of a diverse character. Hence, to become completely certain upon this subject, it would be necessary to make a complete medico-legal history of hereditary insanity. But it may be said that all true dipsomaniacs are irresponsible for acts committed immediately before, during, and after attacks. This is on account of their intellectual condition before the crisis, on account of the impulsive character of their actions, and on account of the toxic delirium with which it is often followed. In the eyes even of those who regard drunkenness as an aggravation of crime, the dipsomaniac should be regarded as irresponsible, because he is not master of his desire to drink. As for the wrong, or even criminal acts which they commit in their lucid intervals, we should never forget that they are possessed of an undeniably morbid disposition, that they have a defective intellectual organization, and are in reality beings who have degenerated.

There are over 17,000 inmates in the alms-houses of New York State. Over 100,000 persons are in asylums, and registered as out-door poor. Over half of this number are inebriates, or children of inebriates. Except the insane and idiotic, they are all regarded as sane, and persons who have voluntarily brought this condition upon themselves, and, as such, subjects of punishment and persecution. This is the new undiscovered country of future research.

Inebriety cannot be prevented by throwing the responsibility on the inebriate, and punishing him for this, as if for crime. He is a sick man, and must be taken out of his surroundings and fully quarantined until he can recover.

THE OTTO CASE—A MEDICO-LEGAL STUDY.

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

Peter Louis Otto was tried for the murder of his wife at Buffalo, New York, December 7, 1884. The crime was committed November 14th of the same year. The following facts in the history of the prisoner and crime were undisputed:

The prisoner was thirty-six years of age, born in this country. His father was a German shoemaker, who drank more or less all his life, and at times to great excess. He was a morose, irritable man, of violent temper, who finally entered the army and died at Andersonville prison in 1863. His father, grandfather of the prisoner, was insane and died in an asylum in Germany. The prisoner's mother, now living, was a nervous, eccentric woman; very passionate and irritable. For years she had been quarrelsome, and untidy in her appearance; has suffered greatly from rheumatism, and is a cripple. She is called by her neighbors "half crazy," and has a marked insane expression. Her ancestors in Germany were crazy; both her mother and an aunt died in an asylum.

The prisoner's early life was one of neglect and general poverty in a cheerless home—on the street, in saloons, and in company with persons who frequent such places. He had beer at home at the table, and, from his earliest childhood, drank it with others. At eight years of age he was sent to school. When about ten he was thrown from the cars, and injured in the forehead. He was unconscious, and taken to the hospital, where he was treated for this injury and a dislocated ankle. From this time, up to about fourteen years of age, he went to school, and spent his nights and mornings on the streets and about saloons, living an irregular life. Then he went to work in a stove manufactory, where he remained for seven years, then went

to learn the printers' trade ; three years after gave it up and went into a candy shop. About the time he entered the stove works he began to use beer regularly, and was occasionally intoxicated. He drank at night, and at the period of puberty gave way to great sexual excess, with drink. From this time, up to November, 1884 (when the murder was committed), a period of over twenty years, he continued to drink more or less to excess all the time.

When about twenty years of age, he married in a saloon, and was intoxicated at the time, and did not realize what he had done until the next day, when he became sober. For a long time after his sexual excesses were extreme, and he was often intoxicated. Then his mind began to fail, and he became irritable and abusive. He was stupid at times, then would have a delirium of excitement and irritation, talking violently, and be angry with any one, with or without cause. He frequently quarreled with his wife ; often both mother and wife combined against him, and turned him out of the house. For several years he has been steadily growing worse and more violent and irritable in conduct ; this often depended on the amount of money he could procure for drink. At times he would bring home beer and his mother and wife would join him in drinking it. Nine years ago, while in a torch-light procession, he was struck on the head by a brick. A lacerated wound was produced, with unconsciousness, from which he recovered, but complained of severe head-aches for a long time after. Four years later he was struck on the head with a mallet, knocked down and made unconscious, and recovered, complaining of head-aches as before. Both of these injuries are marked by scars.

For some years past a deep-seated delusion of his wife's infidelity has been steadily growing, also suspicions of intrigue and poisoning by his wife and mother to get him out of the way. He has imagined his wife was alone in her efforts to drive both him and his mother away. The mother owned a small house which they occupied, and he claimed it, and was suspicious that it would be taken away from him. These

delusions and suspicions were very intense when he was intoxicated, but at other times were not prominent. He attributed deep sleep, when intoxicated, to medicines put in the beer by his wife or others. He heard voices at night, out in the street, plotting his death. On one occasion, after a quarrel with his wife, he became depressed and tried to commit suicide by swallowing the contents of a bottle of rheumatic medicine, supposed to be poisonous. On another occasion he placed some fire-crackers under the lounge, firing them with a slow match, expecting to be blown to pieces. His drinking and violence had increased to such an extent that both wife and mother complained to the authorities. He had been arrested six different times, and confined in jail. Once he served sixty days in the work-house for violence and drunkenness. Two months before the murder he was sent to jail, and was delirious and confused, and the police surgeon, Dr. Halbert, was in great doubt whether it was not a case of real insanity.

The judge ordered his confinement that he could be observed a longer time. He had what the physician called alcoholic insanity, but after eight days' confinement was discharged as sufficiently improved to go out again. For a week before the murder he had drunk every night to excess and was, as usual, quarrelsome and very irritable to all he came in contact with. He bought a revolver, and was taught how to use it, giving a fictitious name where he bought it, and greatly alarming the clerk by placing the pistol to his head and offering to shoot himself. The day and night before the murder he drank freely of beer and whisky. On the morning of the murder, he drank as usual, and had an altercation with his wife; was seen to follow her into the house, and pistol shots were heard. Otto was seen to run out through the back yard, running against the door of a house in a dazed way, then walked out in the street, and some hours after was arrested in the store of a friend. He did not seem intoxicated, and talked of getting into a "bad job"—meaning the murder. At the station he was at first very talkative, told many stories of his wife's infidelity, but denied

the crime; said nothing had happened. Later, he was dazed and silent. The jail surgeon found him in the afternoon of the murder in a cell, in a stupefied, confused condition, with no apprehension of the crime, and, although not apparently intoxicated, was nervous, restless, and dazed. The next day this state of mental aberration continued, he talked but little and stoutly denied the crime, saying it was all a conspiracy. His confused, dazed state gradually passed away, and he seemed to realize his condition, but the delusion of conspiracy grew more positive. He believed that a scheme had been formed to keep him in jail so his wife and mother could secure the property. One reason he gave for his wife's infidelity was, that she had done washing for the inmates of a bad house, and that he heard voices of persons out in the yard planning to get in and stay with her, and other more absurd reasons—all without the slightest basis in fact. His suspicions extended to others, whom he believed to be always trying to cheat him. He claimed not to remember any events from a day or more before the crime, until some days after, when he awoke in the jail. He had evidently a faulty memory which had been noted in many things long before the murder.

As in many other cases, the medical testimony given on this trial was a medley of faltering, confused statements. Two physicians thought these delusions and mental defects were no indications of insanity. One man doubted the existence of alcoholic insanity. Another was sure loss of memory could not occur unless dementia was present. Others swore that it was possible for persons to drink as the prisoner had done and not have a defective brain. Alcoholic trance and monomania were denounced as having no existence.

The judge very naturally seemed to ignore the medical testimony, and fell back on the letter of the law, merely asking the jury to discriminate between a mind actuated by revenge and jealousy and one full of diseased emotions and impulses.

A verdict of guilty followed, and sentence of death was

pronounced. An appeal was taken, and a year later I examined the prisoner in jail as to his mental condition. I found him pale and anæmic, with no other indications of ill health. He has had attacks of neuralgia in his head and shoulders from time to time; his appetite, nutrition, and sleep seemed natural. His face was blank and stolid, the eyes were staring and unequal in size. Talked in a slow, hesitating way, and changed with difficulty from one subject to another. He had become very religious since confinement in jail, and read the Bible and prayed often during the day. His ideas of God and heaven were confused and childish. He saw lights on the prison walls, and thought God had something to say to him, and opened the Bible, and the first verse he read was God's message to him. He often heard voices at night, telling him various things; sometimes they were threatening, calling him bad names. Then he heard God's voice telling him that he would not die, but live. These hallucinations of hearing and sight had all a meaning. The day before this visit a flash of light, like lightning on the wall, appeared, and he found an explanation in this sentence from Jeremiah: "Is not my word as a fire, saith the Lord, and like a hammer that breaketh the rock in pieces?" He still thought that his wife was living, and the whole thing was a plot to destroy him. He was very suspicious of every one; thought every person was deceiving him, and no one was true but God. He said all the stories of the murder were false, and that after a time God would bring back his wife to her senses, and she would live with him again. Said he would never drink spirits again, and would like to live with his wife in quietness. He had no concern about the future; was indifferent about the efforts made to stay his sentence. His mental powers, or capacity to realize what was said, were dull and slow. He stared, and asked, with suspicious hesitancy, "What do you mean?" or, "What is that?" He was unable to go from one subject to another unless the subject was often repeated and pressed on his attention. When he came to realize the topic, he talked in a confused, dogmatic way, asking questions

as answers, and expressing great doubts. Recited the lies that had been told him, and inquired how he could believe any one or any thing? He heard voices in the street talking about him at night, and the howling or barking of a dog he thought was the work of enemies, who wished to annoy him. He dreamed of going home and living with his family, and heard God speaking to him through those dreams. He described those dreams with great minuteness, and when laughed or sneered at, turned away with disgust, but forgot it quickly. He doubted his mother and counsel who visited him; was sure they were lying to him steadily. He selected out passages of Scripture and applied them to his case, but without plan or idea, except that God would defend him, and that the Devil would be finally driven out. When pressed sharply to explain his inconsistency, he turned, repeating the accusation with disgust. He was not greatly disturbed or annoyed, and seemed not to remember much that was said to him. When talking of himself, was not boastful of what he had done. The past seemed enveloped in a mist, and the future of no interest, and the present had no anxieties of moment. He saw different colored lights and interpreted them as God's answers or wishes to him. The jailer mentioned his defective memory: of asking for the same thing many times a day, even when it had been brought to him. Of sending for a thing, then forgetting that he had done so a moment after. He had been uniformly quiet in jail, reading his Bible and praying many times a day, and manifesting no concern about anything in particular. A depression was noted where he had been injured on the head.

From these facts I concluded that Peter Louis Otto was insane and irresponsible for the crime he had committed. A summary of these facts would be as follows:

1. Otto had a bad heredity, with no training, and was brought up on the street in the worst mental and moral surroundings. He was ill-nourished, and suffered from defective hygienic surroundings, and also from severe traumas of the head at least three times in his life.

2. He drank beer from childhood. At puberty began to drink to excess, and gave way to great sexual excesses. From this time his life was that of a suicidal dement; constantly growing worse. Long before the crime was committed, he was an alcoholic maniac, on the road to either suicide or homicide.

3. Delusions of his wife's infidelity, so common in these cases, deliriums of suspicion and wrongs from others, great irritability and violent temper, with hallucinations of the senses, constitute a group of symptoms about which there could be no mistake.

4. His conduct after the crime, and the persistence of delusions and hallucinations after a year's residence in the jail, indicated a permanently impaired brain.

5. The crime was a most natural sequel to his life, and although a degree of premeditation was indicated in the purchase of the pistol, yet it was evidently the cunning of a maniac, and not the design of a sane mind.

6. The probability of an alcoholic trance stage in his case is well sustained by all the facts of his defective memory, as seen in jail, noted before the crime was committed, and sustained by his steady denial of memory of the murder or any of its details. The continuous denial of recollection of the crime could not have been planned by his weak mind for any possible gain it could bring him.

7. His irresponsibility was most conclusive from his cloudy, defective brain, and general indifference as to his present and future, and also the delusions of himself and surroundings.

The prisoner continued in the same mental condition up to the time of his execution, May 21, 1886; manifesting great indifference and even coolness up to the last.

The counsel for the prisoner, Mr. E. A. Hayes, deserves the warmest praise in urging the insanity of the prisoner to the last. Finally, a commission of two physicians appointed by the Governor, and designated by the district attorney, reported as follows on his case :

“BUFFALO, N. Y., May 10, 1886.

“We, the undersigned, have the honor to report that in accordance with your request, we have made a careful examination of the condition of Peter Louis Otto, the condemned murderer, as to his mental state at the present time, and since the date of his trial. In the course of this examination, lasting for one week, we have had repeated personal interviews, together and separately, and have taken the testimony of those who have had the most intimate knowledge of him since his confinement in jail, namely: the sheriff, jailer, the assistant jailer, the watch, the jail physician, and his spiritual adviser. We have in this way taken every means to inform ourselves fully as to his true condition. We find no evidence of any physical or mental change having taken place since the time of the trial, which must necessarily have been the case if he were suffering from any form of insanity. He is in good flesh, and in good physical condition. His circulation and respiration are normal, and all of his physical functions are normally performed. He eats and sleeps well, and there is no complaint of any form of illness.

“We find that his mental state is entirely inconsistent with any form of insanity known. And we believe that he is feigning mental disease. We therefore pronounce him, in our judgment, sane and responsible.

“CONRAD DIEHL, M. D.

“WILLIAM H. SLACER, M. D.”

On this report, Otto was executed, May 21, 1886; another victim of medical non-expertness and judicial incompetency. Otto, in the grave, or in an asylum, is of no account, but the treatment of Otto and his crime is of the greatest importance. Psychology protests everywhere against the so-called administration of justice on the theological dogma that inebriety is always a vice and sin. To hang insane, diseased men is to go back to the days of savagery and the punishment of witches as criminals. Society gains nothing, and the progress of human justice is put back by the injustice, law and order becomes a mob rule, and inebriety and wife-murder is increased rather than diminished. The

Otto trial is only another landmark of the low legal standards and psychological levels on which insanity is measured. Two hundred years ago, eminent men of the three learned professions sat in judgment over some poor, insane people at Salem, Massachusetts, and hung them, and have gone down into history as more to be pitied than the poor victims who suffered. It is the same non-expertness that considered Otto, after twenty years of excessive use of beer and spirits, with changed character, habits, temper, disposition, and intellect, committing murder from an insane delusion, as sane and conscious of the nature and character of his acts. Less than two centuries ago, both judges and clergymen urged that witches should be punished as a means of safety to society, and prevention of the extension of this crime. But witches increased, until science finally pointed out the real facts. In the Otto case, both judge, jury, and experts took the same position, opposed by all psychological teaching of science, and the result will be the same. It is a pleasure to note that some of the medical men on this trial saw the real facts; among them were Drs. Halbert, Campbell, and Daggett, who all testified that Otto was clearly insane. The charge that Otto was feigning insanity was not sustained by the facts of his history and mental condition. Such a man might exhibit cunning in some directions, but his mind was incapable of planning and carrying out any scheme of assumed insanity. Both judge and experts started from the mediæval theory that inebriety is ever and always moral depravity, and controllable wickedness, and that Otto as a drinking man should be punished, no matter what the circumstances of the crime were. If crime was committed the punishment should be increased, and to call such a case insane was a dodge to avoid the penalties. It was such views that hung witches and even persecuted persons of different religious faith.

The Otto trial is only another strange, inexcusable blunder of our boasted civilization, in mistaking insanity for wickedness, the injustice of which will react on both the court and the community where it was enacted.

TEMPERANCE IN THE TREATMENT OF THE SICK.

BY DR. MACLEOD, PROF. OF SURGERY IN THE GLASGOW UNIVERSITY.

To those who practice medicine in a great city, it cannot fail to be a source of wonder and regret that so large a number of people use alcohol habitually in excess. A very large proportion of our hospital patients are addicted to such habits, and a very considerable proportion of the accidents and diseases with which we are called on to deal are more or less directly due to such tendencies. The recklessness out of which the accident arises, the complications which follow it, the difficulty of securing a complete and satisfactory, not to say a rapid recovery, are in many cases the direct results of indulgence in alcohol. Many patients are chronic inebriates, whose vital organs have been weakened by long excess, and whose recuperative powers have been sadly if not fatally weakened. In private practice, also, we are often opposed by the occult influence which arises from the same cause. Being carefully concealed from us, it may be long of being discovered, but we yet daily trace its pernicious effects in thwarting our remedies. We perceive the same thing in dealing with the children of intemperate persons. Their ailments, mental and corporeal, not unfrequently take a complexion of their own from the habits of the parents. The low vitality, the stunted growth, the late maturity, the epileptic seizures, the hydrocephalus, and numerous other morbid conditions met with, occasionally, owe the intemperance of the progenitor as their cause. It is now well-known how apt inebriety is to become hereditary, and to beget various forms of insanity. In administering alcohol to the sick, it is important to learn, if possible, what were their previous habits regarding its use. This information is often very difficult to

obtain. A large number desire to be considered very temperate, when, in truth, if they are judged of by ordinary standards, they would be classed as very much the reverse. Men's notions of temperance in this and many other things differ very widely.

In the hospital, we always try to form, if possible, some estimate on this point. Occasionally, in private practice, we are entirely and intentionally misled. There is no more painful feature connected with intemperance than the deceit and shameless deceptions to which it leads. Whenever a patient takes exceptional pains to define to us the exact amount of stimulants he consumes, and when he reverts to it again and again, we should be on our guard against deception. . . . Further, there are a certain number of persons who consult with the very thinly veiled design of getting you to connive at their habits. Very likely they have been blamed at home for over-indulgence, or possibly their own consciences demand to be quieted. They give you a pitiable account of their weakness of body, their feeble digestion, and their mental depression. They have such feelings of "sinking," such flatulence and misery. They cannot eat till they taste "a mere drop," and they commonly quote some distant or deceased practitioner for authority to take the "thimbleful" in which they so often indulge. If you oppose such practices, as you are bound to do, knowing how certain they are to increase the evil, and lead to eventual destruction, the chances are you will never see the patient again, as he will at once discover that you "do not understand his complaint," and will seek the aid of a less scrupulous practitioner.

This leads me to say that an unconscientious and unprincipled medical man may very readily increase his *clientele* by pandering to these tastes, as many who desire the authority and countenance of a medical attendant to pursue their destructive habits will gladly seek his aid. Such success is, however, usually but short lived, and cannot fail to leave a sting of self-reproach in the breast of the practitioner. I know from experience to be the fact, that in the great run

of surgical ailments—in the great majority of those I have dealt with either within or without the walls of the hospital—no aid is required from stimulants; but, on the contrary, these complaints are much better managed without alcohol.

At the moment I address you, I have under my care more than fifty surgical cases, and only one, and she a very weakly woman, with blood-poisoning, is taking alcohol. Among the cases I allude to are many who have undergone serious operations, and many old and feeble people. I mention this to show that, while I resolutely defend the use of alcohol in certain cases, I am but little given to its administration in the usual practice of my profession. It is food, and not stimulants, the mass of patients require to restore them. If food of a nourishing and concentrated kind can be taken and assimilated, that is what will recuperate our patients and prolong their lives. Alas, it is the want of this power of assimilation which baffles us so frequently in dealing with disease, and that is not unfrequently the offspring of previous intemperance.

Once for all, I would add that it is wrong—it is criminal, in my opinion—to employ such an agent carelessly, and without the most scrupulous and conscientious safe-guards against its abuse, and without stopping it so soon as it can be done without. The practitioner assumes a great responsibility when he administers alcohol, especially to one who has not before used it, and he must see that by no carelessness of his shall injurious habits be inaugurated. There cannot be a doubt but that intemperance can frequently be traced to the license of a sick-room, and such a result must be a terrible reflection to those responsible for it. We must bear this in view, and make it clear when the use of the stimulant is to be given up.

Finally, I most heartily subscribe to the opinion, which I am glad to think begins to prevail, that there is no risk whatever in withdrawing alcohol suddenly and absolutely from inebriates. I have long known and practiced this. It is, in my experience, the only hope for their recovery. Half-measures

always fail. Let it be absolutely forbidden in any form and quantity, and though I am not very sanguine as to success in the case of confirmed drunkards, yet for those less hopelessly abandoned there is, by following rigid abstinence, a chance of reform. Nourishing fatty food, sugar, plenty of fresh air, and mental enjoyment, will help to wean the victim from his poison.

A girl was taken before the Paris tribunal charged with stealing a blanket. She pleaded that she was under the influence of another person and could not help herself. In prison it was found that she was in a hypnotized condition, and acted readily under the commands of others, doing anything that was told her. She was examined by a commission of Charcot, Brouardel, and Mollet, who reported that this state came from the use of morphia, suffering, and hunger. That these suggestions from others, acting on an unstable nervous organism, greatly deranged by morphia and other causes, rendered her irresponsible for her acts. She was acquitted.

Toxic idiocy in the children of alcohol and opium inebriates is far more frequent than is supposed. In the history of twenty cases taken indiscriminately, eight were found to come from inebriate parents. Quite a large percentage of these cases come from the use of opium and beer in infancy. The former in the shape of soothing syrup to quiet children who are irritable, and the latter to give them strength. In these cases some state of atrophy of the nerve-centers takes place, and arrests of development from faulty nutrition. In a neurotic family this is a source of great danger.

Three hundred thousand pounds of snuff are sold annually in Atlanta, Ga., according to the *Surgical Journal* of that place. It is all consumed in that section and not exported, and that city is said to be the third largest snuff market in the world.

Abstracts and Reviews.

THE QUESTION OF RESPONSIBILITY.

BY T. L. WRIGHT, M.D., BELLEFONTAINE, OHIO.

It has become a maxim in law that drunkenness is no excuse for crime. The interpretations of phenomena by theology and medicine are undergoing modifications in consonance with the advancement in science and discovery, which distinguishes the age in which we live. Similar interpretations by the law, however, are not so impressible. The movements of the law are necessarily cautious and deliberate. The legal principle which denies to drunkenness any liberty with respect to crime must have its reason in some presumed expediency, in the absence of exact knowledge. For the true principles which underlie the several and distinct varieties in motive and intent, inciting the inebriate in the gratification of his unnatural appetite, are even now undergoing study and analysis. The law has been unable, hitherto, to offer a comprehensive and satisfactory explanation and definition of drunkenness; and its dictum, therefore, that inebriation is no excuse for crime, must be open to suspicion.

It is certain that a man indubitably drunk is not in his right mind, and that he can not, by any power within himself, either mental or physical, conduct himself as he would do when not intoxicated.

It is also certain that his departures from the lines of right reason are fundamental and not frivolous. But drunkenness is a state of mind and body, usually of brief duration. The sober mind has means within itself of studying the nature of drunkenness between spells, as well as observing it in others. It is capable of perceiving that the use of alcoholic liquors will induce a condition of the mental facul-

ties wherein motives and intents are unusual and unsound, as well as beyond volitional control. But the questions arise: Are there not radical differences in the motives which impel to drunkenness? Is not intoxication, very frequently, indeed, the result of the demands of a disease, or of an urgency in the feelings which an attending imbecility of mind is unable to control or overcome? If these interrogatories really foreshadow actual facts, then it must be that there are important exceptions to the proposition that drunkenness is no excuse for crime. For the inebriate may then be not merely irresponsible, abstractly, when drunk, but he may be irresponsible for the imbecility of will which so readily yields to the demands of the neurotic constitution. In the neurotic constitution even slight intoxication is often succeeded by an utter blank in the memory. This withdrawal of the mind from the direct line and knowledge of conscious life implies radical disabilities in the assumption of responsibility for conduct. Drobisch explained clearly the general nature of the law of association in psychology in the language following: Psychology shows that not only memory and imagination, but judgment, reasoning, conscience itself, and, in general, all higher activity and all development of the mind rest upon the association and reproduction of states of consciousness; that this explains also the different variations of feeling, emotion, desire, passion, and rational will. But these explications are supported by generalities that have always an indeterminate character. This arises from their lack of quantitative determination. Whatever, therefore, is conceded or permitted to a congenital infirmity of mind in its relations with the world at large, must also be accorded to a constitutional incapacity in any special direction. The well-defined neurotic or spasmodic drunkard is an imbecile in respect to his desire for intoxication; for in the congenital inebriate, the association and reproduction of states of consciousness neither are, nor can they become, with respect to his special besetment, either normal or manageable.

In general terms it may be said that inebriety is origin-

ally—that is, anterior to its hereditary descent in varying forms—the outcome of very serious bodily injury, but more especially injury to the head. The history of the late civil war abounds in exemplifications of this fact. Certain physical wounds affect directly portions of the brain, or they may withdraw from normal correspondence and relationship with the brain to important parts of the body elsewhere. The means, and measure, and quality of consciousness, through many channels of sensation and association, are thus permanently destroyed. Thus there are produced radical defects in consciousness, which in respect to inebriety prevent those conservative mental operations and associations upon which all higher activity and all development of mind rest. I have said neurotic inebriety is primarily occasioned by some physical injury, possibly in remote ancestry. This includes, of course, such injuries to nervous integrity as may arise from any adequate cause, perhaps not technically, yet in reality—physical, as prolonged grief, great nervous shock, excessive study, protracted and profound disease, malaria, and many other recognized sources of that peculiar state of nervous instability and inadequacy which goes under the general designation of the neurotic constitution. Absence of function begets incapacity to act through sheer debility of nerve, or even through atrophy of substance.

Dr. Livingston, after years of absence amongst the black tribes of Africa, says, that upon coming into the presence of his countrymen he was at home in everything except his own mother tongue. He seemed to know the language perfectly; but the words he wanted would not come at his call. It is difficult to divest the mind of the idea that the inebriate is really capable of mastering his morbid proclivity at will. And that there may be—in view of the lack of quantitative determination in the character of the nervous disability in the neurotic inebriate—certain instances wherein the defect is not overmastering, seems probable. Yet this very qualification may doubtless include innumerable instances in which voluntary restraint is impossible. No man by taking thought

can add one cubit unto his stature. Neither can a man by any process of reasoning or any effort of will change the functions appertaining to physical defect or pathological deterioration into the ways of normal and physiological life.

—*Neurological Review.*

THE HEREDITY OF INEBRIETY.

Dr. Faquet, in a late number of the *Annales de la Soc. Med.*, in France, writes as follows :

“The immoderate use of liquors is one of the main causes of the decrease of population, and of the corruption of morals of human society. With one death of an inebriate the effect of the poison may not be ended, but probably it may have already been inherited by his descendants.

“Physical weakness, epilepsy, deafness, and many other nervous symptoms, are the bodily defects; debility of mind, inertia, impulsive instincts, idiocy, and insanity are the psychological infirmities of the children of drunkards. Neither sword nor starvation have conquered the Indians, but alcohol has conquered and destroyed them. The consequences of drinking were already known to the ancient Greek. Diogenes remarks about a stupid boy: ‘Your father must have been drunk at the time of your procreation.’

“In alcoholism there are inherited dispositions which may be similar to those possessed by the parents, or somewhat changed. Many a child is already born with the disposition for future intoxication, if the parents or grandparents have been addicted to drink. Some children may be free from this hereditary vice, but it is apt to be developed in them at the beginning of manhood. In all countries where liquors are immoderately used, physicians have often met with families, and even generations, in which drunkenness, delirium tremens, and even suicide were hereditary. The morbid germ, which the children of drunkards inherit, does not often appear in early age; on the contrary, young people exhibit a certain prematurity of mind, so that they shine in certain

branches of art and science, and become the pride of their teachers. But just then, when their brilliancy is at the acme of height, a collapse may take place, perverse actions, insane deeds, and abnormal affections appear, and offer to the psychologist a difficult problem. Knowing that the father and perhaps the mother have suffered from alcoholism, the diagnosis of such disorders of the mind will be easier. Persons afflicted with hereditary insanity are not as often met with as those of an eccentric manner, who give the impression of pretended insanity."

THE DISEASE OF INEBRIETY.

Dr. Mann, in a late number of the *Medical Times*, writes as follows: "Inebriety is a disease, probably of certain parts of the brain, resulting from some morbid irritation of the cortical sensory centers, or from special molecular changes in these centers, perverting brain function, a condition markedly hereditary, and evinced outwardly by great nervous irritability or restlessness, unnatural sensations, an uncontrollable desire for alcoholic stimulus, and a disposition to frequent fits of intoxication. There is a departure from a healthy structure of the nervous apparatus, as in mental diseases generally.

"The pathological evidence in favor of these facts was at first slender, has been yearly increasing, and is to-day conclusive and unanswerable. The inebriate is a subject of disease, in which normal function is acting under abnormal conditions, and we should recognize this fact both as to medical or moral treatment. Dipsomania is inconsistent with a healthy discharge of the functions of the brain and other portions of the nervous system. It is a symptom of a morbid condition of some portion of the nervous system, and experience shows us that this disease is the most frequent where diseases of the nervous system are most fatal.

"In the disease of inebriety we have deranged nutrition, which precedes the blood-changes, and the disease arises in

abnormal primary and secondary assimilation. Defective assimilation in this disease gives rise to defective secretion.

“There is an abnormal state of the blood; the blood supply is not sufficient; there is an abnormal condition of the ganglionic or great sympathetic nervous system, and the parts that are to be nourished are not normal. We have a poor state of the blood, and disturbed conditions of life, which are often the cause of the disease of inebriety. We have the subjected symptoms, which relate to the sensations or feelings of the patient as expressed by himself in this disease, and we have the objective symptoms which the physician observes for himself unassisted by the patient. In this disease we should examine with care the digestive system, the circulatory system, the respiratory system, the tegumentary system, and the secretory system. The symptoms of inebriety are three signs of disease which are apparent to either the patient or physician on superficial examination. The different parts of the blood may be affected in this disease.”

ALCOHOL IN HOSPITALS.

Dr. Drysdale, leading physician of the Metropolitan Free Hospital of London, England, lately read a paper before the British Medical Temperance Association, on the above topic, in which the following conclusions were prominent.

1. Alcohol is not a real food, but must be classed among the anæsthetics, in company with ether and chloroform; hence it ought not to be used as an article of ordinary diet.

2. The treatment of fevers by alcohol in large quantities is inferior to the treatment by cold and ordinary diet.

3. There is no clear proof that alcohol is changed into carbonic acid and water in the system; and, at any rate, part of it remains unchanged for as much as twelve hours in the system, irritating the internal organs.

4. Moderate amounts of alcohol neither raise nor lower the temperature, but excite the heart's action, and in some cases, in small doses, less than one ounce gives appetite.

5. In large and stupefying doses, alcohol lowers the temperature.

6. The amount of alcohol administered in various hospitals is so wanting in uniformity, as to show that there is no settled opinion in the profession at present as to its value.

7. It would be well, when alcohol is prescribed in clinical hospitals, that some exact amount of it should be prescribed, and not a varying amount of an alcoholic fluid not analyzed.

8. The London Temperance Hospital experiment seems to indicate that many diseases do well without the use of any alcohol, which previously were thought to require it.

9. Hence, whilst the modesty of science forbids us to say that alcohol will prove useless in any given disease, it seems advisable for patients in hospitals to have that drug administered to them with far greater caution than has hitherto been the case. And it would seem also to follow that all mere dietaries should be free from the routine use of alcohol, which should in all cases in hospitals be distinctly ordered to the patient by his medical adviser.

ACUTE INEBRIETY.

Dr. Campbell, in the *Canada Practitioner*, gives the following case.

Was called to see W. R., aged 42, a grain merchant, at 8 A. M., and found he had had a sleepless night. Was restless and taking, at intervals, tremors and spasms of all the voluntary muscles. He had a furred and tremulous tongue, cool skin bathed in perspiration, cold hands and feet; saw ships sailing; was going to have a great show, at which he would exhibit the now defunct "Jumbo"; sometimes was buying and selling wheat by telephone; occasionally asked for his revolver. Pupils somewhat contracted, no intolerance of light, pulse steady but somewhat rapid, tongue moist, no albumen in urine. He complained of pain in the top of his head, of a boring nature, and asked me to cut the piece out. He has been a steady drinker for five or six years at least,

and drank moderately even before that time. Sometimes drank large quantities at a time. He had a puffed-up, red face, full of acue roacea. Had been from home for six weeks, and it is believed had been drinking hard. Came home two days before, and was in my office pretty drunk at 11 o'clock the night before I was called. He had eaten literally nothing since he came home. Procured sleep with syrup of chloral, followed with potass. bromid. Ordered feet to be put in hot water, and cold cloths to be applied to the head. After sleep a saline purge to be given, and plenty of liquid nourishment in the form of cold beef tea, milk, and raw eggs, with ice to suck—and to be kept quiet in a darkened room. Called during the afternoon, and found him dancing through the house. An old friend had prescribed some whisky—a pint having been used between them—hence the revelry. Was called at 7 P. M., saying that he was worse. The whisky having evaporated, the trembling spasms returned. Treatment as before until sleep had been procured. Four men stayed with him. Was dealing extensively in wheat until he went to sleep. Called in the morning and found that he had a good night, though the medicine had to be repeated several times. Had taken a large amount of liquid nourishment as before. Dr. Elliot was with me and considered that he was doing well. Treatment continued during the day. Trembling spasms were always allayed by the medicine, and the nourishment was retained. A purgative was again ordered. Patient kept quiet. Saw him, with Dr. Elliot, in the evening. Spasms had returned; still complained of the pain in top of his head. Quite sensible in the intervals between the tremors. Was annoyed at our statement that his trouble had been brought on by drinking.

On the advice of Dr. Elliot, added one of Wyeth's pellets (gr. $\frac{1}{4}$) to our previous treatment—eggs, milk, and beef tea as before. We both saw him the next morning. Reported to have had a good night. Symptoms on the whole unchanged. Still complained of pain in a small spot on the top of the head, and also of our diagnosis. Saw him again

at 7 P.M. Found him sitting on the edge of his bed, smoking his pipe. Spoke rationally, but was taking spasms of the voluntary muscles every ten or fifteen minutes, when the bed would fairly shake under him. Symptoms unchanged.

Dr. Scott saw him about 8 P.M., noted the symptoms and watched the spasms. Thought at first that they were partly feigned, but came to the conclusion that they were involuntary. Between spasms he talked sensibly, and still complained of the pain, and complained of the name given to his trouble. Dr. S. told him that his disease had been brought on by drink. The doctor gave as his opinion that he would recover, as there were no dangerous symptoms at present. While the doctor was yet speaking, he took another convulsion severer and longer than any previous one. The head was thrown back, the eyes turned up, the pulse became weak, intermittent, then imperceptible — respiration ceased — he was dead.

Remarks.—(1.) From the manner of death we both concluded that the immediate cause of death was apoplexy, but as no *post-mortem* was allowed our opinion could not be verified.

(2.) That the cerebral hemorrhage in all probability had occurred at the spot where the severe and constant pain had been complained of, and that the pain in question had been the result of severe congestion.

(3.) That the disease from the first was one form of acute alcoholism, with some anomalous symptoms which are not often present.

Twenty-eighth Annual Report of the Washingtonian Home, Boston, Mass.

Three hundred and thirty-five patients have been admitted during the year. Seventy five were treated for delirium tremens. Two cases died of pneumonia during the time.

The following extract from Dr. Day's report gives some idea of its nature, and philosophy of this work.

“During the last thirty years I have treated quite ten

thousand cases of inebriety, many of whom have relapsed, and applied for treatment the second, third, and fourth time; yet I do not remember a single instance where the excuse for relapse was alleged to be the necessity for using intoxicating drinks. Those persons know the utter absurdity of the excuse that there existed any real necessity for the use of the beverage. Even the drinking man, when thirsty, will drink cold water in preference to any other drink. When natural thirst occurs, nature, with her sparkling water, meets all demands of nature's laws.

“But I am met with the statement that man needs something to drink other than water, or at least he demands it. Not if his stomach and nervous system is, and ever has been, free from alcoholic beverages. Why he demands it is because the nervous system has been degraded to a lower level, and depraved by the use of stimulants. His system is not in a healthy condition, and it is base quackery to advise persons to take alcoholic beverages simply because the victim of excess or moderation wants it.

“It is the *poison hunger* which demands intoxicants, and not a healthy desire. In its general character and in many respects it is like *Cretinism*, or the chalk and dirt eaters; and several authors have observed that the pathological condition of children by drunken parents is much the same as cretins. The degeneration which is sure to follow in each case is much the same. The subjects of alcoholic degeneration are found at birth ill-conditioned in various ways. The skin is flabby and cyanosed, and the general anatomical development is defective. There will generally be a fair development of intelligence until the age of fifteen or sixteen years is reached, when epilepsy often develops, and there will be a mental decline to complete idiocy, and before the age of thirty is reached the sad drama is closed by death.

“This condition is more likely to be transmitted by what is termed moderate drinkers than those of an occasional character. With the periodical drinker, although he may go to great excess, there are generally several months between

the paroxysms, and this respite gives the system a chance to resume a healthy tone, while the one who drinks daily (and he thinks he is very temperate, and no one will denounce the drunkard like him) never allows the blood and nerves to obtain a healthy condition. From such persons comes the depraved condition of body and mind.

“In most of the chronic or constant drinkers there are various complications. They are especially liable to pneumonia of a low type, to rapid phthisis, various types of liver diseases, valvular disease of the heart, gastric catarrh, albuminuria (Bright’s disease), and these diseases are frequently caused not only by spirits, but by the use of large quantities of beer. Most cases of what is called *delirium tremens*, a disease with which we have much to do, are from the constant drinker. I frequently meet such cases, where the history reveals the fact that the patient was a very temperate man, who drank but few times each day, and his friends were slow to believe that it was possible for the patient to be afflicted with such a disease. The first stage of this mania is indicated by inability to take food; marked anxiety and restlessness, tremor of the voluntary muscles, furred and tremulous tongue, cool skin which is frequently bathed in perspiration, cold hands and feet, and soft, weak pulse. There is complete insomnia, and the nights are tormented with horrid insects and reptiles, and constant fears of being killed, and all his powers are exercised to escape from his apprehended danger. He has illusions of all the senses. He often attempts suicide in order to escape the danger he imagines himself to be in. Such cases require careful watching and treatment. They usually recover unless there are complications, such as pneumonia or kindred diseases.”

The *Neurological Review*, edited by Dr. Jewell of Chicago, begins with the most flattering auspices and promises for the future. The field for such a journal, and the editorial skill and ability to manage it, are combined, making success assured from the start.

Evolution and Religion. By Henry Ward Beecher. Part II. Fords, Howard & Hulburt, publishers, New York city, 1886.

This second volume contains eighteen sermons on the application of evolutionary principles and theories to the practical aspects of Christian life. This, like the first volume, which we noticed in the last JOURNAL, is without doubt the best presentation of the scientific philosophy of religion that has appeared. The following extract from a sermon on the "Drift of the Ages," indicates that this work should have a place in the library of every scientist and thinker of the country :

"In the first place, the final age, the perfect age, must be an age made up of men that come into life better than the generations do to-day. Men do not have a fair chance. A man who is born with robust health has a better chance than the man who is born an invalid for his father's sins. The man who is born of temperate parents, and bears health in every throb of his veins, has a better chance than the man who is the offspring of a miserable drunkard or debauchee. The man who has a large and healthy brain, has a better chance in this life than the man who has a shrunken brain, and most of it at the bottom. These are the inequalities of condition in this world to-day, but do you suppose that we are going forever to undertake to lift monkeys up to saints? That we shall forever be obliged to bombard animals that have just intelligence enough to direct their passions and appetites? Do you not believe that in the coming time there is to be such knowledge of heredity as shall lead men to wiser selections? And that the world that has learned how to breed sheep for better wool, horses for better speed, and oxen for better beef, will not by and by have it dawn on their minds that it is worth while to breed better men too, and to give them the chance that comes from virtuous parentage on both sides? As goods well bought are half sold, so men well born are half converted.

"There must be a vast change on this subject. We have

not come to it yet, or only here and there in mere scintillations of knowledge, but before the great ripeness comes the race will be regenerated in physical birth. Generations will in the ripe age supersede regenerations. There must be, also, a regeneration of society, for man is so made that he is largely dependent for his education, shape, and final tendencies upon influences that act upon him when he is a child, and that meet him when he goes out from the family. Men under certain forms of government, compressed, misled, are not competent for the things that they would have done if they had been under a purer, nobler, and wiser government. There must needs be a regeneration of government, and there needs to be also a regeneration of business.

“All institutions, governments, and laws, are but organized human nature. Governments and business, notwithstanding all their benefits, are varied with selfishness, full of cruelty, largely void of love. They may restrain the worst elements of mankind, but cannot develop the best. Thus, the human body must be born better, the human mind and dispositions must come into life better, men must come into life through better families, families must stand under better institutions and better governments—under divine laws and institutions; and we can only come to the higher through the imitation of these. But that is a slow work, a gradual work. There are very few pulpits that teach it, or that are competent to teach it, but it must come. It is a great work, it is a glorious work, the fulfillment of which will be the new heaven and the new earth.”

How to care for the Insane. A Manual for Attendants in Insane Asylums. By William D. Granger, M.D. G. P. Putman's Sons, publishers, New York city, 1886.

This is a very practical little work, giving much information, and will be found of great service in the training of attendants. This work should have a place in the libraries of all who are engaged in nursing, and will be read with pleasure by both physicians and specialists.

I. The Mystery of Matter. II. The Philosophy of Ignorance. By J. Allanson Picton. J. Fitzgerald, publisher, 393 Pearl St., New York. Post free, 15 cents.

There exists in our time no such schism between religion and intellect as that which characterized the eighteenth century. On the contrary, side by side with a growing independence of traditional creeds, there is a more marked tendency than the world has ever known before to associate the emotions of religion with the discoveries of science. To those whose only notion of alliance between religion and science consists in the futile compromises of the current schemes of "reconciliation," this may appear a bold assertion. But those to whom the most obvious emotion of religion is reverential awe, and its chief fruits self-subordination, uncompromising truth and charity, will gladly allow that science, as represented by its most distinguished masters, is increasingly affected by the inspirations of the spiritual life. This view of the relations between science and religion is admirably illustrated in the two very remarkable essays named above.

Hand-book for Instruction of Attendants on the Insane.
Cupples, Upham & Co., publishers, Boston, Mass.,
1886.

This work is prepared by a committee of the Scottish Medico-Psychological Association, and is most admirably written for popular instruction. The following is the table of contents: "The body, its general functions and disorders. The nursing of the sick. Mind and its disorders. The care of the insane. The general duties of attendants." The clearness, brevity, and accuracy of its statements commend this work to every specialist, and to any one who would be instructed in the every-day care of mind disorders.

The *Journal of Heredity*, *Phrenological Journal*, *Democrat's Monthly*, *Lend a Hand*, and the *Homiletic Review* are all distinguished in their lines, and may be commended to all readers.

Illustration of Unconscious Memory in Disease: including a Theory of Alteratives. By Charles Creighton, M.D. J. H. Vail & Co., publishers, New York city.

This volume points out the influence of unconscious memory in health and disease. This is shown to be a cause of human action beyond the sphere of conscious life, and beyond the responsibility of our wills. This is another of those most suggestive studies on the border-lands of mind and matter, which will be read with great pleasure by all. We shall make some quotations from it in our next number, and advise all our readers to send to the publishers for a copy of the book.

The *Popular Science Monthly* for June and July presents a most valuable table of contents. Next to a medical journal, this science monthly is almost indispensable for the physician's library. The best thought from the ever-widening fields of science comes as a most stimulating substitute for the studies of a physician; and those who read regularly this journal must be far in advance of others.

The *Scientific American* completes its fifty-fourth volume in June, and may be said to have attained a maturity and solidity of character that commends it to all.

The *Electrical Engineer* is not only a readable but most fascinating journal for all who are interested in electricity.

Dr. Shepard's Turkish baths, on Brooklyn Heights, is the most attractive place to spend a few days, to all who are worn out and who are invalids, and wish to have the value of sea air with a scientific system of baths.

According to a correspondent the grape and wine growing regions of California are not increasing as rapidly as other fruit sections. Last year the grape growing sections covered 150,000 acres, while the orange culture extended over 200,000 acres. Other fruits are more largely cultivated every year. The inference is that the wine industry will give place to other and more profitable labors.

Editorial.

THE RECOGNITION OF THE DISEASE OF INEBRIETY IN THE CLASSIFICATION OF MENTAL DISEASE.

The effort to formulate some general classification of mental disease, taken up by an international committee of specialists all over the world, has brought out the fact that the disease of inebriety is now almost universally recognized. A number of leading specialists have each submitted a plan of classification for the consideration of the committee, and from these are to be selected some general plan which will be adopted as the latest conclusion of science in this field. It is interesting to note the place inebriety is given in these plans by specialists in different countries. Dr. Verga, of the Italian specialists, calls inebriety an acquired psychosis, and divides it into alcoholic and tonic. Dr. Lefebore, of Belgium, places it under the head of toxical alienation. Some German alienists, at a conference at Frankfort-on-the-Main, arranged inebriety under the head of alcoholic mania, and another division called it "those who need watching." Westphal's plan called the cases toxic and delirium tremens. Dr. Steenburg, of Denmark, made a distinct division of these cases under the head of delirium tremens, with subdivisions of chronic alcoholic insanity and periodic dipsomania. Dr. Wille, of Basle, calls these cases psychoses of intoxication, from alcohol and other intoxicants. Dr. Mynert's classification calls these cases toxic, from alcohol and other agents. Dr. Hack Tuke, of England, puts them under the head of manias and chronic deliriums. These are only a few of the different reports that have been submitted by committees of different countries, which will eventually be examined and compared in a general congress. The chairman of the

American committee, Hon. Clark Bell of New York, has invited committees of the leading societies in this country to join in uniting upon a form of classification of mental disease that will be presented to this international congress in the future. The committee from our association is as follows: Drs. Parrish, Day, and Crothers. The American committees will meet some time during the year.

It is a source of great pleasure to realize that at last the fact of the disease of inebriety is being recognized as a form of insanity, and our efforts through the *JOURNAL*, and otherwise, have been influential in the progress of science. Our society may well congratulate itself on opening up a new field, and leading the world's march in the recognition of a new and curable form of mental disease.

THE following is taken from Rev. Dr. Van Dyke's address before the graduates of the Long Island College, at their Commencement, and is a fitting tribute to one of the founders of our association, a pioneer worker who was far in advance of his day and generation, and whose name and work will be monuments in the march of science: "I am sure your hearts will beat in unison with mine, and make much sweeter music than my voice, when I mention the name of Dr. Theodore Mason, one of the principal founders and the first President of the Long Island College Hospital; a man whose hands, I believe, have conferred the diplomas up to this time upon a majority of the graduates of this institution. Wise in council, patient in endurance, indomitable in courage, conservative, and yet progressive, with a wide outlook for the future, he built his life-work deep in the foundations, not only of this college, but of other institutions benevolent and sanitary; a gentleman and a scholar, a Christian and a philanthropist, the friend of labor, and of the poor and the needy; he visited the widows and the fatherless in their affliction, and kept himself unspotted from the world, and the just blessed him."

TEACHING THE NATURE OF ALCOHOL.

The effort to prevent inebriety by teaching in the common schools the nature and character of alcohol and the danger of its use, is a psychological advance of the subject worthy of note. Many States have passed laws requiring this subject to be taught in the schools, and many text-books and an army of lecturers have appeared discussing the scientific facts concerning alcohol. These lecturers are clergymen, teachers, and irregulars in the medical profession, mostly non-experts, and most incompetent teachers of facts, who, from a small basis of truth, draw the most startling conclusions; conclusions that would require a century of study by the most competent men to determine. From the lecture-stand and before a general audience these exaggerations and fictions pass unchallenged. But when they are presented in text-books for purposes of teaching, the effect is bad. No one can doubt the importance of the subject, and the pressing need of information; but no argument or inaccurate statement can benefit or help on the cause. The zeal of earnest, misinformed men and women which betrays them into statements regarding alcohol that are untrue, is an injury, and in time will react and weaken, if not destroy all their efforts. No matter what is believed to-day by the masses, the truth will be recognized and accepted by-and-by.

The text-books to teach alcohol in the schools are already numerous and voluminous. When we consider that all the known facts concerning the nature and action of alcohol can be placed on a single printed page, the dozen or more text-books on the market, presenting this subject in from one to three hundred pages each, must appeal strongly to the reader's credulity. With one or two exceptions the authors of these works, and their peculiar emphatic style of writing, go far to deepen the suspicion of error and non-expert teaching. The conclusion is inevitable, that all present teaching of alcohol and its dangers must be empirical from such works, and the real results will not come from the impressions pro-

duced on the minds of the children, but from the general agitation of the subject, and the growth of a broader conception in the minds of the community. Alcohol, like electricity, will by-and-by become known, and its place in nature determined; then it can be harnessed safely into the service of progress and civilization. It is the profound ignorance of its nature and character that makes it so dangerous and fatal. The effort to teach the danger from the use of alcohol is a movement in the right direction. But unfortunately these efforts, like the movements of the first settlers or squatters of a new territory, will be transient. Occupying the land here and there, they will give way after a time to the real settlers, who will make permanent improvements and develop the country into an organized state. The real responsibility rests on the medical profession, not on moralists and clergymen. It is a scientific subject, that requires a medical training to study and determine. The public will justly turn to medical men for instruction on this subject. It is too early to teach what alcohol is, because it is unknown; but if this empirical teaching will rouse up inquiry to find out the facts, then good will come from it. If the money spent in this direction had been used to equip laboratories and employ competent men to discover the real truths, the cause of temperance would make great strides. What is wanted most are facts concerning alcohol proclaimed and maintained through all good and evil report.

INEBRIETY AND PYROMANIA.

A most excellent physician of a large town in New York State sends us a long account of two cases which have excited great interest in his community, and requests an opinion in the pages of the *JOURNAL*. A, one of the cases, came from an insane ancestry. His mother was more or less insane all her life, and died in Utica asylum. His father was a boatman on the Erie canal, and lived a life of great irregularity, using spirits to excess at times, and was finally

drowned. A was brought up by a miserly and very religious farmer. At twenty he went into a grocery store, and soon after began to drink beer to excess. When twenty-six he was considered a very dissipated young man. He worked when obliged to, and spent his time about saloons and stables. At times he drank quite steadily, and for days would be on the verge of stupid intoxication. He would seem quiet and at times express a strong desire to get even with some imaginary person who had injured him. Then he would recover, sign the pledge, and work for a time apparently quite sober. Two years ago he was arrested on the charge of setting fire to a barn; as the evidence was not strong, he was discharged. A few months ago he was caught in the act of putting fire to a large factory. It appeared on the trial that, in company with a younger man, he had put fire to many buildings about the town during the past year, and had been very prompt and energetic to extinguish the flames. He plead guilty, and gave as a reason that he could not help it, and that it was the work of rum. He did not ask for pardon, but simply deplored his weakness and said it was whisky alone. His accomplice, B, was a German, with unknown parentage, who seems to have been brought up in beer saloons, and finally graduated as a bar-keeper. He was a weak-minded, steady beer drinker, who, when he had drunk too much, was very morose and talked revengefully of resenting some imaginary wrongs. He was considered childish and incapable of committing any great crime. For the past two years he was the boon companion of A, and seemed to be very obsequious and deferential to all his wishes. They would be seen walking out at night, B always conceding to A in everything, and never making any protests. B was arrested with A, and confessed the crime, giving full particulars of many instances in which he both assisted and committed the act under the direction of A. On the examination both stated that after drinking they would walk out to sober up, when suddenly A would suggest they have a little fun, meaning put fire to some property. This they did with caution, but without any

special design as to whose property was burnt. The fire would be started, both would run away, A would return and try to put it out, while B remained concealed at a distance watching it. When it was over they seldom talked of it. B claimed that A had bewitched him, and that he could not help doing what A commanded him to do.

The counsel for the defense contented himself by pleading for mercy on the ground of previous good character; that they had never been known to have violated any laws, and that they were repentant and confessed at once. The judge read them a severe lecture and sentenced them to a long term of imprisonment. A described his impulse to set fire to buildings as the temptation of the devil, which he could not resist, and which possessed him like a cloud, filling every thought; but when the fire was under full headway vanished, and was replaced by a feeling of regret and desire to repair the injury.

These are the leading facts, and assuming them to be true, there was no doubt great injury done in their sentences. A was an inebriate with pyromaniac impulses. He was born a defect, with an insane and alcoholic tendency, and almost any form of insanity might have been reasonably expected. He was clearly unaccountable for his acts, and was the victim of an insane impulse, both born and acquired. B was likewise an irresponsible, defective person. How far these pyromaniac impulses were the growth of disease in his brain or the projection of A's morbid impulses on a mind weak and prepared to receive them, cannot be determined. Both of these men were clearly insane, and punishment in prison is a most dangerous remedy for them. They will come out terribly unfitted for a life of sane act and conduct. They cannot be made sane and well by prison treatment; all those morbid impulses will be intensified and break out in some other direction when they regain their liberty again.

The State is simply schooling them for other and more insane acts. The normal power of self-control will be broken up, and should they live through their long term of imprison-

ment will be prepared for other crimes, and always be dangerous persons in society. Facts and experiences within the observation of every one fully sustain these statements.

MORBID IMPULSES IN INEBRIETY.

A most fascinating field of premonitory symptoms appear in the history of nearly every case of inebriety. The impression grows on the mind of the observer that these symptoms, when better understood, will be found to be more or less uniform in their growth and progress, and to spring from causes that can be understood. Most cases are preceded by, or follow, some condition of mind and body that is alike at all times. In others, complex and most obscure states of mind appear, that are only recognized after the paroxysms occur.

The following case shows a very curious mental condition which precedes the drink paroxysm, and suggests more pronounced states of insanity than was apparent from general inquiry. A, forty-four years old, a lawyer and editor of great brilliancy of mind, came under my care in 1882. He had served with great credit in the army, and began to drink at long intervals to excess after his discharge. He is a paroxysmal drinker, with free intervals of sobriety of from three to twenty months. In meantime, is very actively engaged in literary and professional work. For the first ten years the paroxysm for drink would come to his mind in a rapidly growing desire to feel the exhilaration of alcohol. He would hold a continuous debate in his mind whether he should use spirits or not. Often he would decide against it, then when the mind grew calm again the impulse to drink would come up, pleading and urging reasons for the use of spirits. This debate would go on for a week, then finally he would yield, and after three or four days of excessive use of spirits he recovered, and continued for months free from all desire for it. This mental debate became a season of wretchedness, apparent to his friends, and was marked by a reckless over-

work and state of excitement, literally to get away from this impulse. His wife and physician did everything possible to break up this, but without avail.

Two years before I was consulted, a new phase of the drink paroxysms appeared. Without any warning, and in the best of health and spirits, he would go to a saloon or hotel and drink to great excess for twenty-four hours; then suddenly start up and become terribly excited about his condition; hear voices of warning and accusation, and make great efforts to get away from danger. He would go home, call his physician, and suffer from intense melancholy and insomnia; have gastric inflammation, and be unable to keep anything on his stomach. Then this would cease, and an inordinate appetite would follow. He would remain in bed a week or ten days, and while suffering in mind, have many and varied pains in all parts of the body; also be alarmed for fear of insanity, and expect a sudden eclipse of mind; call in his clergyman and become very earnest in prayer to let this cup of sorrow pass from him. Some little thing would serve as a turning-point, and he would get up as suddenly as he went down, go out and resume work with all his usual calmness and brilliancy. He was offended if his past was alluded to in any way. The onset of these drink cravings was a form of trance state, in which all sense of responsibility and duty seemed to be suspended. His memory of what he did was not clear, but at the time he drank in a precipitate way, and gave as a reason that he could not help it.

These paroxysms have continued up to the present time, two or three every year. The drink period is longer and the recovery is also longer. His mind is more sensitive, and these drink paroxysms often seem to start from some little cause; as, for instance, the sight of a drunken man, some little irritation from any source, as bitter words, sudden excitement or sorrow. It would seem when the mind reaches a certain stage, a moral paralysis comes on, and he is the victim of the drink impulse until it is exhausted, then his paralysis lifts, and his danger and situation come into view.

Another curious fact is noted, that these little causes are inoperative and make no impression except at such times, and his friends can only judge of their approach by the length of time which has elapsed since the last drink period. His mind is very acutely sensitive to the danger of another drink paroxysm, and he resolves and pledges himself to stop, and makes every effort to prevent their recurrence. When these times come on he forgets all these efforts, and all advice seems lost, and the efforts of both wife and friends are lost. In a few hours he awakens to the situation, and his alarm and fears are morbid. If a clergyman or friend should be in prayer at this time, he joins in the faith that his sudden change is the answer to prayer. Should a dose of medicine be given, or a word be said, he attributes to them the same power. But this faith dies out after a time and is lost in other views.

He is still in business, and able to work with his accustomed skill, but he is less buoyant and cheerful, and, like all others who drink, is confident he will recover by his own will, and has the usual delusion of great loss of character in going under treatment in some institution.

WHEN an inebriate suddenly develops mania which continues for some time without cessation, some head injury or sunstroke will be found in the history. If the mania is preceded by a stage of depression and melancholia, the prognosis is grave. If the mania comes on gradually and seems to be dependent on the spirits used, yet keeps on when spirits are removed, serious trouble may be anticipated. If the mania goes away and returns again without any external cause, some state of physical exhaustion produces it. If the mania is violent and destructive, more debility will follow than if mild and delusive. Deliriums of grandeur and power are not grave where they are transient, but when they grow in intensity and duration, grave lesions of the central nervous ganglia are indicated. The manias of inebriety should always be studied with great care.

INCREASE OF INEBRIETY IN HOT WEATHER.

The hot waves which follow each other during the summer months, register their duration and intensity in the police courts, station-houses, and hospitals of all large cities by the sudden increased number of inebriates who come under observation. A sudden rise of the thermometer brings more drunken men to the station-house, and more acute intoxication is noticed on the streets. Why this is so is not clear. Why should the nerve and brain debility of inebriates seem more easily affected by extreme heat? Why should alcohol have more rapid action, causing pronounced narcotic effect? Why should the inebriate use spirits more freely at such times? These and many more inquiries await an answer from the scientists and future investigation.

One view of the subject should be practically recognized everywhere. *First*, the great danger of confining intoxicated persons arrested on the street in hot weather, in close, badly ventilated cells; such cases are in great danger of heatstroke. Narcotized with alcohol, and thrust into close, stifling air — all the favoring conditions are present, and the person is found dead next morning in the cell, or in a state of deep stupor from which he dies later. The real cause was not the intoxication, but the heatstroke from the close air of the cell. Close, hot cells should never be used for the purpose of confining intoxicated men in hot weather.

Second, in a number of cases, drinking-men suffer from partial sunstroke in the street or saloons, and are taken to station-houses, as simply drunken men. They are placed in cells, receive no care, and die. They may be temperate, and, feeling bad, take a glass of brandy for relief, fall into a state of coma, the real cause being the sun or heat-rays; but from the alcoholic breath they are judged to be intoxicated and taken to the cell, only to have an increase of their injury and die.

Another class of cases, far more common than is supposed, are those who, after a partial sunstroke, take a single glass of

spirits, become delirious, and are called "crazy drunk." They are roughly taken to the station, and, perhaps, hit on the head, with no other idea than that of willfulness, and next morning are dead, or are taken to the hospital, and supposed to have meningitis, from which they die. The real cause was the policeman's club, and hemorrhage from traumatism.

Another class drink ice-water, or soda compounds, to excess, then, to relieve the distress from these drinks, take brandy or whisky and become delirious. They are arrested, and thrust into a cell like the others, and if they do not have a heatstroke suffer from injury in their delirium by striking their heads against the walls. Policemen have no other standard except the alcoholic breath for determining the state of the person.

An instance came under my observation, of a man, poorly dressed, who was overcome by heat and exhaustion, and was given a glass of whisky by a kind-hearted storekeeper. He became delirious, was taken to the station, and from thence to the hospital, where he died a few days later. The autopsy revealed a fractured skull and a ruptured artery, which came from the struggles in the arrest or self-inflicted injury in the cell.

Third, judges who administer so-called justice to these poor victims, often assume that this sudden increase of inebriates demands increased severity of punishment; and the wrong of arresting every one indiscriminately and sending them to station-houses is still further increased. Justice is outraged, and the burdens of the tax-payer increased, and the danger to life and property made greater by recruits to the dangerous classes—classes diseased and incapable beyond recovery, yet treated as law-abiding citizens and held responsible.

The medical men in every town should insist that all men arrested during hot periods for supposed intoxication should come under medical care, and be examined carefully before they are thrust into cells. The community should be taught that the increased number of acute inebriates in hot weather points to ranges of physical causes that

require study, and can not be treated by policemen or police judges. Hot cells in the ordinary station-houses are sources of danger that should be avoided. The delirious or comatose inebriate who is placed in such cells over night is practically murdered. The chances of escape from heatstroke and traumatism are far less than the hope of recovery. The skill to correctly determinate the condition of these acute inebriates who are arrested in hot weather is far greater than in ordinary insanity, and should not be trusted to policemen and non-experts. Here is a field for the ambitious physician who would discover new ranges of physical causes, and point out methods of prevention of the greatest practical importance.

WE have received a long, bitter appeal from Dr. Evans, to give an opinion on a case in which many medical men have differed. The case was that of a lady lately confined, and nursing an infant who seemed healthy. For some neuralgia or malarious complication, she was given morphia and spirits in sufficient doses to be quite stupid for some days. In meantime, the child, who was nursing her, had convulsions and became stupid and died. The diagnosis seemed to rest between tuberculous meningitis and opium poisoning. Questions of fact in science can never be settled by acrimonious debates and sharp personalities. It would be more profitable to read some of the literature on this subject, and find that many cases of this character have been reported, also that the best authorities point out this danger in nursing-women, and warn the practitioner against the use of opium in any form to such cases.

The narcotic called *Hopsine*, reported to be a new principle of hops, has been found to be a preparation of morphia concealed with an extract of lupulin.

Inebriety precipitates the system into premature old age. Fatty and chronic interstitial degenerations come on. Both mind and body take on all the symptoms of age and decline.

Clinical Notes and Comments.

INEBRIETY FROM TEA.

Dr. Slayter, in a late number of the *Lancet*, writes of a case of delirium in a girl who chewed large quantities of tea. It appeared that masses of tea leaves had lodged in the bowels, and the delirium was in some measure dependent on the irritation and reflex action which followed. Trembling delirium, and delusions of injury from others, gave it a strong resemblance to delirium tremens. The amount of tea chewed daily was over one pound. The patient recovered by the use of free cathartics and the withdrawal of the tea. In 1881 I saw a boy who had delirium and trembling that had existed at intervals for two months. The fact that his father had died an inebriate seemed to be a sufficient reason for his symptoms in the minds of his friends. It was ascertained that he had for years drank large quantities of tea. Having been employed in a tea-store, he had chewed it freely. He was literally a tea inebriate. He had inherited an inebriate diathesis, and the early and excessive use of tea was a symptom of it. He had all the symptoms of one who was using alcohol to excess. He recovered, and a year later used coffee to great excess, until he became unfit for work; then was under medical care for a time, recovered, and finally became an opium-taker. Another case came under my observation in the person of a little girl twelve years old, the daughter of a patient under my care for inebriety. She had gradually and steadily become excessively nervous. Could not sleep, had muscular twitchings and delusions of fear; would burst into tears, and complain that she was going to be turned out into the streets. She heard voices at night, and could not keep still. She also imagined that her father was being burned. It was finally found that she was a tea inebriate, and both

drank and chewed it at all times and without any restraint. A physician consulted me about a singular stage of trembling and mild delusions which had appeared in a family of three old maids living alone in the country. It was found to come from excessive use of tea, and to be tea inebriety. When this was stopped they recovered. My observation leads me to think that these cases are not uncommon among the neurotics. They are of such a mild character at first as to escape special observation, and hence are supposed to be due to other causes. Such cases, after beginning on tea, take other drugs, and become alcohol, opium, or chloral takers, or develop some form of neurosis, which covers the real and first causes.

ANY comparison of the results of treatment in insane asylums with that of inebriate asylums brings out some very positive evidence in favor of the latter. Of five thousand cases under treatment at Binghamton and Bay Ridge ten years ago, over thirty per cent. are now temperate, and a large per cent. of this number are occupying responsible positions, have charge of property and estates, and are active business workers in their communities. Compare this with the history of five thousand insane who were discharged ten years ago as cured or benefited, and not ten per cent. can be found to-day who are producers in active life. Practically when the insane are removed to an asylum the causes of insanity are not removed, but when you remove the inebriate to an asylum many of the active causes are removed. In the diagnosis and treatment of the inebriate you have the coöperation of the patient. Not so with the insane. The insane recovers slowly, because he cannot reason on his case; the inebriate recovers more rapidly because he can reason and adapt himself to the new circumstances and conditions of life. Inebriate asylums are always more practical and will do far more towards restoring men to the ranks of producers than insane asylums.

DR. TURNER.

CLINICAL STUDY OF A CASE OF INEBRIETY.

A young man possessing rare gifts of mind, an only son, in many respects the counterpart of his father. They were both professional men of ample means, and with but little to think of, except how best to enjoy life; and, of course, each had his own ideal of what constituted enjoyment. The father was an extremist in religion of the transcendental order, and seemed to dwell in an atmosphere that imparted to his inner sense the most exquisite delights, and when not ranging in invisible spheres, and communing with unseen friends, he was intent on securing converts to his faith; and especially was he anxious to enlist the gifted mind of his son in the same pursuits with himself. The son, on the other hand, could not adopt his father's ideal, though he was envious of his ecstatic flights, and determined to avail himself of the intoxicating and bewildering effects of ardent spirits, hoping thereby to arouse, if possible, similar ecstasies to those of his father's mental state. His judgment could not accept the religion of the father, though he thought he discovered that its realm was, to a great degree, within the scope of a lively imagination, and that by stimulating his own powers he might occupy the same field, and enjoy similar fellowships and fancies.

Both parent and son were alike in temperament; the bodily health of each was good, and on more than one occasion, both in my presence and in the presence of each other, were earnest and sincere in argument and appeal to convince me that the other was insane. The son conceived the father to be a monomaniac on the subject of religion; and the father believed the son to be insane, because, not accepting the dogmas of his transcendentalism, he obtained enjoyment from the bowl. The brain of one was disturbed by a faith which inspired his conduct to a degree, and in a manner, to warrant his being classed with those who

"Are drunk, but not with wine,"

and who

"Stagger, but not with strong drink."

The brain of the other was so far athwart its balance as to believe he could substitute the intoxicants for a religious faith, and draw from their inspiration similar delights and enjoyments. By unreasonable methods both sought to realize what they could not possess in a normal state, or could not obtain by reasonable means. The recompense to each was in harmony with his tastes and with the means employed to indulge them.

These men occupied the border-land between sanity and insanity, for a season. They kept pace with each other in concurrent lines, during several years, each following his own course to its end. Occupying separate homes was among the early signs of domestic dissolution, and the sequel of the son's career was a permanent lesion of the brain, requiring a care-taker for the remainder of his life.

The natural outgrowth of his father's vagaries was a gradual but continuous loss of mental poise, and a corresponding diminution of worldly fortune. Both of them, from a common impulse, that was purely psychical, sought happiness through channels that were alike familiar and congenial with their tastes, but leading to one and the same result. The son reveled in an artificial atmosphere, the product of alcoholic intoxication. The father delighted in a rapturous communion with a counterfeit world, which was brought within his reach from beyond our own sphere, not by the poison of alcohol, but by the toxic wand of a bewildered imagination. The brain was intoxicated in both cases, and yet neither was an inebriate. The father exhibited psychical, and the son physical symptoms of intoxication.

DR. PARRISH.

DR. CLOUSTON of Edinburgh Asylum, Scotland, writes: "I am safe in saying that no man indulges for ten years continuously, even though he was never drunk in all that time, without being psychologically changed for the worse. And if the habit goes on after forty years, the change is apt to be faster and more decided. We see it in our friends, and

we know what the end will be, but we cannot lay hold of anything in particular. Their fortunes and work suffer, and yet we dare not say they are drunkards, for they are not. It all depends on the original inherent strength of the brain how long the downward course takes. Usually some inter-current disease or tissue degeneration cuts off the man before he has a chance of getting old. I have seen such men simply pass into senile dementia, before he was an old man, from mild, respectable alcoholic excess, without any alcoholism or preliminary outburst at all. And I am sure I have seen strong brains in our profession, at the bar, and in business, break down from chronic alcoholic excess, without their owners ever having been once drunk.

DR. OGLE, the superintendent of Statistics of the Registrar-General office in England, in a late paper on the mortality of physicians brought out the following startling facts: "The annual mortality of medical men in England has been increasing since 1880. Compared with other callings, this mortality was found to be very high. Among the causes of death, alcoholism or inebriety was more frequent among medical men than among the general people." Thus the annual deaths per one million people are one hundred and seventy-eight medical men from alcoholism, to only one hundred and thirty deaths from this cause, in the general population. In almost all the causes of death, the mortality of medical men was greater than among other classes.

The *Johnson Revolving Book-Case* is one of the most elegant and useful articles of furniture that can be put in the office or library. It is practical, cheap, and durable, and would be a most acceptable present to a clergyman or physician.

VALUABLE REMEDIES IN INEBRIETY.

The remedies advertised in our pages are very near specifics in most cases of inebriety and its allied disorders. In our experience *Horsford's Acid* is excellent in the beginning of treatment, where the stomach will bear an acid, and later, when the case has recovered, as a drink its effects are marked. The *Lactopeptine Compounds*, by the *N. Y. Pharmacal Association*, especially those combined with iron, bismuth, strychnine, and other remedies, can be used in all cases with the most satisfactory results. *Colden's Liquid Beef Tonic* is invaluable in cases of great exhaustion and debility, and can be used in the early stages of these cases with great benefit. *Wheeler's Tissue Phosphates* are valuable, after the acute stage of inebriety has passed, to build up and restore the system. *Maltine Preparations*, by the Maltine Company of New York and Yonkers, being extracts of malted wheat, oats, and barley, combined in many cases with various drugs, is an excellent combination. We have used the *Maltine plain* and the *Maltine Cascara Sagrada*, the latter for constipation and deranged bowels, and most heartily commend it. The *Bromidia Compound* of Battle & Co., St. Louis, is a combination of narcotics that is not excelled, and is a remedy that should always be in readiness for emergencies. *Beef Peptonoids* and *Coca*, prepared by Reed & Carrick of New York, is another of those nutrient stimulants that are so valuable in cases of exhaustion from inebriety and opium taking. The *Coca cordial*, by Parke, Davis & Co., has the same action, and as a coca preparation will be found indispensable in those cases of border-land disease. *Fellows' Hypophosphites* acts promptly as a stimulant, and in all of these cases of debility of brain and nerve organization can be used with the most satisfactory results. The *Lactated Food*, prepared by Wells, Richardson & Co. of Burlington, Vt., is found in our hands of much value in the low grades of chronic inflammation, following from excessive use of alcohol. Compared with beef tea it seems it is far superior as a rapid stimulant, and should be used in all cases of great exhaustion. We shall in the future make a note of some comparative studies with this and other foods.

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ALCOHOL ON THE RESPIRATION.

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Seventy-three years ago the distinguished chemist and original inquirer, Dr. William Prout, made some most interesting and valuable experiments on the various conditions which influence the discharge of carbonic acid gas by the lungs in breathing. In the course of his observations, Dr. Prout was much surprised to find that the quantity was much diminished after he had taken porter with his dinner, while the reverse was the case when he took only water. After repeated experiments, the fact was established that alcohol, in its various forms, has a constant and a very marked influence in diminishing the quantity of carbonic acid in the respired air.

Several important researches on the same lines have been undertaken by practical chemists in later times; but to Dr. Prout must be accorded the honor of initiating this inquiry, and of carrying it sufficiently far to supply most valuable and trustworthy data to elucidate the history of the action of that most mysterious spirituous agent in the animal economy. It

were vain to dwell on what might have been the position of humanity in relation to the terrible alcohol question at this day, had this fact and its true significance been recognized in 1813, and upheld as a beacon light from that day to this. Of this much we may be sure, that much of the learned and labored disquisition on the benignant influence of alcohol, which has been inflicted on these later ages, and which goes on under full pressure to this present hour, would never have been heard, the contest which brave and enlightened men have so long and nobly upheld against the drinking usages of society, and the disease and desolation and death which follow in their train, would have been more effectively sustained, and would have had more decided and conclusive results than we can yet boast of, and, what is of more importance than aught else, the medical profession would not have been disgraced and degraded by the pseudo-science and specious fallacies which have been so liberally presented in maintaining the usefulness of alcohol as a supporter of life and a remedial resource in disease, men of high standing in the profession would not have hazarded their reputation for scientific precision, on such flimsy arguments as have been often so confidently and complacently adduced, had Dr. Prout's sagacious and scientific conclusions been before them. That this precious and signally instructive fact in the history of alcohol, with practical bearings on human well-being of the most urgent importance, and which had been revealed to us by an observer so enlightened and trustworthy as Prout has been proved to be, should have been so overlaid and buried, as Carlyle would say in the rubbish heaps and dust whirlwinds of the past, as to have been almost wholly lost, is truly difficult to explain.

It is a sad illustration of the truth that when facts conflict with prevailing prejudices, they are pretty sure to be ignored, and, unfortunately, in this case, the seductive character of the material has given extensive currency to the prejudice that people are benefited by the use of alcohol, and that it deports itself as a salutary agent in the system; and this

prejudice is not only deeply ingrained in the vulgar and unthinking portion of society, but it largely pervades the theories and practices of the medical profession.

The more famous chemist, Liebig, followed Prout at an interval of about twenty years, and his name also stands prominently associated with the alcohol question, but in such contrast to that of Prout as is painful and humiliating to contemplate. Liebig has not left us a single observation of value on this subject, but he has flooded the age with ingenious and plausible hypotheses, under which most mischievous fallacies as to the influence of alcohol in the living economy have received extensive circulation, and have become deeply entrenched both in the popular and professional mind of the times, apparently almost beyond eradication: while the grand demonstration of the true action of alcohol by the patient and painstaking and unpretending investigator, tracing out the secret and unsuspected working of the insidious spirit, has been allowed to lie almost unheeded, noticed only by a few sympathetic seekers after truth. The truth according to Prout, has been practically ignored, while the specious fallacies of Liebig have had universal acceptance, have been as widely swallowed as the dangerous and deluding agent they were intended to commend. Such is too often the fate at once of the flatterers, as of benefactors of humanity, *veritas vincit*, sometimes very slowly. A remarkable reference to these two chemists by Dr. Marshall Hall, in 1837, came recently under our notice. Marshall Hall had to fight a hard battle for the acceptance of the results of his original investigations on the nervous system by the profession, as all discoverers of great truths have had to do, and he keenly resented, in words more plain than pleasant, the opposition he received. The present, he says, has been too justly designated the age of medical degradation, when members of our profession shall be really and fully imbued with all its literature, they, and it, will take the station which is due to them. But there are those who actually boast that they never read! that is that they are

without literature; that for them, Prout and Liebig have labored and written in vain. The result is that our profession is indeed in a state of degradation. We fear that we can only intensify rather than mitigate, which would have been a much more agreeable task, this severe censure; for we have to point out that the labors and writings of Prout, which require some reflection and study to appreciate, have been neglected and laid on the shelf, wholly lost to the cause of temperance, while the baseless and arbitrary assertions, as they are characterized by one of his own countrymen, with which Herr von Liebig has a peculiarly facile talent for propping up his conclusions, dazzling and bribing his public withal, have been received as gospel truths, and have been retailed in vindication of most discreditable recklessness in the employment of alcohol.

Dr. Prout's whole inquiry is of the greatest interest and importance, as illustrating the extreme caution and carefulness which he brought to the investigation of a new and strange subject, for we must remember that it was undertaken in the very early days of pneumatic chemistry, a department of science in which subsequent investigators have added much to our knowledge. But as a great base-ment fact, second in importance to none, in the great campaign against alcohol, of which we have not yet seen the end, the paper of Dr. Prout should be republished in full and widely distributed, so that no one, especially in the medical profession, could undertake to speak on the subject without being confronted with the facts put on record by that distinguished and enlightened authority. In the meantime we must be content to present in the shortest possible compass, the observations which directly bear on our present subject, and we shall endeavor to place the facts in such a light that both friends and foes to the temperance movement may read, mark, learn, and inwardly digest their significance. Prout's observations were extended over a period of weeks, and the experiments were made every hour, and sometimes oftener, during the day and occasionally during the night.

The first step in the procedure was to determine his normal or health standard, and after careful observations, Prout found the mean for the twenty-four hours, viz.: 3.43 per cent. of carbolic acid gas in the respired air, the maximum being 4.10 about noon, and the minimum 3.30, which prevailed during the night. The effect of rest exercise (bodily and mental), was noted, and some interesting results are recorded.

On the immediate effects of taking food, Dr. Prout remarks: The effects observed from food have not been remarkable, and apparently little more than to keep up the quantity to the standard, and sometimes to raise it a little above. Certainly never to depress it below, unless I took some fermented liquor, and then it was always depressed, as will be seen immediately. Abstinence from food for twenty-one hours, was found to depress the quantity of carbolic acid very little below the usual standard. We quote Prout's own words as to the effect of alcohol. He says: "Alcohol and all liquors containing it which I have tried, have been found to have the remarkable property of diminishing the quantity much more than anything else that has been made the subject of experiment. This was so unexpected on my part, that I was prepared to meet with the reverse. I was first led, however, to suspect the accuracy of my opinions by observing that when I took porter with my dinner, the quantity was always reduced much below the standard, the reverse was the case when I only took water. This induced me to make some experiments on the subject, and their results were such as fully to persuade me that alcohol in every state, and in every quantity, uniformly lessens in a greater or less degree, the quantity of carbolic acid gas elicited, according to the quantity and circumstances under which it is taken.

"When taken on an empty stomach, its effects are most remarkable; in this case they appear to take place, and the depression to be greatest, almost instantaneously; after a short time, however, the powers of the constitution appear to

rally, and the quantity rapidly increases ; then it sinks again, and afterwards slowly rises to the standard. I have generally observed this sort of oscillation when the quantity has been suddenly and greatly raised or depressed from any cause, and I have been ready to account for it by supposing that the sudden and great exertions of the animal powers required to counteract the effects of a poison or other injurious cause operating, made them, as it were, overact themselves. Upon a full stomach, as after dinner, the effects of vinous liquors are more slow, but no less sure and remarkable: I have even thought them more permanent, but this might arise from my having taken a larger quantity than I chose to do on an empty stomach."

As long as their effects are perceptible, so long is the quantity of carboic acid gas emitted, below the standard. The results of Dr. Prout's experiments are presented in twelve tabular statements ; of three experiments only, we present the most striking details.

Hours of Observation.	Observed Quantity of Carboic Acid. Percentage in Respired Air.	REMARKS.
P. M.		
1.15	3.85	Before dinner.
2.25	3.55	Twenty minutes after dinner.
3.55	3.60	
4.55	3.60	
A. M.		
11.40	4.00	Before taken wine.
P. M.		
12.10	3.00	Five minutes after taking 3 ozs. of wine.
1.25	3.10	Twenty minutes after a walk and dinner.
3.00	3.00	
3.30	3.10	
3.55	3.00	Ten minutes after taking half a pint of wine.
4.30	2.70	Very strong effects of wine, vertigo, etc. This is the largest point to which I have ever seen the quantity reduced.
5.00	2.90	
8.05	3.60	Here the effects wore off. Frequent yawnings, and a sensation of having just awoke from a deep sleep.

9.30	3.30	Standard resumed five hours forty-five minutes after having taken wine.
NOON.		
12.00	3.90	
12.30	3.60	Five minutes after taking 1 oz. of diluted alcohol.
12.50	3.45	Five minutes after taking 2 ozs. of diluted alcohol.
1.20	3.40	Five minutes after taking 3 ozs. of diluted alcohol.
2.15	3.35	
2.45	3.30	This shows that even in divided doses which have been supposed to injure the stimulating effects of alcohol, it still acts by diminishing the quantity of carbonic acid.

We desire that the marked effect "almost instantaneously" produced by small doses of alcohol, reducing the exhaled carbonic acid by one-fourth, be specially noted, and also the prolonged depression (nearly six hours) which attended what would be regarded as a very moderate quantity of wine. The depressing effect of small and repeated doses Dr. Prout has pointed out, and it is very noteworthy.

"In the annals of philosophy" for 1814, Dr. Prout presents a second paper in continuance of this subject, in which he mentions with special satisfaction that Dr. Andrew Fyfe, of Edinburg, had been prosecuting the same inquiry which he had just made the subject of his inaugural thesis. Dr. Fyfe had followed very much the same lines of inquiry as Dr. Prout. Wine, he found, reduced the quantity of carbonic acid from 8.5 per cent., which he had found to be his standard quantity, in one experiment to between 2 and 3 per cent., and in another, to 5.75 per cent. He found also that on the day after a much greater quantity of wine than usual was taken, the quantity of carbonic acid, by repeated experiments, was as low as above stated; with less wine the quantity was considerably reduced, though not so much as before.

In a paper on the phenomena of sanguification, in the same work for 1819, Dr. Prout refers to his own and Dr. Fyfe's researches, and in a *résumé* of the causes which depress the elicitation of carbonic acid, he says: "The greatest decrease experienced was from the use of alcohol and vinous liquors in general, especially when taken on an

empty stomach, whatever diminishes the powers of life, as low diet, etc., appears, from Dr. Fyfe's experiments as well as my own, to have the effect of diminishing the quantity."

With great reluctance we must leave our readers to draw their own references from this wonderful revelation of the secret doings of alcohol. But we are most unwilling to part with this interpreter of Nature, this guide, philosopher, and friend without a shout of triumph over such testimony, from such a witness on such a subject. Has the stern logic of truth ever read such a lesson to men and the times we live in? That alcohol in all its forms is always and under all conditions a depressor of vital energy; that its vaunted power as a vital stimulant is a mockery, a delusion, and a snare.

But we must forbear, and hasten to gather up some additional evidence, some of it from most unwilling witnesses, to complete, as we may be able, the grand superstructure, of which the foundation has been so nobly laid by William Prout. Nearly thirty years elapsed before this important inquiry was resumed; but the classical work on respiration, by Vierordt (Carlsruhe, 1845), was worth waiting for. It represents a most extensive research, embracing numerous series of experiments on his own person, 600 in number, and extending over a period of fifteen months. In a few words Vierordt condenses the results of his experiments on the action of alcohol. He says: "As Dr. Prout (and Fyfe, we must add) has already, I, also, have found a considerable decrease in the elimination of carbonic acid after the use of spirituous liquors. The mean of four observations showed that the carbonic acid fell after taking from one-half to a bottle of wine very quickly (*wahr schnell*) from 4.54 per cent. to 4.01, and retained through one to two hours the latter value. Thus the absolute amount of carbonic acid is remarkably lessened, viz., by about one-eighth. This influence shows itself during digestion, as the elimination of carbonic acid after meals taken with wine is far less energetic than after meals without wine. Digestion is delayed when spirituous liquids are taken with the meals." He further remarks,

“Prout, of whose excellent observations I could hardly dispute a single one in the long succession of my experiments, points to this: that lively agitations of the mind cause an increase of carbonic acid.” The late Dr. Carpenter did not contribute any new observations on this subject, but he was deeply interested in the alcohol controversy. On our present subject he says (writing in 1858): “That the presence of alcohol in the circulating current does interfere with the processes to which the functions of respiration is normally subservient, appears from the fact, which has been verified by many observers, that its introduction almost immediately causes the arterial blood to present the venous aspect.” And again “The introduction of alcohol into the blood has the effect (as has been determined by the careful and repeated experiments of Drs. Prout and Vierordt) of occasioning a considerable diminution in the percentage of carbonic acid in the expired air.”

Of the inevitable and very serious consequences which must attend this restrained respiratory action, Dr. Carpenter speaks very forcibly. He says: “As the channel by which decomposing organic matter in the blood is chiefly eliminated, is the respiratory process, it will most powerfully favor the action of zymotic poisons on the body, and if there be anything certain in medicine, it is the fact that deficient aeration of the blood, by whatever cause induced, does exert such an influence. Further, it may be stated with confidence, that the tendency of the habitual use of alcoholic liquors is to induce a state of the blood exactly resembling (so far as this point is concerned) that which is brought about by imperfect ventilation, bad sewerage, noxious emanations, etc., namely, to contaminate it with the refuse generated in the body itself, whose due elimination is checked no less effectually by the presence of alcohol in the circulating current, than it is by constantly shutting up the doors and windows of our apartments, or by heaping together a mass of putrefying rubbish in our cellars, or by damming up our sewers and causing them to overflow into our kitchens, or by any other

similar approved means of causing the fever-germs (and a great many germs besides fever-germs are now recognized) to take root and flourish in our systems."

In 1849, M. Hervier and St. Layer, presented to the French Academy of Sciences an exhaustive and valuable memoir on the exhalation of carbonic acid in health and disease, or rather under physiological and pathological conditions. Among many most interesting and most important deductions, is the statement that the use of alcoholic drinks diminishes the carbonic acid exhaled, and, also, that the inhalation of ether and chloroform produces the same effect. It is further stated that the air expired by young persons contains a larger proportion of carbonic acid than that exhaled by adults. In connection with this last observation we submit the statement that for equal weights, children of nine or ten years of age exhale nearly double as much carbonic acid as adults. We can thus explain the greatly intensified effects of alcohol upon young persons. The more recent observations of Boeker (Bonn, 1854) confirms the previous evidence of the effects of spirituous and fermented liquors in impeding the proper functions of the lungs in eliminating carbonic matters from the blood. His researches were made with great care, and were conducted through upwards of sixty experiments upon his own person. He lived as usual, and seven or eight times a day, took a teaspoonfull of spirits of wine. This was continued for six days in succession. The effects of wine were also subjected to observations, from one and one-half to two and one-half bottles daily of a white rhenish wine, or a red wine from a Burgundy grape, were taken alone or with food. In both cases there was a diminution of the carbonic acid expired. The alcohol diminished not only the absolute quantity of carbonic acid exhaled by the lungs, but also the relative proportion of it in the products of respiration, and the augmentation which accompanies the period of digestion was materially lessened. Boeker calculates that when using alcohol, he excreted daily 165-744 cubic centimeters less

than his ordinary quantity, and he proved that the want of action in the lungs was not compensated by any increased action in the intestinal canal or the skin. Boeker extended his observations to the action of beer, the effects of which on the respiration were found to be the same as those of pure spirits. After fourteen days' use of four or five pints daily of German beer, one-third of the strength of Bass, he examined the condition of the blood and he reports some interesting particulars. He especially notices a much increased proportion of the pale unnuclated globules, and these Boeker holds to be defunct bodies, no longer capable of absorbing oxygen, and he infers that this increase of solid matter in the blood, in beer drinkers, is no evidence of increased vital powers, but merely a retention of partially effete materials.

(To be continued).

IN the excellent work published by J. H. Vail & Co. of New York city, entitled *Unconscious Memory in Disease* by Dr. Creighton, some very suggestive ranges of thought occur that bear on the philosophy of inebriety. He shows that memory is a general function of all organized matter. That impressions are stored up and let loose again under the influence of some powerful emotion, and disease is a habit contracted from the repetition of abnormal impressions memorized and made permanent. That errors in diet and drink affect the nervous mechanism of the body, and produce tropho-neuroses, hyperæsthesia, followed by anæsthesia, impaired power of movement and control of the body. The effects of alcohol leave a constantly accumulating store of tissue memories, which permanently impair the brain and nerve centers, and incapacitate them from healthy action.

THE world wants clear, authoritative facts on the nature and character of inebriety, and not the confusing, contradictory, uncertain theories which are spread out in papers, books, and sermons.

ALCOHOLIC NEURASTHENIA.

BY EDWARD C. MANN, M. D.,

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That neuropathic decay and degeneracy of brain power is often due to alcohol, no observant physician will deny. That it is the duty of the family practitioner to see, that as far as practicable, healthy brains and vigorous nervous systems are transmitted to descendants is equally indisputable. The abuse of alcohol, and conjoined with this, the abuse of tobacco and sexual excess, is responsible for much of the increase of the neuropathic diathesis which eventually terminates in insanity and hereditary degeneracy of brain and mind. Alcoholic excess in an individual, which may perhaps do him personally no further harm than to set up a curable state of neurasthenia or nervous exhaustion, is a tremendous power for evil, a morbid force, which starts in his children a neuropathic diathesis which for two or three generations may result in epilepsy, dipsomania, imbecility, and every grade of mental unsoundness. The marriage of two persons, one of whom use alcohol to excess, means simply the founding of a family with a tendency to brain degeneracy. The neuropathic diathesis which the children born of such a union will have, is liable at any time to develop into positive mental unsoundness. It is very problematical if the children with an alcoholic neuropathic diathesis will grow up to come under Judge Edmunds' definition of sanity: "a sane man was one whose senses bore truthful evidence; whose understanding was capable of receiving that evidence; whose reason could draw proper conclusions from the evidence thus received; whose will could guide the thought thus obtained; whose moral sense could

tell the right and wrong of any act growing out of that thought, and whose act could at his own pleasure be in conformity with the action of all these qualities. All these things unite to make sanity."

Alcohol cannot supply a growing organism with the chemical element of nerve repair, and the young, therefore, should never touch it. In later years alcohol is the most dangerous thing imaginable with which to spur the brain and nerves as fast as they feel the necessity for something to antagonize the influence of mental or physical overwork. Many brilliant men and women go to pieces every year because they rely on alcohol instead of rest and change.

Some eminent English physicians a few years ago, wrote a few articles endeavoring to show that moderation in drinking was true temperance. This somewhat seductive doctrine may hold good for England; it does not, in my opinion, for America. It is rare in England to see the premature decrepitude and nerve degeneracy and breakdown met with in our country. We live faster and have more causes of nerve disturbance than the English people. There is no such ceaseless bustle and din of business in England as here. They have more time for recuperative rest to brain and mind, and do not suffer from so much wear and tear of brain and nerve as does the busy American. The Englishmen rests more and longer, and therefore gets well repaired, and he also lives more in the open air, and therefore does not suffer from overstrain, but has a vigorous, well-poised nervous system as a rule. In this country, and more particularly on the Atlantic coast, the stimulating nature of the climate and the extremes of heat and cold, result in the production of a very sensitive nervous organization. Add to this, overstudy when young, or educational pressure unwisely applied to delicate children, and we see, as a result, too much brain and spinal cord, and too little physique and a very susceptible nervous system in both men and women. Let such men and women, with exceptional quickness of intellect and exceptional delicacy of nerve organization, lay down for themselves, as a rule of life, that moderation in the use of

alcohol is true temperance, and we can but tremble for the nervous system and mind of the next generation. To such persons, the daily use of a moderate amount of alcohol will inevitably, sooner or later, confuse and injure the finer operation of the brain and mind, and result in a certain proportion of the number thus using alcohol moderately daily, in the disease of dipsomania. The victims of this disease now drink, not because they choose, but because they have developed a craving for alcohol which has mastered their will and which they cannot resist ; a condition which may be acute, periodic, or chronic : generally periodic.

Another proportion of moderate drinkers will go through life apparently uninjured, if they happen to have inherited particularly good nervous systems, but their children will pay the penalty ; while some will progressively retrograde and become typical inebriates. It is decidedly the exception where an American is a moderate drinker, that both he and his descendants escape unscathed, and the reason for this we have explained.

We come now to speak more particularly of that form of neurasthenia or nervous exhaustion which, personally, we have so frequently seen as the result of alcohol. We have never, in a somewhat extensive observation of these cases, treated the alcohol question otherwise than one of purely scientific inquiry, and all facts stated are those legitimately deducible from the cases which we have seen as a physician, and studied in their relation to the hygiene of the nervous system and mind. The over-worked business or professional man finds that he can maintain an habitual system of over-exertion of the nervous system for a longer time with the assistance of alcoholic stimulants than without them. Instead of the rest he should take, he prolongs the term of over-exertion by the daily repeated application of stimulus, expending more and more of the powers of his nervous system, and preparing for a more complete nervous prostration at a later period. He then suffers from a sudden failure of mental and bodily vigor, shown by deficiency of power of

continued mental exertion, depression of spirits, want of appetite, enfeebled digestion, and a whole train of nervous symptoms. There is failure of memory and of mental energy generally. When the patient has no occasion to exercise his mind, this symptom of failure of memory may not attract his attention, but if he has, he soon finds that it is simply impossible to do what he once could. He cannot fix his thoughts, and it is an effort to follow up any train of thought consecutively. Wakefulness is another marked symptom, and a patient now under my care cannot sleep at night, he tells me, unless he takes whisky at bedtime. Of course he was put at once under treatment that obviated the necessity of this. The depression of spirits amounts often to melancholia, and there is very frequently a great irritability of temper. There is an intermittent craving for alcohol, which temporarily makes the patient feel better, but which leaves him suffering more than before. There is a lessened control over the bladder. The locomotive power is lessened, and the patient is easily tired. There is marked inactivity in the sexual functions. There are inequalities in the circulation. The hands and feet are cold, while the head is hot. The patient looks prematurely old. There is a tired feeling, feeling of weight at the back of the head and neck, and vertigo is very frequent. The patient is unduly emotional, and the eyes fill and the lips quiver in a person who previously had good control over his feelings. The patient becomes breathless and faint very easily. Epileptiform symptoms may be present, very frequently all that is noticed, being fits of unaccountable sleepiness, followed by forgetfulness or weakness or faintness with numbness or tingling. There may be transitory hemiplegia. There is a lessened tolerance of stimulants, so that a very small quantity produces intoxication.

Our patient suffering from alcoholic neurasthenia, must stop alcohol at once. Upon rising in the morning, he should take, fasting, one drachm of Warburg tincture, should take a cold sponge bath with subsequent friction with a Turkish towel, and should discard too much meat from his diet list.

Electricity in the form of central galvanization I find very useful to improve the nutrition of the central nervous system. The bowels should be carefully regulated. Wakefulness should be combatted by taking prolonged warm baths at bedtime, of half an hour duration, with a cold towel wound round the head, followed by the administration of from a pint to a quart of milk, which by giving the stomach work to do draws off nervous irritation from the brain, and directly induces sleep, doing away with the necessity for alcohol or drugs at bedtime to overcome the insomnia. Rest is imperative. The patient should leave his business and spend as long a time as he can in an invigorating mountain region like the Catskills, at an altitude of about 2,000 feet or 2,500 feet above the sea level. In this way, if stimulants are entirely stopped, the lost vigor will be restored to the brain and nervous system, the patient no longer having to rely on the delusive support afforded by alcoholic liquors.

If we have written somewhat strongly upon this subject, it is because we feel strongly. The nervous and mental deterioration, the result of alcohol, is on the increase, and is most painful to witness. The ready writer, the bright and witty talker, the man of natural ability, with a powerful memory and a gift of ready application, has the higher mental faculties in constant operation, and he is the man above all others who should never touch alcohol. If he does, he soon finds that his mind when unaided by the stimulus becomes barren and unproductive. That man is in a very dangerous position who finds that only under the influence of his accustomed dose of alcohol, can he command his intellect, for this control is only a temporary one, and this deceptive health is replaced by pallor, pain, and distress, and a generally miserable condition which can only be relieved by alcohol again. It is this abnormal condition of the centric nervous system set up by the use of alcohol that is essentially the disease we call alcoholic neurasthenia, which if not antagonized by the proper means leads to degraded intellectuality, and even to mental unsoundness.

Abstracts and Reviews.

DE L'ALCOOLISME ET DE SES DIVERSES
MANIFESTATIONS.

Considérées au point de vue physiologique, pathologique, clinique et médico-légal. Par Dr. F. Lentz, Médecin Directeur de l'asile d'aliénés de l'Etat à Tournai, Bruxelles, 1884.

This work extends over 600 pages and treats of alcoholism in all its ramifications. The author deals in general considerations of the physiological action of alcoholic drinks upon digestion, circulation, the heat of the body, respiration, the blood, the kidneys, and the nervous system. He acknowledges that this last is the most difficult to determine. New researches are indispensable to establish the true nature of the action which alcohol exercises upon the whole nervous system. He endeavors to prove, however, that alcoholic stimulation which is usually believed to infuse fresh energy and vigor into the brain and nerves is only factitious, that it very indirectly reaches the nervous system itself, and exercises an indirect influence upon the motor, sensory, and intellectual functions. In fact the stimulation of the nervous system is regarded as the consequence of cerebral excitement, the complex nature of which may be difficult to establish, but is analogous to the effect of good news upon the mind. Passing over these sections which refer only to ordinary intoxication, we note the description of maniacal excitement due to alcohol, which contains a good sketch of the prodrome, course, and termination of the attack. Lethargic sleep lasting from twelve to twenty-four hours may completely put an end to the outbreak of fury. The most characteristic circumstances here is the complete re-establishment of the previous mental activity without the persistence of

any morbid manifestations. Homicide or suicide may have been attempted during this attack of acute alcoholism, and striking cases are given in illustration. Closely allied is convulsive intoxication, the stress of the attack falling on the motor system. The attack is sudden, being preceded by little more than irritability, precordial pain, and headache. A graphic description follows of the contortion, dangerous violence, and loss of consciousness, the manifestations of mental activity being mainly hoarse cries and inarticulate sounds. When aroused from the profound sleep which terminates the crisis, the patient retains no memory of the storm through which he has passed.

Dr. Lentz treats of the abnormal state of intoxication which occurs among the insane, imbeciles, and epileptics. It is laid down as a general principle that all who fall under the great class of mental maladies present a greater susceptibility to alcohol, and display in their symptoms of intoxication special characters which carry it beyond its ordinary type. The general paralytic is usually very susceptible to alcohol, in fact he can rarely absorb a sufficient quantity to permit the successive symptoms of intoxication to follow their normal course. A true maniacal excitement is the principal symptom, and often in the first stage occasional vagabondage, quarrels, thefts, assaults, and even murders. As the author observes, it is strange to see this same general paralytic who bears alcohol so badly, in the fully-developed stage of the disease able to bear great excesses and yield with difficulty to intoxication, when dipsomania results from and constitutes the first symptom of general paralysis. Dr. Lentz insists, with reason, that the intoxication of the weak-minded is the most abnormal and generally the most dangerous. With regard to the dipsomaniac he scarcely knows, paradoxical as it seems to say so, what true intoxication is during the active stage of his disorder; it consists rather of a continual, semi-maniacal agitation with rambling and incoherence. Certain authors, as we know, hold that intoxication is always due to a pre-existing chronic alcoholism.

Granted that it is rare with those who only occasionally take alcohol, still glaring exceptions do not permit us to regard it as an absolute rule; in the exceptional cases there is a neurotic predisposition which explains the origin of the abnormal intoxication. This altogether special susceptibility to intoxicating beverages which may so easily lead to a maniacal attack, nearly always depends upon a constitution marked, in the neurotic, by a tendency to delirium and hallucination in the course of various disorders, especially fever, great mobility, excessive susceptibility to atmospheric influences and to diet, and exaggeration of vaso-motor excitability under the action of the slightest mental impression. Hence, breathlessness, palpitations, blushing, precordial anxiety, vague uneasiness, rapid and facile appearance of the same phenomena under the influence of drink, excessive irritability of the nerves and senses to a continuous state of irritation and emotion; increases of reflex irritability, and tendency to convulsions. In the psychopathic constitution there is great excitability, instability of the moral sentiments, frequent change of humor without cause, inconstant sympathies and antipathies, too vivid an imagination, and rapid and exaggerated but very momentary, voluntary determination. Dr. Lentz is one of the few medical writers who point out that the neurotic or psychopathic constitution, although usually hereditary, is not necessarily so, but may be acquired by causes which profoundly affect the cerebral and nervous functions, as traumatism, typhus fever, and other zymotic affections, meningitis, moral shocks, etc. From these causes as well as from heredity may unquestionably arise a tendency or susceptibility to alcohol which gives rise to many forms of pathological intoxication.

In diagnosing maniacal from ordinary drunkenness it is necessary to bear in mind that the former is marked by sudden outbreak, while the latter pursues a regular course in its commencement and progress, a certain period of continuance and then decline. In the former, movements are well directed and remain under the control of the will. In the

latter, motor action is not long maintained and soon becomes feeble, the drunkard having little power of resistance. Hence the childish conduct of ordinary intoxication, and the violent and well-combined acts of the pathological form; in one there is restlessness and progressive relaxation, in the other the display of extraordinary force. The mental condition is fundamentally different. The maniac, although unable to give an exact account of the situation, will recognize his entourage, will understand the question asked of him, and may even reply sensibly, there being, therefore, a certain conscious intelligence which renders the patient all the more dangerous. There is, however, in that variety of pathological intoxication which assumes a convulsive form, an almost complete mental stupor, and in this respect it is more allied to the grave forms of ordinary inebriety. Pathological intoxication is marked by profound sleep, and as the quantity of alcohol has been insufficient to cause general disorder in other organs its disappearance is complete. Ordinary drunkenness, although usually followed by profound sleep, is not marked by the elimination of alcohol, the effects of which on the system continue for a considerable time. Its victim awakes fatigued, vertiginous, or dyspeptic, while the maniacal inebriate shows no signs of indisposition. Lastly, the patient, on recovering from maniacal or convulsive intoxication, remembers nothing.

This rarely happens after a drunken bout. Attacks of acute alcoholic mania, arising in the course of chronic alcoholism, are often confounded with pathological intoxication, but the former is characterized more especially by terrific hallucinations, emotional paroxysms, furor, and stupidity. Unfortunately, clearly defined as these distinctions seem on paper, the several forms are considerably mixed in practice.

Dr. Lentz has to confess that the different forms of abnormal intoxication are not connected as yet with a definite pathology. Pathological intoxication is only a transitory insanity, having a special origin, and yet alcohol is often so

little taken into the constitution that in most cases it does not offer the general character of alcoholic delirium. Of hallucination there is not a trace, the change is moral sensibility, so characteristic of really alcoholic disorder, is wanting. It is, indeed, as far removed on the one hand from the group of true alcoholic mental disorders, as it is on the other from ordinary intoxication. The term pathological intoxication is, therefore, employed to mark its relations with alcohol, and at the same time the differences which separate it therefrom. In discussing the relations of intoxication and insanity, the author points out in a philosophical manner, the resemblance and the difference between the two. The analogies between general paralysis and the effects of alcohol are minutely described, and the author adopts the opinion of Bayle, that drunkenness, if permanent instead of transitory, would be nothing else than general paralysis. The pathological analogy lies not only in the organ affected, but in the region namely, in the pia-mater; and the cortex, as also in the nerve cells, and the morbid evolution which mark the two affections. It does not, however, follow that intoxication is a state identical with general paralysis.

The medico-legal questions arising out of intoxication, are clearly stated by Dr. Lentz, both in regard to ordinary and pathological drunkenness.

It may be remarked, in passing, that the simulation of drunkenness at a stage which would carry with it complete irresponsibility is so difficult, that the author has not found a single case on record.

The author's great point in regard to the responsibility of drunkards, is that they are punished for their drunkenness and not for the crime which they commit when intoxicated; just as a man guilty of homicide, through carelessness, is not punished for the homicide, but for the carelessness. The drunkard places himself voluntarily in a condition of transitory insanity, knowing beforehand the risks to which he may expose himself, and therefore he must take the con-

sequences. Lentz alike rejects the German law, that intoxication diminishes responsibility, and the English law, which regards it as an aggravation. It does not seem, to us, quite consistent to say that a man is punished for his drunkenness, and not for his crime, and yet maintain that he must be punished more severely if he commits an injury during his intoxication.

The author holds, that if there is complete amnesia there can be no responsibility, but this again seems hardly consistent with the foregoing. The condition of drunkenness in which hallucinations are present forms a transition between normal and pathological intoxication, and, in the author's experience, the hallucinations are not, strictly speaking, such, but illusions always excited by external objects. On either supposition, however, the individual should be regarded as irresponsible. As the pathological intoxication already described is a well-characterized insanity, the question of responsibility rests on a correct diagnosis alone.

But we must pass on to the chapter which describes chronic alcoholism, the definition of which varies from the inclusion of all the consequences of the prolonged use of spirits to that of an affection slow and chronic, caused by alcoholic excess, and characterized anatomically by inflammation, sclerosis, and fatty liver, and clinically by physical, moral, and intellectual changes. The author, however, prefers description to definition. He treats, first, of chronic visceral alcoholism, with local disorders, hepatic, etc., or with general disorder, as cachexia, and, secondly, of cerebro-spinal chronic alcoholism, which is divided into four forms; namely, alcoholic degeneration, hallucinations, simple dementia, and alcoholic dementia, of which forms the complications are pachy-meningitis, epileptic convulsions, cerebral congestion, softening, sclerosis, and paraplegia. These disorders are detailed minutely, and cannot be summarized, but the reader will find them worthy of study.

Innumerable as are the phenomena of cerebral alcoholism, they preserve the same type; namely, enfeeblement,

wear and tear of mind, and dementia. The first form, the foundation of cerebral alcoholism, is designated alcoholic moral degeneration; the term dementia being scarcely appropriate, seeing that the intellectual weakness is often the least apparent symptom, and it is well remarked that the term moral brutishness would be more appropriate were it scientific enough. This form usually characterizes the first stage of alcoholism, and may never advance further, and is almost automatic in character. More commonly the second form, that of alcoholic hallucination, quickly follows, and constitutes a well-marked emotional and sensorial disorder.

The third form consists of simple alcoholic dementia; there is real mental weakness, intellectual and, especially, moral, wear and tear of the faculties, and this state may remain uncomplicated with other morbid manifestations. More frequently, however, it is only transitory, and rapidly ends in the last form, alcoholic dementia, with paralysis, which must not in the early stage be confounded with true general paralysis, although it nearly always terminates in it. Anæsthesia, which, as every one knows, is much more common than hyperæsthesia, is usually present at an advanced period only of chronic alcoholism.

Objects fall from the hand unless the patient looks at it, and patients can prick or wound themselves without feeling anything, while tickling the arch of the palate or uvula excites no reflection.

Affections of the sight, diplopia, polyopia, dyschromatopsy, became marked. The ophthalmoscope does not fully explain the phenomena of amblyopia and amaurosis. Mysterismus or tremor of the eyes is frequently present.

The pupils are often uniformly dilated and react slowly to light; their inequality may occur without any symptom of real paralysis. Affections of hearing occur in chronic alcoholism more frequently in the direction of anæsthesia than of hyperæsthesia.

Disorders of smell and taste are well known to arise. Motor troubles appear mainly under the form of cramp and

tremor, chiefly in the hand and arm, then the organs of speech and the lower extremities.

Paretic and ataxic phenomena pass insensibly into complete paralysis. After death the dura mater is frequently the seat of false membranes. Dr. Lentz clearly distinguishes the changes which may be found in the arachnoid and in the pia mater and the brain itself, some being due to the direct action of alcohol, and others being only secondary. The reader will find them carefully described as also the changes in the spinal cord.

The cases reported are of great value, in conjunction with the commentaries of the author, in illustrating the several forms of inebriety already mentioned, and deserve careful study. The symptoms in that form of chronic alcoholism which the author designates expansive alcoholic general paralysis exhibit all the symptoms of the latter.

To diagnose alcoholic general paralysis the previous existence of symptoms of intoxication must be proved ; the simple abuse of alcohol is not sufficient. There may have been attacks of delirium tremens, or disorders of motility, or moral dementia.

There is no certain sign to indicate the transition from chronic alcoholism to general paralysis, and even the autopsy may not decide the question, for adhesion of the membranes, which is the chief pathological appearance, may be so limited as to escape observation. When alcoholic general paralysis follows upon pre-existing alcoholism, optimism does not appear to constitute the symptoms of transition, but rather intellectual enfeeblement. Ideas of grandeur, when present, assume a different character in the two affections — in general paralysis they are more infantile and silly, in alcoholic paralysis more definite and coherent, and there are frequently at first ideas of jealousy, followed by delusions of persecution and general hallucinations.

In general paralysis the motor trouble is scarcely perceptible at first, the tongue and articulation being alone affected. In alcoholic paralysis the fingers and toes are at

first affected, extending afterward to the elbows and knees. Another point is that in ordinary general paralysis the motor trouble is rather ataxic, while in alcoholic paralysis it is more of a paralytic nature. In the former the movements are irregular and jerky, while in the latter they are marked by weakness. In the former the patient is active-restless, often petulant, and may be firm of gait; in the latter he is feeble, heavy, and trails along with difficulty. The paralytic will raise a weight which the alcoholic would be scarcely able to move; the one will shake hands firmly, while the other's pressure is scarcely felt.

The tremor in the general paralysis type is frequently absent or scarcely appreciable early, and when present is limited; in alcoholic paralysis, on the contrary, it is ordinarily generalized, and obvious at first sight, the body, including the head, being affected. The fibrillar tremors of the lips and orbicularis palpebrarum and elevator oris are observed when the patient makes the last effort. The tremor of the tongue is much more marked in the one than in the other form, but the difference in the hesitation of the speech is still more striking, for in alcoholic paralysis the speech is tremulous in consequence of the tremor of the different parts which come into play in attempting to speak, while the hesitation of the genuine paralytic is an ataxic disorder due to defective association, as much physical as mental. When the alcoholic paralytic wishes to speak all the labial muscles tremble, and verbal expression is the result of a painful muscular effort. When, on the contrary, the general paralytic speaks the words come easily, except at intervals when one or other muscles, or even the mind, makes a false step. Again, on the side of sensation, dysæsthesia is almost constant in alcoholic paralysis, while it is rare in ordinary general paralysis, for we rarely meet with formication, pain, cramp, and numbness in general paralysis. Dizziness, vertigo, dimness of vision, muscæ volitantes, buzzing in the ears, are constant symptoms in the one disorder, and rare in the other. The mental symptoms also differ, especially as to the form of de-

mentia, mental weakness being nearly always marked in the expansive form of the insanity. In alcoholic paralysis the dementia occupies the first place, and presents special characters, the delusions being less pronounced and often transitory. Intellectual inertia and moral atrophy predominate, but in spite of this the patient seems to preserve more lucidity and consciousness of his condition. M. Lentz agrees with the opinion of a French physician that general paralysis distinct from alcoholic influence exhibits much oftener than is supposed persistent hallucinations of sight and hearing.

But sensorial troubles in alcoholic paralysis present a peculiar aspect. These are rather visions than auditory hallucinations. They are accompanied by anxiety, agitation, dreams, nightmare, and insomnia, while on the contrary, the hallucinations of general paralysis are much more disseminated, and are less persistent. In alcoholic paralysis the delusion seems to be directly derived from the hallucinations; in general paralysis it is more spontaneous and the hallucinations do not at all modify it. It must be borne in mind that M. Lentz is speaking only of the expansive variety of alcoholic insanity, the rarest of all, so much so that Voisin is able to write that ideas of grandeur are rare in this form of paralysis. It would, perhaps, be more correct to say that they are not exclusive or predominant, but are very often mixed up with ideas of persecution of a hypochondriacal kind, with ideas of magnetic influence, proceeding from the remains of sensory hallucinations or disordered sensations.

Under the head of complications of chronic alcoholism a careful description is given of pachymeningitis, three successive stages of which are recognized, but our space will not allow of citation from this important section of the work. We must also pass over the valuable observations on alcoholic epilepsy.

After some remarks on spinal alcoholism, comprising the hyperæsthetic form of Leudet, and the paraplegic of Wilks, the latter of which is considered better established than the former, M. Lentz enters upon the study of progressive causes

of chronic alcoholism, the laws which govern, and the relations between its different manifestations, in other words the pathogeny.

The triple action of alcohol upon the vascular system, general nutrition, and the formative process is fully detailed.

An interesting sketch is drawn of the analogies between chronic alcoholism with insanity and inebriety. Clearly the mental weakness, as also the paralysis of mind and body due to alcohol, present all the characters of ordinary dementia. In that form of alcoholic insanity characterized by hallucinations, the enfeeblement may not be so evident, but its epiphenomena remove it from the more clearly marked forms of insanity of which it presents, in other respects, the leading symptoms. There remains the first form, described under alcoholic degeneration and drunkenness. A man becomes a drunkard, properly speaking, when excesses have produced that moral degradation of which the most advanced state constitutes Dr. Lentz's first form, namely, alcoholic degeneration, and not merely the vicious condition of him who abandons himself to drink. Is intemperance a vice or a disease? is a question which the author scarcely ventures to answer in an unqualified manner. He, however, formulates his position thus: drunkenness, so far as it consists in that state of immorality which is induced by alcoholic excess, ought not to be regarded as a vice; it is a pathological condition in the same sense that all the modifications of the moral and intellectual being, due to extra physiological causes, are pathological; drunkenness ought to be considered as the analogue of the prodromic period of mental maladies, and really constitutes the prodromic period of confirmed chronic alcoholism. It is quite otherwise in regard to the craving for alcoholic drinks. With the exception of cases in which this craving is instinctive, and therefore hereditary, it is only a vice which human nature is capable of resisting, and therefore entails responsibility.

In the section on the medico-legal bearing of chronic alcoholism, Dr. Lentz observes that the three forms or

stages, namely, acute, subacute, and chronic, are insufficient. The subject is, therefore, considered on the lines already laid down, that is to say, under the three forms of alcoholic degeneration, hallucination, and dementia. No exact criterion can determine the responsibility of a man laboring under alcoholic degeneration. Different degrees of moral and intellectual arrangements carry with them corresponding grades of responsibility. However degraded may be the moral feelings in this form, there remain sufficient lucidity and self-control to resist the suggestions of the passions. If the drunkard is indifferent to the moral aspect of things, he at least understands them; if the mental functions act slowly and imperfectly, his understanding is at least sufficient to appreciate the character of the acts he commits. Doubtless the power of resistance is diminished, and his perception more limited, but with this we can only associate a corresponding diminution of responsibility. Between the two extremes, of very slight change and that of moral degradation and intellectual hebetude, there is a long period during which it would be as unjust as dangerous to absolve the unfortunate men whose faculties have been weakened by alcohol. In the hallucinatory form, acts of violence, usually unreasonable and repulsive, cannot be regarded as involving absolute responsibility, if there is any mental obliviousness. If, however, the hallucinations are fleeting, and the memory is preserved, we cannot claim irresponsibility for the individual. In the last form, that of alcoholic dementia, there is, of course, no more responsibility than in ordinary dementia.

The fourth chapter discusses alcoholic delirium, delirium tremens, and alcoholic psychosis. Passing over the two forms, it may be stated that the last is divided into three orders; the first being associated with depression, the second with exaltation, and the third comprising chronic alcoholic mental disorders. In the depressive group we have alcoholic lypemania; and in the expansive group, ambitious exaltation, which Marcé was the first to describe; and in the chronic

group, the mania of 'persecution and megalomania. Dr. Lentz regards the last as usually a chronic form of the first group, in which ideas of persecution have been effaced, or at least obscured, by the shadow of ambitious conceptions.

Dr. Lentz, in concluding this chapter, makes the important remark that psychical alcoholism, from the simplest to the most complex form, constitutes a state of genuine insanity, presenting no difference whatever from that which is of non-alcoholic origin. The only form which assumes a specific difference — delirium tremens — ought not to raise the slightest medico-legal difficulty. Complete irresponsibility is its necessary accompaniment. To record cases would only confirm the rule universally accepted up to the present time, that delirium tremens is not a form of drunkenness which can be induced voluntarily, but a mental disorder of which the genesis is independent of the human will, and is often even not immediately dependent upon the alcohol which a man imbibes.

In the fifth and last chapter, the author speaks of hereditary alcoholism, of which Morel has given the best description. It is treated by our author under two forms; hereditary transmission of the same affection, the hereditary transmission of a transformed alcoholism, or rather of alcoholism transformed into numerous nervous manifestations. Of 379 intemperate patients admitted into the asylum of Binghamton (New York), 180 were hereditary drinkers; but, on an average, the statistics of several countries do not give more than twenty-five per cent. In the second form, we have the symptoms of chronic alcoholism in the descendants of drunkards, without intemperance in the former. Sensation is perverted, the lower extremities are generally affected, cephalalgia and migraine are common; the sight is affected, vertigo and dazzlings are not rare, and sleeplessness is frequent, while there may be chronic indigestion along with complete sobriety. Such persons are subject to hallucinations from slight causes; facial tremor and weakened motor power are also simple. Convulsions are induced with extreme

facility, or even epilepsy itself. With women hereditary alcoholism is transformed into hysteria, and with men the peculiar nervous affection denominated "nervosisme" by Bouchot.

Hereditary alcoholism frequently gives a clue to those moral perversions which raise the question of moral insanity. In youth, the descendants have low instincts and evil propensities; they are cruel, vindictive, choleric; the pain and suffering of others gives them pleasure; their greatest pleasure consists in tormenting and killing animals; others are never happy unless they can tease, plague, and cause suffering to their little playfellows, whom they fill with fear; they habitually reveal, at an early age, their evil tendencies by the depravity of their character, by the precocious vices in which they take pleasure. When older they become indolent vagabonds, and incapable of discipline; sometimes they prove refractory to all education, or, if they have painfully learnt a profession or trade, their capacity vanishes at the moment of mental development at puberty. Indecision, sloth, vagabondage, an obscure moral sense, instability of character, the impossibility of settling to anything, the tendency to intemperance, and sexual vice, and, lastly, intellectual enfeeblement, are the chief characters of their perverted nature. When this supervenes there is something more than moral insanity, but, as Dr. Lentz observes, many are examples of "folie morale instinctive."

The volume concludes with a notice of dipsomania, which Dr. Lentz, with his accustomed discrimination, distinguishes alike from alcoholism and drunkenness, observing that it has only distant relations with intoxication. He defines it as a true insanity, which should be referred to the class of impulsive affections, the craving for drink being only a simple symptom, which might be replaced by any other irresistible desire without at all modifying the essential nature of the mental disease. The only relation it has with alcohol is that it too frequently gives place to alcoholism, whose symptoms efface those of the affection which produced

them. Dipsomania is regarded under two forms: the essential and the symptomatic, the latter being the most frequent, and occurs especially at the commencement of certain maniacal states and general paralysis; indeed, the craving for drink is sometimes the most prominent symptom of the latter. In circular insanity the stage of excitement is often characterized by an almost instinctive propensity to excess, and appears to be a veritable dipsomania. The invasion of true dipsomania is generally slow, the attacks increase little by little in intensity and duration, and at last the disorder assumes a circular character; the mental condition is absolutely different in the two periods of the circle. Heredity plays nowhere a more important part than in dipsomania. The principal symptoms are the disorders of moral sensibility, returning periodically, and accompanied with an invincible tendency to intemperance. At first the character changes, the patient becomes irritable, and even violent, the sleep is disturbed, an indefinable malaise renders him anxious and restless, while vague apprehensions put a stop to ordinary occupations. Dr. Lentz forcibly describes the condition as one of "véritable effervescence intérieur." On the termination of the attack the patient falls into a state of moral weakness, and the patient, conscious of his condition, shuns society and often seeks admission into an asylum. The medico-legal aspect of dipsomania offers little difficulty; it involves complete irresponsibility. The ordinary abnormal manifestations include an irregular and fantastic character, arrested development, or singular inequality of the intellectual and moral faculties, natural tendency to lying, dissimulation, cruelty, excesses of all kinds, periodical return of various nervous disorders, sometimes always alike, at others variable in their form; with these are often combined physical imperfections, such as malformations of the head, etc.

Of course, during the attack, the dipsomaniac must be considered irresponsible, but during the remission he cannot be allowed to enjoy the same immunity, although his absolute responsibility must not be assumed without inquiring into

the special features of the case. We have given a full analysis of this very able work on alcoholism, in order that the author's views on so practically important a subject may be accurately followed, and it has been thought that a sketch of the ramifications of alcoholism will prove useful to our readers. — Dr. HACK TUKE, in *Journal of Mental Science*.

TRAUMATIC DELIRIUM TREMENS; BY JOHN B. ROBERTS, M.D., PROFESSOR OF ANATOMY AND SURGERY IN THE PHILADELPHIA POLYCLINIC.

This nervous affection, characterized by muscular tremor and a peculiar restless delirium, not infrequently follows the receipt of injuries in those accustomed to alcoholic stimulation.

Some writers describe, under the terms traumatic delirium and nervous delirium, a condition frequently very similar to delirium tremens, which is said to occur in patients free from the alcohol habit, and to depend upon nervous prostration, often associated with shock and hemorrhage. It is possible that failure to investigate previous habits with judicial acumen has allowed to arise a confusion between delirium dependent simply upon traumatism and delirium induced by traumatism in alcohol drinkers. The muttering delirium and muscular twitching that supervene in asthenia, from surgical as from medical causes, and the noisy delirium after injury that is exhibited by quick, rapid, and full pulse, and by febrile reaction, are two very different conditions to which the name traumatic delirium might with propriety be applied. These forms of mental disturbance, in my opinion better called asthenic and inflammatory delirium respectively, arise without reference to personal habits.

The group of symptoms which I propose describing as traumatic delirium tremens, however, is found especially, if not exclusively, indeed, in those whose nervous systems have

undergone, prior to injury, the deterioration due to absorption of alcohol. I have not been convinced by my experience, nor by my reading, that such a concatenation of symptoms can occur after traumatism in the absolutely abstemious. The amount of drinking requisite to induce the predisposition varies with the individual. The repeated ingestion of quite small quantities of alcohol may give rise to the delirious susceptibility. It is possible that a similar deterioration of constitution, and a consequent liability to trembling delirium, may be caused by the opium, chloral, and tobacco habits; but it is difficult to differentiate these because of their frequent association with alcoholic excess.

Traumatic delirium tremens may follow even slight injuries, but compound fractures and burns seem to have a special tendency to develop this serious complication. Its occurrence should not be ascribed to the restraint imposed upon the patient's habits by the injury, but to a traumatic disturbance of a previously unstable nervous equilibrium. Medical authorities vary in their appreciation of the causative influence exerted by sudden deprivation of accustomed stimulants in exciting attacks of ordinary delirium tremens. It is probable, however, that in a vast majority of such cases the directly exciting causes are the deficient assimilation of food, the anxiety, and the nervous strain which go hand in hand with a period of debauch, and which persist after the ingestion of alcohol is stopped. Neither is the occurrence of the malady to be imputed to the directly poisonous effect of a large amount of consumed alcohol, since acute alcohol poisoning, in persons unaccustomed to the use of alcohol, gives rise to stupor and death, but not to delirium.

Traumatic delirium tremens occurs because chronic changes in the nervous tissue or blood, or perhaps in both, have rendered the alcohol drinker susceptible to such an outbreak upon the application of any disturbing influence. The receipt of injury is a sufficient perturbing force, especially if the patient be on the verge of an idiopathic attack. It has been thought that the use of beverages containing amylic alcohol (fusel oil) especially predisposes to delirium tremens.

The alteration in nerve structure or blood, which is the essential pathological factor of delirium tremens, is unknown to us. At autopsies, an abnormal amount of serum is usually found in the substance, and within the ventricles of the brain; meningeal congestion and hemorrhage are often seen; the cells of the gray matter, the cerebral connective tissue, the lymph spaces and the vessels may show sclerotic or fatty changes; and the liver, kidneys, and digestive tract may exhibit the characteristic lesions found in chronic alcoholism; but there is nothing to which we can point as the distinctive lesion of delirium tremens.

The initiatory symptoms of traumatic delirium tremens are sleeplessness at night, and slight tremor, which is readily noticed by ordering the patient to hold out the hand with widely-separated fingers. Subsequently, restlessness, insomnia, and tremor increase, and delirium is shown.

The delirium, which is often first exhibited at night, is peculiar. The patient sees numerous small animals or insects creeping over the bed and about his person, or is pursued by some hideous spectre. Hence, he is constantly endeavoring to eject the vermin from his clothing, or trying to escape the persecutions of his tormentor. I have now under my care a patient with traumatic delirium tremens, after an open fracture of the leg, who imagines that elephants are moving over his bed and tramping on his legs. He may, in his efforts to get rid of these disgusting and distressing annoyances, leave his bed and fall from a window or down a flight of steps. The mental condition is one of depression, trepidation, and great activity. He is exceedingly restless, and is constantly chattering in a low tone, but, though he may cry out because of fear, he shows little or no maniacal excitement. He is good-natured, not prone to violence, and can often be aroused, by emphatically spoken words, to an understanding of his surroundings: but he soon relapses into the previous incessant chattering and motion. Very often a single idea recurs again and again to his delirious fancy, and not infrequently the delirium has a comical or tragedo-comical aspect.

The muscular tremor is not like the twitching of tendons seen in asthenic conditions, but resembles the shakiness, from want of coördination, seen in cerebro-spinal sclerosis. Often there is hurry in movement, and the limbs or tongue will then be thrust forward with a jerk. The tremor of delirium tremens reminds me much of the movements that would be expected in an association of chorea with sclerosis of the nervous centres.

During these symptoms, the patient is unable to sleep, is incessantly in motion, and has a bright eye with dilated pupils, and an unsteady, restless look. He exhibits a moist, flabby, tremulous tongue with a whitish fur, desires no food, has constipated bowels, and passes a scanty, high-colored urine. In idiopathic delirium tremens of moderate severity there is no great acceleration of the pulse, and the temperature does not rise much above 100° , except during active muscular exertion. In those graver cases, which Magnan calls febrile delirium tremens, the bodily heat is apt to remain in the neighborhood of 102° – 105° , though there is no inter-current affection to keep up the temperature, and the pulse rate is also increased. In traumatic delirium tremens the constitutional disturbance, due to the wound, affects the pulse and temperature. The patient will often remove the dressings from his wound, or subject the injured limb to violent motion without appearing to experience pain.

Traumatic delirium tremens arises, as a rule, within two or three days after the receipt of injury, and lasts usually not more than five or six days. The illusions are apt to continue during the night, even after the patient has become convalescent and quite rational in the daytime.

The peculiarity of the tremor and delirium renders the diagnosis easy. If my view of its causation be correct, the existence of the characteristic symptoms is evidence of previous habits of stimulation; but it is not always well to mention this suspicion, nor to call the disease delirium tremens, since the patient's friends may be unaware of the existence of such habits.

Death may occur from exhaustion, coma, or some inter-current affection, and is sometimes inexplicably sudden. The character of the traumatism may determine the mode of death. Pneumonia is frequently associated with idiopathic delirium tremens. It is often, in fact, the exciting cause of the delirious outbreak, and, of course, in traumatic cases greatly diminishes the chances of recovery. When the temperature shows a tendency to remain high without a sufficient traumatic cause, and especially when the tremor affects all the muscles of the trunk as well as those of the head and extremities, and is not arrested during sleep, the prognosis is bad. A history of previous attacks of the disease renders the outlook more grave.

In considering treatment, it is important to bear in mind that delirium tremens is an asthenic condition. There is action, but it is the activity of weakness, not of power. Depressants are therefore injurious. Five or ten grains of calomel, or one or two seidlitz powders, may be administered in the beginning of the disease, or when its occurrence is feared, because of the anorexia and gastric derangement. Concentrated liquid food, bitter tonics, and capsicum add to the patient's strength, and tend to give tone to the impaired digestive organs. Bathing and mild diuretics may be employed, in the endeavor to eliminate the alcohol that has entered the system. Chloral hydrate (gr. x-xx) with potassium bromide (gr. xxx-xl) should be given every two or three hours, as soon as sleeplessness and slight tremor are noticeable; no visitors should be allowed in the room. If the development of the attack is not prevented, the same treatment is continued but the doses may be increased. The object is to quiet the nervous system and induce sleep. In this endeavor an occasional dose of morphia (gr. $\frac{1}{4}$ to $\frac{1}{2}$), may be combined with the chloral and potassium bromide. The excessive use of opiates is undesirable, for it is not narcotism that is desired but sleep; cerebral congestion is induced by over dosing with morphia. If fatty heart exists, opiates should be pushed, perhaps rather than the chloral and potassium

bromide. The combination treatment with the three hypnotics allows the surgeon to diminish or increase each element according to indications. Tincture of digitalis (m. x-xxx) every two or three hours is valuable in cases of weak but not fatty heart, where there is palor and cyanosis with probable anæmia of the brain. Strychnia also has been recommended in delirium tremens. Mechanical restraint, with the straps and the straight jacket, is only to be adopted when efficient watching and soothing by attendants is impracticable. All such apparatus excites the patient and is very liable to interfere with respiration. The best appliance is a loose but strong garment consisting of trowsers and shirt, in one piece, with loops attached for fastening the patient in bed. Fractures should be dressed with plaster of Paris bandages, because ordinary splints will probably be displaced by the patient. If failure of vital powers is to be feared, alcoholic stimulants in small amounts administered only when food is given, are judicious because in chronic drinkers digestion will sometimes not go on sufficiently without the aid of alcohol. Such failure of assimilation in delirium tremens may turn the scale against the patient. Whisky or brandy (F. ii3-F. iv3 during the twenty-four hours) in the form of milk punch or egg-nog, is probably the best form of administration. Many patients will not require any stimulants. Vomiting occurring in delirium tremens, is to be treated by milk and lime water, cracked ice, effervescing drinks, bismuth sub-nitrate, pepsin, and carbolic acid mixtures.

LAST WORDS ON COCAINE.

Dr. Hughes in the *Medical Review*, writes as follows:

“The truth about cocaine is that it is a tonic and stimulating exhilarant of some power in melancholia, mental depression, and nerve weariness. That it acts rapidly but much more evanescently than morphia.

“That excessively used, it intoxicates and converts melancholia into mania.

“That given largely in the upright position, it is capable of inducing vertigo, whether, as Dujardin-Beaumetz thinks, by inducing anæmia, is not proven.

“That as an antidote to alcoholism and its effects, it is not equal to morphia.

“That it is not equal to morphia as a tonic in melancholia, or as a narcotic in certain states of nervous debility.

“That in equal doses it nauseates more certainly than morphia.

“That it is not an antidote to meconophaggism, though beneficial if judiciously used and timely abandoned.

“That it may be used with advantage, if carefully given, in the withdrawal of opium, and the cure of opium habit as one of many substitutes, but cannot be alone relied upon.

“That it intoxicates some persons, and poisons them.

“That its continuous use is difficult to break off.

“That it is probably capable of developing permanent madness like similar intoxicants, as a few doses occasion temporary insanity.

“That it is a dangerous therapeutic toy, not to be used as a sensational plaything.

“That it will probably help to fill, rather than to deplete the asylums, inebriate and insane, if it should unfortunately come into as general use as the other intoxicants of its class.

“As an intoxicant, it is more dangerous if continuously given, than alcohol or opium, and more difficult to abandon.”

— *Medical and Surgical Reporter.*

INEBRIETY AND CRIMINAL RESPONSIBILITY IN MEXICO; BY DR. A. FRIMONT OF OZULUAMA, MEXICO.

The penal code of this State endeavors to answer all circumstances pertaining to crimes, but does not mention in a single instance inebriety, neither incidentally nor accidentally. In chapter IV of the code, occurs the following: Art. 32, “He is not a delinquent who commits an action when sleep-

ing or in a state of dementia or in any other manner, when not in the full possession of his reason and power of deliberation."

Voluntary inebriety or any other privation or derangement of the reason of this character can not be regarded as an excuse for crime committed under such influence; neither will the penalty be diminished, but on the contrary it will be considered as an aggravated circumstance of the crime!!

I suppose that the legislators who created this code were guided perhaps by the vulgar idea that inebriety is a general vice among the proletarian class; and that in the greater number of crimes committed they should recognize principally the use or abuse of intoxicating beverages as a prominent cause of the extravagances which carry off our people—and that for the public weal and morality they should choose such legislation, to check by extreme penal statutes the tragic inclinations of the lower classes. In so doing they separate themselves from the principles laid down in other codes—thus actually establishing in inebriety a legal circumstance which shall be paramount to even any temptation to the commission of the crime, while it really does aggravate and makes the criminal responsibility of the accused greater and less defensible.

Almost all civilized nations are ruled by codes which establish incontrovertibly that the idea of crime necessarily involves two elements, viz.:

1st. The consciousness that the commission of the act which constitutes the crime is contrary to law.

2d. The unimpaired and free use and exercise of will, with power to commit the offense or not.

The legislators of Vera Cruz have doubtless intended to refer on this point only to the insane, recognizing that there are lunatics who in spite of the consciousness that they are committing a punishable act, are, by infirmity of the disease, destitute of their power of will and of self control. Other insane persons may know that the act is contrary to law, but are impelled by a conviction or irresistible impulse against

their will or by a force which they can neither control nor resist.

I am convinced that inebriety is a trance state clearly allied to insanity. We should therefore understand that every act committed under such circumstances should be regarded as a *medico-legal* case and considered and determined by the peculiar facts attending it.

Only the physician could establish the difference between "not to want" and "not to be able" to obey the law, or precisely indicate the peculiar conditions of the malady which constitutes the incapacity, or responsibility of the offender against the law, and determine how far the accused had exercise of his reason, his will, or power to control or regulate his action.

I venture to assert that the law can not properly recognize as a fact that which is known to science not to be a fact.

Health cannot be legally adjudicated to exist where science has detected and demonstrated disease. The courts of Vera Cruz therefore should not insist upon enforcing this error, against and in violation of the laws of nature in deciding those things which belong to medical science exclusively, and which should be recognized by all law makers.— *Medico-Legal Journal*.

INTRACRANIAL HEMORRHAGE IN INEBRIETY.

In a recent paper read before the Connecticut State Medical Society, Dr. Lewis of Hartford, makes the following remarks:

"The condition of an intoxicated person, so closely simulates that of cerebral compression, and of concussion, that it is sometimes difficult to recognize the difference between the two states. Especially is this difficulty increased when, as often happens, a drunken man has sustained a blow upon his head by an accidental fall, or while engaged in fighting, or at the hands of an officer making an arrest.

Medico-legal questions should naturally suggest themselves at the time to the medical examiner under such circumstances. Even when there is no perceptible alcoholic odor in the breath, and no history of the case to indicate intoxication, serious mistakes in diagnosis have been made by medical men. It is not singular, then, that a police officer, on finding a man who has been rendered insensible by compression, should send him to the station-house for the night as "found drunk." Such fatal mistakes should not occur, and need not if municipal laws required all drowsy persons to be taken to a place where the few hours required to reveal the true nature of the case, could pass without harm to the victim, and where he could be under medical observation. In other words, a hospital ward should receive all such persons.

"The following case, which came under my investigation, is one where an unfortunate mistake of this sort was made.

"H. W. B. who had been away from home, arrived by railway after ten o'clock P. M. and started at once to walk to his residence, which was located several blocks distant from the railway station. At one o'clock A. M. he was found by a private watchman, about half a square from his house, in a half reclining posture upon some door-steps, in an unconscious condition. The watchman finding he could not arouse him from sleep, and supposing him to be drunk, took him to the police station, where he remained without any further care until about six o'clock that morning, when, upon examination, it was found that he had sustained a penetrating fracture of the cranium by a pistol ball. He died the same day. He had always been a temperate man, and an estimable citizen. The mystery of the shooting was never fully cleared away; but it probably occurred about eleven o'clock that night, in an alley where his traveling satchel was found. If it then and there took place, two hours passed before he was found by the watchman at a considerable distance from where the shooting occurred. Our explanation of this is, that when shot, he was immediately

rendered unconscious by concussion of the brain, and lay in that condition until the first stage of concussion had passed, when he partially regained his senses. He then in a dazed condition, started for home, and the cerebral hemorrhage, which had been arrested by the effects of concussion upon the vascular system of the brain, became more abundant, and he sat or stumbled down upon the steps, where he was soon after found, laboring under the commencing stage of compression. His forced walk to the police station, and the disposition there made of him, before his real condition was known, favored the increase of extravasated blood, and he died comatose.

“Many of the semi-unconscious persons that come into the custody of the night police, have a more or less strong odor of spirituous liquor in their clothing which renders it somewhat difficult to determine whether there is the same odor in their breath or not. In doubtful cases, the examining surgeon should always test the urine for alcohol.”

INEBRIATE LEGACIES.

Dr. Butcher lately read a paper before the Medico-Legal society of Philadelphia, Pa., entitled “Curious Legacies,” in which he referred to inebriety as follows :

“I think it is clear that a large portion of the crime of to-day is attributed to intemperance. This unnatural appetite or desire for stimulation seems to be hereditary, and may be called one of those curious legacies which we are speaking of.”

In the discussion which followed, Dr. Stewart said : “From my own observations, intemperance is inherited where the son has followed the footsteps of his father to a drunkard's grave; the example could in no way have been one that we could suppose was attractive, but on the contrary repulsive and disgusting. Here they seem to have been bound together by the same debasing desires that apparently no power could restrain their headlong career.”

Dr. Stubbs remarked: "In the study of anatomy it has been shown that every tissue of the animal body comes from the cell, whether muscular, bone, nerve, or otherwise. If now such cell be changed in any way by the mode of life or the use of drugs or alcohol, at such time as conception takes place, may not such change result in a changed offspring? I remember the case of a man who was a drunkard at the time of his marrying. His first child was weak mentally; reforming, the children born after were among the brightest in the town."

Dr. Waugh said: "We do not by any means say the last word when we prove the heredity of alcoholism. In the best marked case I have seen, every male member of a certain family for two hundred years had been addicted to alcoholic excess. I found that debauches were preceded for a week by acholia. The stools were white and fetid, there was no jaundice, the man was uneasy and irritable, and suddenly began drinking. On several occasions when the acholia became apparent, I administered hepatic stimulants, and prevented the outbreak of alcoholism."

Dr. Nash thought that the fact of such an inheritance was a powerful influence in lessening the power of resistance in such cases exposed to temptation.

Dr. Buckley contended that the drink tendency was the result of bad surroundings and artificiality.

Dr. Connor said that heredity was as well established as the law of gravitation. That an uncontrollable desire for stimulants was a family legacy as much so as the form and shape of the face.—*From the Journal of Heredity.*

MENTAL DEGENERATION IN INEBRIETY FROM BRAIN INJURY.

Dr. Maudsley calls attention to a certain condition resulting from injury to the head; whether by a blow upon the brain, or saturated by alcohol or other drugs, the pathological condition is the same. I frequently meet such cases, and

indeed more or less of them are under our care most of the time.

“Examples of marred moral character and will to which I call attention, are those which sometimes follow injuries to the head. It happens in these cases after an injury that may or may not have caused immediate symptoms of a serious nature, that slow degenerative changes are set up in the brain, which go on in an insidious way for months or years, and produce, first, great irritability, then little by little a weakening, and eventually a destruction of mind.”

The person who appears, perhaps, to be all right soon after his accident or the inordinate indulgence in alcohol, turns out to be all wrong, and after several years to be beyond cure. Now the instructive matter is, that the moral character is usually impaired first in these cases, and in some of them is completely perverted without a corresponding deterioration of the understanding. They are intelligent, and capable of performing many of the duties of life, but the truth is, the boundaries of mental health are narrowed, and when the brain receives certain impressions from external surroundings, the man is insane, although it may be temporary, and if he would in the future preserve his mental integrity, he must live and work within the circle of his mental capacity.

The injury has given rise to disorder in the most delicate part of the mental organization,—the part which is only separated from actual contact with the internal surface of the skull by the thin investing membranes of the brain,—and once this delicate organization has been seriously damaged, from whatever cause, it is seldom that it is ever restored completely to its former state of soundness.

Thus far it has been shown that moral feelings and will are impaired or destroyed, by degeneration going on through generations by the disorganizing effects of disease, mostly caused by alcohol, opium, and kindred drugs. These, by their chemical action, poison the nervous system by the abuse of such nerve stimulation and nerve narcotizing substances.

It is not enough to say that passion is strengthened and will weakened by indulgence, as a moral effect; that is so, no doubt; but beneath that effect there lies a deeper fact of a physical deterioration of nerve-element; for the alcohol and the opium enter the blood, are carried by it to the inmost minute recesses of the brain, and act there injuriously upon the elements of the exquisitely delicate structures. So its finest, latest organized, least stable parts, which subserve moral feelings and supreme will, are marred. Vain is it to preach reformation to one who has brought himself into this wretched predicament; if any good is to be done with him, he must be forcibly restrained from his besetting impulse in a properly appointed asylum, and under the care of intelligent management, where the brain will soon get rid of the poison, and the brain tissues may, after a long time, recover their healthy tone.

MEDICAL AND SURGICAL DIRECTORY OF THE UNITED STATES.

Cloth, pp. 1452; in one volume. Price, \$7.00. Detroit: R. L. Polk & Co., Publishers.

This is a work containing the names and addresses of over 80,000 persons who are practicing medicine in the United States. All the medical schools and hospitals are represented. All the medical journals published; and a great variety of medical information is given. The status of each physician is noted, and in brief it is a perfect dictionary of facts and statistics concerning physicians and medical matters. This work is solitary and alone, and gives the information so often needed by medical men. We commend it for its accuracy and general value to the profession. To anyone who wishes to communicate with the profession of this country it is invaluable. Such a work has a value in any library of the country.

The Humboldt Library, J. Fitzgerald, publisher, 108 Chambers street, New York city, is practically indispensable to every scientific man.

Science, an illustrated weekly journal published in New York city, represents the latest aspects of scientific research in all departments. To the scholar such a journal is indispensable, and we most heartily commend it.

Lend a Hand, a Boston journal of philanthropy, is a commendable work to place the best facts and conclusions of science on social questions before the public.

The Electrical Engineer of New York city, is the leading journal of the world, representing all the marvelous advances in the practical field of harnessing this mysterious force into the service of mankind.

The Scientific American brings weekly glimpses of the mighty progress of science in every department. Like the dailies, they are indispensable. Munn & Co., of New York city, are the publishers.

George Stinson & Co., of Portland, Me., are the great art publishers of this country. They make a specialty of steel engravings, which are really the finest pictures that can be had for parlors and office. We commend them to all our friends.

The Popular Science Monthly, D. Appleton & Co., New York city, is a most welcome visitor to every scientist. The October and November numbers are volumes in themselves of the greatest value. No more practical present can be made, than a year's subscription to this journal.

The following are some of the works lately published, and sold at 15 and 20 cents each. "Anthropology," by Dr. Wilson; "Evolution in History and Language," lectures delivered at the London School of Arts; "Descent of Man," by Charles Darwin; "The Dancing Mania of the Middle Ages," by Dr. Hecker; "Profit Sharing between Capital and Labor," by Sedley Taylor, M. A.; "Studies in Animated Nature." These are only a few of the most celebrated scientific works of the day, published by this firm.

A gentleman, from Chicago, writes that he has become fully restored, and is able to control all desire for spirits, and live a temperate life. This he accomplished by following my advice some years ago, to take turkish baths every day, while the paroxysm was on him. This soon broke up this drink impulse, and finally would ward it off. In some cases this remedy is practically a specific. Dr. Shepard's Turkish Baths, on Columbia Hights, Brooklyn, N. Y., may be said to be the most thorough system of baths, given on scientific principles, in this country.

Editorial.

TEMPERANCE, PARTIES, AND POLITICS.

Like an army unexpectedly attacked and thrown into confusion, or a ship struck by a squall, in disorder until the authority of the captain is asserted, the temperance moralist and reformer are astounded at the sudden alarming prevalence of inebriety. In the confusion of this discovery they seize on the wildest means for relief, and follow the noisiest enthusiasts and the most impracticable schemes. Leaving to one side all the various means of cure by prayer and pledge, they turn to politics, and are trying to unite their confused efforts in a political party, which will enforce by law their theories of the causes and cure of inebriety.

This prohibition movement, from a scientific point of view, has never attracted much attention. But to-day it assumes such arrogant claims of power to remedy the evils of drink, condemning all who differ, that it most naturally invites the scientists to examine its pretensions and theories.

In this inquiry the *JOURNAL OF INEBRIETY* has no political interest or theory to sustain. As the organ of men who are making inebriety a scientific study, it demands the facts, and the evidence upon which they are based must be presented and compared before the truth of any phase of this subject is accepted. Any views supported by facts are welcomed, and the kindest sympathy is extended to all measures and movements for the relief of inebriety, no matter how crude and impracticable. All such efforts are regarded as agitations and revolutionary struggles incident to every advance of science.

The prohibitory movement is based on the theory that inebriety is only caused by alcohol, and that this drug is a

luxury which can be withdrawn at will, thus removing the evil. Also, that inebriety depends upon the manufacture and sale of alcoholic compounds, and will disappear when the supply ceases. The remedy is to drive out the maker and seller of spirits, and banish alcohol. It is a curious fact that prohibitory legislation has been tried for over a thousand years, from time to time, against alcohol, tobacco, tea, coffee, coca, and opium. Moral, social, theological, and governmental forces have most fiercely and violently tried to suppress the use of these drugs. Despots who held the lives and thoughts of their subjects, and controlled all their acts, have failed to break up the use of stimulants and narcotics. Even the Chinese despotic rule failed to stop the use of opium. Kings and popes have combined against the use of tobacco, only to be defeated, and over and over again legislation against the use of alcohol has been unsuccessful. Now and then temporary, local, and limited successes follow, but after a time this disappears, and the evil continues in even greater proportions than before. Thus history repeats itself in the movement of prohibition to stop the evils of inebriety.

The theory of prohibition is not sustained from a study of the inebriate and inebriety. Alcohol is not a luxury, to be used or not at the will of anyone. It is a narcotic spirit which has been used in all ages, climes, and by all peoples, to soothe and relieve the wearied brain and unstable organization. Alcohol and its compounds have ever been used to supply some demand of brain and nerves, some defect or debility. This demand is not created by the form or the prevalence of alcohol, it is an inherited or acquired defect. The army of inebriates are recruited from states and conditions of life far back of the distillery or saloon. In this country they are often victims of our high-pressure civilization; of continuous nerve strains and drains, which not only exhaust but cripple the race and its descendants. The demand for relief which is found in spirits brings out the manufacturer and retailer to supply it. They may increase this demand, but they do not create it.

When once the victim finds relief from this drug, law and moral suasion are powerless. Banish the maker and dealer of spirits, and the current is turned into other channels equally dangerous. Opium, ether, and other drugs come to supply the demand.

The chemists of to-day are constantly discovering new and endless varieties of alcohols, which will always have a place in the arts and sciences ; and wherever they are found to bring rest and quiet to this abnormal craving of the race they will be used under all circumstances. No prohibitory measures can discriminate in this field, and no present knowledge will indicate the alcoholic compounds that are dangerous or safe which should or should not be sold. Prohibition is a delusion when it assumes that to stop the manufacture and sale of alcohol is to break up inebriety and cure the inebriate. It is a delusion to expect that politics, party, and law can break up the disease of inebriety, or that a knowledge of the evils of inebriety will point out the causes and remedies. It is a delusion to suppose that the evils of inebriety can be remedied and controlled when its causes and nature are practically unknown. Opinions, theories, and beliefs by earnest enthusiasts cannot bring the authority of knowledge based on well-observed facts. Until inebriety is made the subject of exact study, and the laws which govern its rise and progress are ascertained, and the complex causes and conditions of life from which it springs are pointed out, prohibition will fail to prohibit, and every other means of treatment not founded on exact study will die out. Prohibitory legislation may act as a dam to the drink current for a time, and the stream appear to be stopped, but the certain breaking down of the dam and overflowing ruin that follows point to the error of not beginning back at the source. The drink problem cannot be solved by moral suasion or prohibition ; it is a question for science and scientific study. In the march of progress, beyond the noise and enthusiasm of temperance reformers, the great forces of civilization are seen recruiting inebriates along lines of cause

and effect as fixed as the motion of the stars. In the same range the scientists catch glimpses of the laws of prevention and cure, from which in slow, measured steps inebriety and its evils can be reached, cured, and prevented.

PREMEDITATION IN INEBRIETY.

The frequent instances where inebriates in apparent possession of good judgment, go away and drink to great excess, displaying a degree of forethought and premeditation fully characteristic of all the ordinary events of life, are often very confusing to the ordinary observer. When the drink paroxysm comes all unexpectedly upon the victim, in some unforeseen state and circumstance, and he falls, it is dimly apparent that he is suffering from some unstable or diseased brain state, which has burst out from the application of some exciting cause. But when the paroxysm is anticipated and prepared for, and all the surroundings are made subservient to this end, when every facility to procure spirits are increased, when money is secured and business arrangements are made in view of this coming paroxysm, the conclusion most commonly reached by all non-expert observers is that it is deliberate vice and wickedness. When the history of a number of these cases is studied and compared, they are found to be well-marked cases of reasoning insanity, with drink paroxysm. These paroxysms are the acute attacks—the deliriums which expend themselves like storms which gather and burst—and are preceded by long periods of rest. A typical case is that of a banker, who is a man of excellent judgment in all business and social matters. He will prepare for a week or ten days in advance for a drink paroxysm. He is a temperance advocate, yet he will display great cunning to conceal the approach of this “spell.” He will become very active in his temperance efforts. His friends realize his danger, and try by every means to help him, but find that all their efforts are turned to aid him in concealing it. He will not begin unless he can find some way to con-

ceal his presence while the paroxysm is on him. When his friends were vigilant, he has been kept sober for a week or more, but with the first opportunity he disappears, and all their work has been thwarted by his cunning. In another case, the most deliberate reasoning and planning will mark the paroxysm. In another case, all at once he will rush away and drink in the most suicidal and insane way, only giving as an excuse some real or fancied injury or trouble. This deliberation and cunning is a symptom of mental unsoundness, and is most obviously reasoning insanity, and will be recognized when these cases are better understood. Dipsomaniac and periodical inebriety very soon became reasoning maniacs, dangerous because they are unknown and misunderstood.

COLONIAL AND INTERNATIONAL CONGRESS ON INEBRIETY.

A council of eminent English physicians have arranged for an International Congress, to be held in London, England, in July, 1887, the date to be fixed later. The object of this meeting will be the presentation of scientific papers and addresses on inebriety and its remedies, with discussions by the most eminent men who have made this subject a study.

For years moralists and reformers have discussed inebriety in great meetings, both in this country and Europe, but this will be the first great gathering of scientific men for the study of this subject, above the levels of theory and opinion.

The importance of this subject is felt all over the world, and the scientific facts which a few specialists have gathered in this country and Europe, are at last to be formulated and accepted, and a new road opened for temperance agitators.

This congress will be the culmination of many efforts to study inebriety in its true relations, by earnest men in this country and Europe. Our American pioneers in this field, who have struggled up through good and evil reports so long, will feel a thrill of joy at this first great recognition of the facts of inebriety. It will not only rouse the British public

to take hold of this subject practically, but excite new interest in the inebriate all over the world.

Papers have already been promised from Dr. Magnan of Paris, Dr. Moelier of Brussels, Dr. Joseph Parrish of America, Count de Praskow-Marstorf, president of the Austrian Society for the Study of Inebriety, Dr. Norman Kerr of London, Dr. T. D. Crothers of America, Dr. Binz of Bonn, Prussia, Dr. De Colleville of Paris, and many others. This congress will close with a public dinner.

The following is a partial list of officers: President, Dr. Norman Kerr; vice-presidents, the Archbishop of Armagh, the Bishops of Cork, Gloucester, Liverpool, London, Newcastle, Ripon, and Rochester, Rev. Canons Barker, Duckworth, Ellison, Hopkins, and Leigh, the Duke of Westminister, Lords Lichfield and Mount Temple, Sir George Burrows, F.R.S., Dr. J. S. Bristowe, F.R.S., Mr. D. B. Balding, F.R.C.S., Mr. Wickham Barnes, F.R.C.S., Dr. Beverly of Norwich, Mr. Harrison Branthwaite, F.R.C.S., London, Mr. R. W. Branthwaite, Mr. C. M. Burton, Dr. Bridgwater of Harrow, Dr. Binz of Bonn, Prussia, Mr. T. H. Barker of Manchester, Mr. J. Barlow, J.P., of Bolton, Dr. Cameron, M.P., Dr. Alfred Carpenter, J.P., Sir W. Collins of Glasgow, Dr. T. D. Crothers of the U.S.A., Dr. De Colleville, Dr. N. S. Davis, U.S.A., Dr. Eastwood, J.P., of Darlington, Surgeon-Major Evatt, Dr. Farquharson, M.P., Surgeon-General C. R. Francis, M.B., Dr. Simon Fitch of Halifax, Nova Scotia, Dr. Hill Gibson, Dr. Stanley Haynes of Malvern, Mr. J. S. Hicks, F.L.S., of Liverpool, Dr. J. B. Hurry of Reading, Dr. Magnus Huss of Stockholm, Dr. C. J. Hare, Dr. G. Harley, F.R.S., Surgeon-General Logie, F.R.C.S., England, Dr. Murray Lindsay of Derby, Dr. F. R. Lees of Leeds, Sir W. Miller of Londonderry, Dr. Magnan of Paris, Dr. Moelier of Brussels, Count de Proskow Marstorf of Vienna, Dr. Withers Moore, President British Medical Association of Brighton, Professor Sir Douglas Maclagan of Edinburgh, Professor Macalister, F.R.S., of Cambridge, Professor McKendrich, F.R.S., of Glasgow, Dr. W. Ogle of Derby, Dr. A. Peddie of Edinburgh,

Surgeon-Major G. K. Poole, M.D., Sir G. H. Porter of Dublin, Dr. B. W. Richardson, F.R.S., Dr. George Robertson, Mr. Robert Rae, Mr. J. H. Raper, Sir Edwin Saunders, F.R.C.S., Dr. Danford Thomas, Mr. S. Urdahl Senior of Norway, Dr. Hart Vinen, F.L.S., Sir Spencer Wells, F.R.C.S., Dr. W. H. Walshe, Dr. A. T. H. Waters of Liverpool, Dr. H. W. Williams ; Treasurer, Dr. C. R. Drysdale, 23 Sackville street, W. ; Hon. Secretary, Mr. C. H. Bishop, 42 Grove Road, Regent's Park, N.W.

CASE OF DRUG TOLERANCE.

The following case is worthy of note, as pointing to some unusual physiological state of the organism, where narcotics have very little influence. A merchant* 42 years of age, in active life, had been a paroxysmal inebriate for ten years, When the drink paroxysm came on, he acted so wildly that both his moneyed interests and that of his friends suffered greatly. It was found that moderate narcotism from chloral and morphia, kept him in bed and cut short the paroxysm. It was customary to get a two ounce mixture of chloral, morphia, and bromide, giving the officinal dose until he became stupid or sleepy. On this occasion, the usual bottle was procured, and given without any results, a second one was given, then a third one, after which the patient went to sleep. The bottles had not been labeled, and the doses had been given every ten minutes, by a new nurse, who claimed to know all about such cases. His son, returning a few hours after, noticing the heavy unnatural sleep, sent for me. I found that he had taken in three hours about nine grains of morphia, 320 grains of chloral, and over an ounce of bromide of sodium. Four hours had passed since the last dose had been taken, and excepting a heavy stupor and general pallor, no alarming symptoms were present. It was decided to pursue an expectant plan, and watch the case rather than attempt any active antidotal treatment. For the next ten hours he remained in a general stupor, from which he could

be easily roused, and was rational, but quickly relapsed into a quiet heavy slumber. This stupor continued for four days, gradually growing less with longer waking periods. Then he rode out, but was drowsy and heavy for a week more. The drink paroxysm had passed, and he returned to his usual work and health, not conscious of any unusual drug taking. This person was a delicate, nervous man, apparently very sensitive to all the surroundings, and with no indications of any peculiar organization or debility.

A CORRESPONDENT of the *British Medical Journal* states that aneurism of the middle cerebral arteries followed by hemorrhage and death, are common in chronic inebriety. Atheroma and fatty changes take place, resulting in aneurism, which after a time break, causing death. In cases of sudden death in chronic cases of inebriates, such a pathological condition will be found.

DR. BEAULIEU in the *Economiste Français* gives the following as the quantity of tobacco consumed by each 1,000 people in Europe : In Spain, 110 lbs. ; Italy, 128 lbs. ; Great Britain, 138 lbs. ; Prussia, 182 lbs. ; Hungary, 207 lbs. ; France, 210 lbs. ; Denmark, 284 lbs. ; Norway, 229 lbs. ; Austria, 273 lbs. ; Germany, 336 lbs. ; Holland, 448 lbs. ; Belgium, 560 lbs.

THE statements of the teaching of science in many of the temperance papers of to-day are strange enough to make the hair of a scientific man, or one accustomed to scientific methods of thought, stand on end.

MANY good temperance people can only see inebriety from one point of view. All the relations and surroundings of the subject are not considered. The one view is considered correct beyond all doubt and question.

Clinical Notes and Comments.

OPIUM INEBRIETY IN AN IDIOT.

BY J. C. CARSON, M.D., SUPERINTENDENT N. Y. STATE ASYLUM FOR IDIOTS.

On the 23d of April, 1884, application was received at the New York Asylum for Idiots for a boy, B. M——, aged eight years, twin born, and a subject of the opium habit since the day of his birth. The father of this boy was stated to be a native of New York, and was about thirty years of age when the twins were born. He is said to have been a healthy, temperate man, and had never been subject to any form of mental, nervous, or scrofulous disease.

The application stated that the father's mother's sister married an own uncle and had three idiotic and deformed children with seven toes and seven fingers, all of whom were unhealthy. The mother was a native of Ohio, and about thirty-six years of age. Previous to the birth of the twins she had had four children, all of whom were still-born. She had always been healthy, except being troubled with neuralgia, for the relief of which affection she acquired the opium habit at twenty-eight years of age. Her family history, as obtained, gave no hereditary predisposition to any form of disease. It is stated that the accoucheur in attendance at the birth of the twins administered ergot to the mother, and about four hours after their birth she was seized with convulsions which continued for two days following, when her death occurred.

The physician, in making the application, ascribes the convulsions to the combined action of the opium she herself had taken and the ergot administered by the attending accoucheur. This opinion, I think, however, is not warranted by therapeutical authority. Aside from the effect of the

ergot administered, the labor is said to have been a natural one, not requiring the use of instruments.

The applicant at birth weighed four pounds, and the twin brother two pounds. They were both very quiet, and lay peacefully resting until about six hours old, when they each almost simultaneously began worrying, crying, and at last screaming, and kept it up without any indications of abatement for hours afterwards. The mother being in convulsions at this time, it was thought her condition might be aggravated by the noise of the screaming infants, and it was suggested, prompted by the known habits of the mother (all other measures tried having ingloriously failed), to give them some opium.

The grandmother says she then took a bit of opium resin about the size of a grain of wheat, dissolved it in a little water, and gave each a teaspoonful. Its effect was almost magical, as in a few minutes they ceased their tossing and screaming, and slept quietly for six to eight hours afterwards. Then they again began to cry, or to "screech and jerk," as the grandmother says, and "kept it up" until the opium was again administered, and so on from time to time and the days and days that followed. Mrs. Winslow's, other soothing syrups, whisky, and various drugs, were tried in vain as substitutes for the opium, but opium alone seemed to possess the charm to allay their "screeching and jerking," which followed each time about eight hours after its administration. It, too, was soon found to be losing its control, and the next step toward peace in the family was to increase the quantity, which was done accordingly as future occasions demanded.

At the end of the first month the smaller twin died in convulsions.

When five years of age the applicant had a severe attack of typhoid pneumonia, from which he eventually recovered, but during which he had convulsions. Subsequent, however, to his recovery from it he would have convulsive attacks, lasting for a few moments, several times a day, and about once in four to six months a severe epileptic seizure.

During this sickness the opium was materially increased, and at the age of seven he was taking ten grains of solid opium every twenty-four hours, or in doses, three times a day, of three and one-third grains each.

The grandmother relates that during these years she made repeated and desperate efforts to discontinue the drug to him, but each time, after about forty-eight hours' trial and endurance, the condition of the child would become so pitiful her courage would fail her, and it was again and again resumed. Soon after his seventh birthday, she says, she determined that the drug would eventually kill the child, and finally resolved it might as well die from the want of it as from its effects. She then commenced to diminish the quantity gradually from time to time, and by May, 1884, had succeeded in reducing it to one grain at bedtime. This amount she continued to give until his admission to the asylum in September following, or a year ago. Since that time no opium has been given to him. The matron tells me that he was restless and uneasy and did not sleep much for a few nights immediately following his admission, but otherwise she did not observe any ill effects from its complete withdrawal.

The grandmother says as soon as she began to reduce the quantity of opium the epileptic attacks became less and less frequent, and have now entirely disappeared, none having occurred since a year ago last May, the time of the opium reduction to one grain at bedtime.

The following additional facts concerning him were elicited from the physician's application made in April, 1884: General health good. He began to walk at two years and eight months. At fourteen months it was noticed that he could not articulate. Before this he appeared very stupid, but this was attributed to the opium habit. Has a fairly developed forehead; vertex flat, with a depression over posterior surface of parietal bones; head wide. Has a slight halt in left leg, but growing less. Has had partial paralysis of left arm, also diminishing. Is of average size for his age,

active and vigorous, and not nervous except when out from under the influence of opium.

Appetite irregular, scarcely ever eats breakfast; likes sweet things, and particular what he eats. Sight and hearing good; is fond of music; notices bright colors, recognizes form, observes and distinguishes pictures; understands language and commands; will do errands, like bringing in wood and water. Commenced to speak at seven years of age. Says "pitty" for pretty, and attempts to call animals by names of his own, corresponding to their habits, as "pee-pee" for birds. Is cleanly in his habits; undresses himself, but cannot button his clothes. Feeds himself with a knife, and sleeps well after taking a grain of opium. Likes to tear things. Is of fairly good temper and obedient, but cannot be trusted. Wants or tries to talk all the time, and amuses himself by running about the house riding a stick which he calls "pony."

The head measurements, as taken by myself recently, are as follows: Circumference, twenty inches; transverse circumference from the external auditory foramina, thirteen and a half inches; from the intercilium to the occiput, eleven and a half inches. The vertex looks flattened, with a depression or valley along the line of the sagittal suture, or between the parietal bones. The palate a little narrow and vaulted; teeth a little irregular.

This case was admitted previous to my arrival at the asylum last fall, and my attention was not directed to his remarkable history until a few weeks ago.

I have with some care inquired into and elaborated his case thus fully, not for the reason that the features of his idiocy present any striking or unusual peculiarities or characteristics, but because I believed it a rare and exceptional case of the opium habit in one so young, and really acquired from a time, at least, commencing with the day of his birth. My memory does not recall any similar or parallel case on record, and during the brief period and opportunity I have had to look up the authorities on the subject, I have been

unable to find or learn of a single case approaching it in character, reported. Whether these twin boys born of this mother, an opium-eater for seven or eight years previous, and in the habit of consuming, as her mother supposes, from ten to twenty grains of solid opium daily, and probably more during the natural anxieties of her pregnancy, really directly inherited this habit from her *in utero*, is one of the questions that arises from the history just narrated. Were the crying, the struggles, and the restlessness of these babes as described, that commenced about six hours after their appearance into the world, due to the want of opium from an inherited opium habit, and obtained *in utero* through the medium of the mother's blood? The time that elapsed before the uneasiness and screaming commenced; the quiet and repose that followed the opium administration, its resumption again after a period of about eight hours, and continuance until the second administration, a tranquil condition for another eight hours, and a subsequent corresponding history, that repeated itself over and over in this manner in these cases, would incline to the opinion of the possibility of the direct transmission to them of the habit through the mother, and a consequent acquisition of the habit at birth. Another point which makes these cases extraordinary and adds weight to the possibility of such a condition, is the fact that here were two babes, twins, each beginning to cry and fret about six hours after their birth, and from the history given, pertinaciously, frantically, and rebelliously persisting again and again until appeased by the opium draughts, and both having been subjected to precisely the same pre-natal influences. — *From the Proceedings of the Association of Medical Superintendents of Asylums for Idiots and Feeble-minded.*

The *Wine and Spirit Review*, published at Louisville, Ky., is a large journal devoted to the production and sale of spirits. It is replete with interesting and curious facts, which in these times of temperance agitation are very suggestive.

RESULTS OF TREATMENT.

No intelligent person who has observed the march of human thought into the recently explored realms of Psychological medicine and the treatment of mental diseases, but will get new views as to modes of treatment, more especially of that class for whom nearly thirty years ago this institution was organized. The favorable results of each succeeding year, only confirm and demonstrate the truth of the humane and wise idea that led to the organization of the institution, viz. : that intemperance in all its stages may be not only checked and mitigated, but in many instances permanently cured, and the subject fully restored to his normal condition of health and sobriety.

Such results may not be reached by the final and utter extinction of the morbid desire for alcohol, so much as by a development and cultivation of opposite and ennobling qualities, which by their vital action, hold the depraved mental tendencies of the subject in constant and absolute subjection, so that they become as inoperative as if they did not exist.

This is as near an absolute cure as we can hope to reach, as the testimony of all inebriates concurs in the fact that the appetite for intoxicating drink never dies, though it may be put to a life-long sleep.

It cannot be expected that the final and complete results of the treatment of our patients, so variously circumstanced and conditioned, can be fully known. From this common center of reform, hundreds have struck out in new and divergent paths, and are lost to our view in the general whirl of business and laudable enterprise. Whenever any one does fall into his previous habits, we are certain to be informed of the fact, as few things travel so fast and so sure as ill tidings of man's vices and misfortunes.

We can congratulate ourselves on the fact that hundreds who have been under our care are now in active life in our immediate vicinity, of whose doings we are cognizant, and it is a source of pleasure to us to know that their correct and

consistent conduct is productive of happiness to themselves, and does honor to the institution and the humane work which it has in hand.

DR. ALBERT DAY.

Dr. Shepard of Brooklyn, N. Y., sends us the following item in the practice of Dr. Rand of Brooklyn, which is worthy of note :

Male ; age, 23 ; American. Has been a hard drinker for two or three years. When seen, patient was complaining of anorexia, insomnia, and muscular tremor—the latter especially well marked. Ordered the following :

℞	Tinct. nucis. vom.,	ʒ iss.
	Tinct. capsici,	ʒ iii.
	Tinct. cinchon. les. ad,	ʒ ii.
		M.

Sig. ʒi. every three hours.

℞	Squibbs chloral hydrat.,	ʒ ii.
	Potass. Bromide,	ʒ ss.
	Aquae, ad,	ʒ i.
		M.

Sig. ʒi. every one to three hours, as required.

Within the hour after the first dose, the nurse left the room for a few moments, and the patient drank the contents of both bottles. When seen, one hour later, sleep was profound ; pulse, 80, and regular ; respiration, slow and deep. It was impossible to rouse the patient, except so far as to get him to swallow some brandy and water.

Considering the chloral and bromide as the physiological antidotes to nux vomica, and the nux vomica as bearing the same relation to chloral, I concluded to do nothing but watch for symptoms that might indicate danger from either of the drugs mentioned.

During the six hours following, the pulse ranged between 70 and 90, and the respiration between 14 and 20 ; but there seemed to be no definite relation of the accelerated pulse to the quickened respiration, the latter being sometimes 20 per minute, when the former was 70.

Patient did not vary his position during this time, except once, when, in endeavoring to rouse him, he turned over

suddenly and fell from the bed to the floor, without evincing any pain from the fall. Anæsthesia appeared to be complete. Pulling the hair caused no evidence of pain. There were no symptoms of strychnia poisoning. The prescriptions were put up by a reliable druggist, and Dr. Squibb's nux vomica and chloral used.

The patient slept for sixteen hours, and came to my office the next morning, having, as he said, no recollection of anything that transpired from the time he took the drugs up to the time of awakening, sixteen hours afterwards.

By HOWARD RAND, M.D., Brooklyn, N. Y.

Dr. Taylor, in a late discussion before the Richmond Medical Society, mentioned the following case to illustrate the danger from cocaine intoxication. A young physician who, while a student, had cocaine prescribed for him for some supposed kidney disease. The cravings of his system for more of the drug became more and more pressing. If his own knowledge warned him of his danger, he probably consoled himself with the reflection that his kidney disease was progressing, and more of the remedy was demanded. For weeks before he was seen by Dr. Taylor he had been in Richmond on a protracted spree, and his conduct was so strange as to give rise to the suspicion that he was insane. It was then discovered that he was taking cocaine hypodermically every few hours. When a stop was put to this he was a raving madman; swore he would kill himself, and had to be watched constantly to keep him from carrying his threat into execution. His delirium finally became so violent that a commission of lunacy sent him to an asylum, but in a few days he made his escape and returned home. His brothers then took charge of him, confined him to his room, and kept a guard over him constantly, and in that way finally broke him of the habit, to which he was a slave. For six weeks his ravings were represented as violent, and his delirium was acute and distressing.

In the *Southern Practitioner* for September a very practical fact is mentioned concerning capsules as vehicles for unpleasant medicines. When any form of alcohol is taken with them, they are rendered insoluble. Tannic acid also precipitates the gelatine covering and renders it innocuous. When the stomach is inflamed and irritable, following excess in the use of spirits, never use medicines in capsules. Never give chloral or morphia in this form to inebriates; it is useless.

Minutes of the *Twelfth Annual Meeting of the National Women's Christian Temperance Union* is a volume of 230 pages. Organizations, like individuals, not infrequently become ambitious, and attempt too much, and thus fail to accomplish the good which would follow from more concentrated effort.

In Miss Willard's address before the Christian Temperance Union, she calls attention to the need of "Reformatories for Women, Homes for Adult Incapables, Homes for Moral Incapables, Inebriate Asylums for Men and Women, Normal Institutes, Training Schools," and so on.

A correspondent writes that over thirty thousand gallons of *Horsford's Acid Phosphate* are bottled and sold yearly.

The Coca Cordial, of Parke, Davis & Co., is no doubt the best form of this most powerful drug that is sold to-day. We especially commend it to all.

Wheeler's Tissue Phosphates: Combine calcium phosphate, sodium phosphate, and iron phosphate and they seem to have great value in bad nutrition, and general nerve debility.

Lactated Food, prepared by Wells, Richardson & Co., of Burlington, Vt., has taken a high rank among the remedial foods on the market. In our hands it has proved of great value in cases of opium inebriety, associated with functional stomach disorders.

The *Anglo-Swiss Milk Food* is endorsed by most excellent authorities, for all cases of deranged digestion among children and invalids. It should be tried in all such cases.

Fellows' Hypophosphites is used very extensively in both Europe and America, and its reputation is fully sustained wherever it is used as a remedy of great value in nerve and brain exhaustion.

Murdock's Liquid Food claims to be the only raw condensed food, free from insoluble matter, on the market. It has been before the public a long time, and has won a place among the valuable remedies.

Lactopeptine is now put up with gentian, strychnia, quinine, iron, bismuth, calisaya, cinchona, and phosphates, and in these forms are undoubtedly the most valuable of all known remedies for nerve and brain disorders.

Peptonized Cod Liver Oil and Milk, prepared by Reed & Carnrick, of New York city, claims to present the oil globules twenty-five per cent. finer than that found in any other preparation in the market. Hence its superiority.

Prof. Doremus of New York, writes: That the various preparations of *Maltine*, are superior in therapeutic value to any other extracts of malt made, and as nutrients they supply almost every tissue of the body, from bone to brain.

Dr. Frazier of St. Louis, writes: I have used with flattering results, *Colden's Liquid Beef Tonic*, as a food in a variety of cases — notably in cases of gastric irritability, and such acute inflammatory conditions of the gastric mucous membrane.

Dr. Crittenden of Unionville, Va., says: In pneumonitis, pleuritis, and bronchitis, I have found *Papine* to answer an excellent purpose. In dysentery it is useful both as an anodyne and in relieving the tenesmus. In the diarrhœa of children, I frequently combine with it bismuth subnitrate and prepared chalk. I have used it also in cystitis. In neuralgia, when I wish an anodyne, I use *Papine*. As an anodyne it is equal if not superior to morphia; and I have never yet seen any unpleasant effects from its use. As a hypnotic I find it to be an agent of great value.

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