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indorsed by the Association.

ALCOHOLIC POISONING IN LONDON, AND
HEART DISEASE AS ITS FATAL
RESULT.*

BY WYNN WESTCOTT, M.B., M.R.C.S.,

Deputy Coroner for Central Middlesex.

My daily experience of official life in London has not failed to impress me very deeply with the extreme importance of the study of "inebriety," which is beyond question the most potent factor in the causation of the crime, suicide, and even of the sudden deaths of this city. Without having been myself a total abstainer, I have long viewed with alarm the immense consumption of alcoholic beverages in this country; and I have always been desirous to aid in any way in my power those who have made a special study of the means for restraining the present excessive use of stimulants.

It was with great pleasure that I supplied, in the year 1888, to our very respected and most energetic President a summary of the results of an analysis of 1,200 inquests field by me, with special reference to alcohol as a factor in the

* Read at the October meeting of the English society for the Study of Inebriety.

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causation of disease and death. The most notable feature was that medical evidence proved that the direct causation of death was due to the existence of alcoholic intemperance in one case out of every 5.25 inquests—children's deaths being excluded.

More recently I made a special study of 1,000 inquests with reference more particularly to alcohol as a cause of "sudden death" from so-called natural causes, excluding deaths due to accident, willful injury, and suicide. The result of this analysis I laid before the "Medicine" Section of the British Medical Association, but it has not yet been printed. Of these 1,000 cases, after excluding all deaths under sixteen years of age, there were 303 deaths described as "sudden, unexpected, and from disease"; of these 88, or 29 per cent., were attributed to alcoholic excess as a prime factor. Of these 88, there were 57 males and 31 females. Of these 303 sudden deaths it is very notable that the very large majority died of failure of the heart, seven-tenths of the whole, against two-tenths from brain mischief, and one-tenth from lung complaints. The 210 cases of sudden death due to syncope tell the most serious story; of these cases 57 furnished absolute proof of excessive drinking; that is to say, alcohol was a prime factor in 28 per cent. of the total number of deaths from fainting and heart disease.

The point, however, to which I am especially desirous of calling attention is the extreme prevalence of fatty degeneration of the heart among those who drink to excess. Post-mortem examinations disclosed the existence of fatty degeneration of the muscular tissue of the heart in 77 cases; of these 33 or 43 per cent. were chronic inebriates. This record demonstrates very clearly the extreme danger to life of drinking habits; more especially because of all the diseases of the heart, and of all the diseases set up by intemperance, fatty disease of the heart is notable as affording so few *reliable* symptoms of its presence, which is generally only a matter of inference; and moreover it is a disease over which treatment appears to have but slight control. Syncope, or sudden

failure of the heart, is beyond all question the most common cause of sudden death ; fatty disease of the heart more often ends suddenly than any other heart disease ; chronic inebriety is found by computation to have existed in almost one-half the cases of fatty disease. How then can I refrain from stamping alcohol as the chief cause of the sudden deaths of our countrymen. Of all the evils which may occur to us, there is one selected by the national faith as a fit subject for prayer for deliverance, and that is from *sudden* death.

So long as unexpected death is considered an evil, it is clearly our duty to recognize that abstention from intemperance is a positive obligation, for it is surely a folly to pray for deliverance from an evil, while we neglect the remedy which science has already shown us is so largely in our own hands. The intemperate man who professes to be a Christian should be recognized as irreligious.

But indeed, it is a truth, which saddens an Englishman, that Christian nations are, as compared with those of other faiths, not notable for temperance ; and that there yet exist many millions of believers in older faiths which insist on total abstinence, whose criminal statistics compare very favorably with our own, and to our discredit.

An interesting side-light is thrown on this question by remarks that have been made to me by those who are familiar with life among Buddhists and Mahometans, in districts remote from recent alcoholic degradation, viz., that sudden deaths and fatal faintings are there conspicuous by their rarity.

I have recently made a complete analysis of 1,900 inquests held by myself, and in regard to which I am aware of *how far* the question of alcohol has been sought out. I find that the average number of cases of inquest in which alcohol has been a distinct factor has risen a little since 1888, so much so that the average of the whole number of cases has risen from one in every five and a quarter, to one in every four and a half of the deaths of persons over sixteen years of age.

These 1,900 inquests furnish 1,150 deaths above this age ;

or these 255 were caused or mainly due to drink. Of these 255 there were 38 suicides, 47 from accidental causes due to intoxication, and 170 due to disease of internal organs set up by alcohol. Of these 170, there were 73 ending in syncope from heart disease, and only 97 from all other diseases put together.

Again, looking at the figures from a different standpoint, of *all* the deaths due to syncope from heart disease, there was evidence of alcoholic intemperance in more than one-third of the cases; in the proportion of six to nine, or in six cases out of every fifteen.

These results will not be found to agree entirely with the tables of causation in any general register of mortality, and this for several reasons.

For one cause tending to *increase* the ratio of alcoholic deaths in my lists, notice that although in a very large number of cases relatives and interested persons succeed in hiding a man's sins of intemperance, yet a coroner does succeed in tracing this causation in a number of cases, where the existence of intemperance would *not* have been disclosed on the face of an ordinary death certificate.

On the other hand, the coroner only gets an enquiry into deaths from disease, when they chance to be sudden, or to take place away from a patient's home, or to take place when the sufferer has happened to have been left alone; while the general practitioner *can register as alcoholic if he chooses* all the deaths accelerated by alcoholic excess which have been preceded by illness — liver and kidney diseases, dropsy and delirium, and every doctor could tell you how numerous such cases are in general practice.

It is indisputable, however, that the desire to shield the reputation of the dead, and to spare the feelings of the living, falsifies entirely the record of the evil results of intemperance.

I cannot refrain from expressing the opinion that the medical profession has hitherto failed to recognize the *large* share which alcohol contributes to the etiology of heart disease, and especially to fatty degeneration of the heart.

I have, in face of the prominence given to the subject as the result of my researches, consulted the more important medical works which treat of intemperance and the pathology and causation of fatty heart, and I do not find my contention to be recognized sufficiently clearly. In Quain's *Dictionary of Medicine*, I find in the special article "Fatty Degeneration of the Heart" that the word alcohol or its equivalent does not occur at all. In the section of "Ætiology," the following causes are noted:—obstruction of the coronary circulation, lowering of the vital powers, chronic cachexia, poisoning by phosphorus, and loss of blood. Acute specific fevers and pregnancy conclude the list; this is Dr. Quain's own article.

"Fatty Degeneration" in general is the subject of another article and there again there is no mention of alcohol; this is written by Dr. Mitchell Bruce.

It is true that if we turn to the article "Alcoholism" we are told that chronic alcoholism causes "the amount of fat in the blood to be increased or to become more visible"—"the heart presents fatty infiltration or even degeneration in its muscular tissue"—this by Dr. Curnow, and is of course quite true, but my point is that as a factor of death, alcohol is found in solemn earnest to cause "syncope from fatty degeneration of the heart" out of all proportion to the number of sudden deaths it causes from setting up all other diseases whatsoever.

In the "*System of Medicine*" of Russell Reynolds, 1871, there is a considerable space devoted to the causes of fatty degeneration of the heart, and we find anæmia set first, as from hæmorrhage or pregnancy, wasting diseases such as phthisis, cancer, chronic suppuration, and Addison's disease; toxic influences, such as rheumatism, erysipelas, puerperal fever, and malarial fevers and gout; and lastly I find that Dr. Cowers, the writer of this article, has recognized, more fully than any other authority I have consulted, the great effect of alcohol. He writes: "Alcohol, if not the most powerful, at any rate is the most frequent, toxic cause of fatty degeneration."

Ziemssen places chronic alcoholic intoxication as a cause after phosphorus and the mineral and vegetable acids

Aitken, 1880, maps out the causes into 9 classes, neither of which includes intemperance, and this is in the 7th edition of his work.

Frederick Taylor, 1891, under "Alcoholism," does not mention fatty degeneration of the heart, only that of the arteries. Roberts does just refer to it.

Perhaps the most popular recent medical text-book is that of Fagge, edited by Pye-Smith, 1891; in this work again, under "Fatty Heart," there is no mention of alcohol; under chronic alcoholism, in the paragraph "Morbid Changes," it is not specified; under "Prognosis" there is the bald statement that "fatty degeneration may be developed"

French physicians seem to have called *more* attention to this matter than the English. Trousseau and Lancereaux say "the appearance of the heart in alcoholism is *quite special*, the fat does not merely line the heart, it likewise penetrates between the muscular fibres, and induces atrophy by the compression it exerts upon them; at a later date the muscular fibers become fatty" — and this was written 20 years ago.

It is to be hoped, then, that the teachers of medical science will give more attention to this point of causation; and it seems to me to be a new weapon of considerable power in the armory of those who are fighting the battle of temperance, when one can point out to those who by faith and training shrink from *sudden* death, how surely the habits of chronic intemperance lead on to a *suddenly* fatal termination.

I have already briefly referred to the existing imperfection of medical science with regard to the diagnosis of heart disease. Notwithstanding that within the last 50 years there has grown up an entirely new science, introduced by auscultation, a science with a literature of vast extent, almost entirely referring to the discovery of heart and lung ailments; yet apart from the more *accurate* nomenclature of valvular diseases, and the more exact estimation of the proportions of an hypertrophy or a dilatation, I cannot myself recognize that

The physician has made much progress toward the *absolute identification* of those ailments which confer the greatest risk to life. The casual visitor to a Coroner's Court is struck by nothing more forcibly than by the constant recurrence of the remark in enquiries into death from syncope — that there had been no suspicion nor discovery of heart disease. Again I have many times heard old practitioners remark that such of their patients who are known by them as "heart cases" rarely die suddenly, although they are surely destined to a fatal result within a measurable period, through the slower path of dyspnoea, lung congestion, and dropsical effusion.

Great, then, is the difficulty in recognizing those cases in which to fear a suddenly fatal issue — in mankind in general; yet every difficulty is intensified and even doubled when a physician has to deal with the drunkard. For he, by actual aberration of a poisoned brain, will perversely throw every difficulty into the way of an investigation, and when catechised upon his intemperance will tell falsehoods with the most unblushing effrontery, while he professes to tender you the most complete confidences. His promises are made only to be broken at the earliest opportunity. I am very doubtful if any madman in any asylum is more unreliable than is the patient with the drink craving, in regard to the concealment of his excesses when he deems concealment to be necessary.

The *Pacific Medical Journal* quotes from a Norwegian Health Journal to the effect that alcoholic drinking has declined in Christiania, and ether drinking rapidly increased. Potatoes and barley brandy have fallen in demand, and the importation of ether from London doubled. The use of ether seems to be more fascinating to the Norwegian drinkers, and all classes are trying it, and evidently it will be a famous drink if not checked in the near future. It has been used for some years, but only recently has it come into any prominence. The supposition that this form of drink was confined to Ireland is a mistake.

DISCUSSION ON THE RESTORATIVE HOMES
BILL IN THE MEDICO-CHIRURGICAL
SOCIETY OF EDINBURGH.

The following is a condensed report of a very suggestive discussion on the proposed bill to establish homes for the care and treatment of inebriates in Scotland. As an expression of the views of the leading medical men, it will be read with unusual interest.

The President said :— " Gentlemen, you are aware that the special meeting of the society this evening is called for the consideration of a subject of very great and wide-spread interest and importance, both in a medical and legal point of view. Many difficulties beset the medico-legal aspect of the subject, and our object now is, not to bring forward individual cases, but rather to discuss the general question, and to aid in the elucidation of those points of which there are a considerable number requiring mature deliberation in order to their being safely and judiciously dealt with in any legislative enactment which may be necessary upon this subject.

" The matter, you are aware, has been brought before the Secretary for Scotland, and a bill in connection with it has been framed by Mr. Charles Morton, W. S., the late crown agent for Scotland. The difficulties of which I speak, and which will be brought more prominently before you this evening, are the considerations and precautions which are required in framing any measures with the view of being adopted for the purposes of the bill which is proposed to be brought before Parliament. Such considerations will be recognized as those attaching to the admission of persons either as voluntary inmates or by committal as compulsory patients.

" There are responsibilities here which must be taken

into account. The next thing is the detention of such persons, whether voluntary or by committal, to consider what powers are to be conferred for the detention of these patients, and in whose hand these powers are to be vested. Again, we must take into consideration the exact definition of what constitutes loss of self-control, of what constitutes inability to manage one's affairs, or even of danger to self or others; and perhaps it might be well to consider whether any modifications are required in these cases where the inebriate is a habitual and continuous drunkard, or one of an occasional nature, where, perhaps, the lapse of months without any mental aberration whatever takes place between the outbreaks, which, however, may be serious at the time."

A letter from Professor MacLagan was then read. He wrote:—"I cannot now go into details, but I beg to express my cordial approval of the principles of Mr. Charles Morton's Restorative Homes (Scotland) Bill. To do any good we require to have complete power under proper legal restraints of saving these wretched people from themselves, and it appears to me that the legal requirements are ample for securing any one against an infringement of that which is, as regards this subject, an intense humbug—the liberty of the subject. I really have some difficulty in seeing who can be injured by this bill. It cannot be the victim, him or herself, whom we wish to save from ruin, soul, body, and estate. It cannot be his or her relatives whom we wish to rescue from worry and misery. It cannot be our excellent asylums, both chartered and private, of which, in Scotland, we have so much reason to be proud, because, as the law stands, we cannot legally commit the habitual drunkard to their custody. Why, then, should not parliament give us a chance and enable us to show, as I am sure we would do, that with proper but safeguarded authority, we could save these sad victims of that which we all recognize as a form of disease. I hope that the opinion of the society will be in favor of extended powers, and that the bill, avowedly tentative, will be confined to Scotland."

Professor Stewart said :—“ The subject which we are to discuss this evening belongs in a somewhat special way to this society. It is more than thirty years since Dr. Peddie formulated for the profession and for the public, in a very able paper read here, his views as to the necessity for legislative enactments for the benefit of certain classes of inebriates and their families and estates. In the discussion which followed, Sir Robert Christison, Mr. Murray Dunlap, M.P., Prof. Laycock, and others, took part, and from that time, as well as in some measure before it, the members have been interested in the question.

“ In the opinion of the council, the present is an appropriate time for renewing the discussion, for we have now had ten years' experience of the working of 'the Habitual Drunkard's Act, 1879,' and by the light of this experience, we are in a position to reconsider the question. Further, many members of the medical and legal professions in Edinburgh have had the opportunity of studying the provisions of the bill, which has been prepared by a very able and distinguished lawyer who was, for a number of years, and under several administrations, crown agent for Scotland, in which it is proposed to deal with the question on new lines. This suggested bill is the more deserving of study, as it is known that government officials have been carefully considering its proposals, and the opinion has been expressed in influential quarters, that Mr. Morton's bill would soon be introduced into the House of Commons, for those in authority had expressed great sympathy with it.

“ The difficulties of dealing with the topic are two, viz.: first, that the necessity for something being done is so obvious as scarcely to admit of argument or illustration; and second, that the devising of suitable plans is beset on every side with embarrassing considerations.

“ The experience of every medical practitioner, of every family lawyer, and of too many of the general public, supplies examples of intemperance of many kinds. There is the steady tippler, who takes small quantities of alcohol at inter-

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vals during the day, never getting intoxicated, and yet certainly shortening his life by such indulgence. There is the man who gets drunk almost every night, but keeps perfectly steady and attends to his work well during the day. There is the convivial victim of intemperance, who is sure to exceed on every festive occasion. There is the ordinary case of delirium tremens or acute alcoholism. There is the victim of chronic alcoholism and of alcoholic paralysis. There is, besides, the maniac, the monomaniac of suspicion, the melancholic, and the general paralytic, each of whom may owe his insanity to his drunken habits. But besides all these, there is yet another class, and it is for them that legislation is specially required. Sometimes, such patients look wonderfully well in the intervals between their attacks. Sometimes they show all the features of the chronic alcoholic. The face is flabby, sometimes pale, sometimes with red or coppery nose or cheeks, the muscles are jerking and unsteady, the tongue is tremulous and furred, the throat is congested, and the breath smells of more or less altered liquor. The stomach is frequently disordered; the appetite poor, especially of a morning, with a tendency to sickness, with vomiting of mucus; the bowels are irregular; the liver is extended beyond its normal limits, congested and rather tender on pressure. The heart acts with little vigor, often too quickly, and sometimes with fits of irregularity or palpitation. There is a frequent tendency to clear the throat, and some cough; the skin is soft, and tends to perspire; the urine is copious, sometimes pale and of low sp. gr., sometimes clouded with urates, or depositing uric acid, or showing some albumen. But the nervous system is chiefly changed. There is undue sensitiveness to impressions, jerky and unsteady muscular movement, with incapacity for sustained exertion. There is a liability to sudden flushings or pallor, excessive dryness or excessive perspiration of skin; there is sleeplessness, nervous irritability, loss of the faculty of concentration, and impairment of memory; while, perhaps, from time to time after a drinking bout, there is a regular attack of delirium tremens,

or eleptiform convulsions, or of alcoholic paralysis, or of *mania a potu*. But at all events, there is an insatiable craving for drink; sometimes constant, sometimes coming on occasionally, a craving which is declared to be absolutely irresistible, not that the drinking usually gives pleasure, but the desire cannot be resisted. No end of cunning and ingenuity is manifested in the attempt to get liquor. The moral nature becomes so debased as to be absolutely incapable of distinguishing truth from falsehood; the most ingenious tricks are resorted to, the most unblushing lies are told. The patients lie with a calm resoluteness, assure one with a pleasant smile that they never exceed, and they are never put out of countenance if you draw the half-emptied bottle from beneath their pillow, or otherwise convict them of the most flagrant untruth. They are liberal of promises in the highest degree, are willing to acquiesce in any opinion which one may express to them. Instead of the sweet reasonableness which a recent much-lamented writer used to describe as one of the best qualities of man, they have an unreasonable sweetness so far as words and promises go. Their manner is often tinged with a peculiar sadness. They seem to contemplate their own careers with melancholy complacency.

"But, while such moods of mind are common, a great change manifests itself during the drinking bout, or when they are seeking for the gratification of their appetite. Then they frequently get into trouble, steal or otherwise bring themselves within the grasp of the law; some patients of this kind are constantly getting imprisoned for longer or shorter periods.

"Mr. Smith, governor of the prison at Ripon, gave some statistics regarding such a case, whose history was known to him for twenty-five years. The subject, who was a woman, had been seventeen times in Wakefield jail, for periods of from three days to three weeks; eleven times in Leeds jail; fifteen times in Northallerton jail; fifteen times in Ripon jail; all for being drunk and disorderly. She was thus imprisoned fifty-eight times; and of the twenty-five years of

which I have spoken, spent five years nine months and twenty days in prison.

"Dr. Peddie told of the wife of a respectable tradesman who had for forty-two years been a habitual drunkard. Every possible means had been tried for her cure, but without avail. She had been boarded in different parts of the country, prevented access to drink, shut up on different occasions in a lunatic asylum, fifteen times in different places of shelter and refuge, fifteen times convicted of drunkenness and disorderly conduct, and sentenced to various terms of imprisonment, running from 14 to 60 days; and her periods of imprisonment had amounted in all to 778 days, besides 200 nights spent in police cells.

"He told also of a son of this woman, who died in prison at the age of 38. He began to drink when a mere lad, and when sober, quiet and amiable; had at times an irresistible impulse to drink, and then became furious, dangerous, and much given to thieving. Thirteen times he was convicted of being drunk and disorderly, four times for theft; he spent 922 days in prison, besides many nights in the lockup when he was found in the streets drunk and incapable.

"The great special characteristic, then, of this form of intemperance is, that the victim is possessed of an irresistible and insatiable craving for liquor; it may be constantly, it may be in paroxysms, recurring at longer or shorter intervals. This craving must be gratified at any cost; the victim becomes regardless of honor or truth, unaffected by appeals to reason or self-interest, by the tears of affection, or by the suggestion of duty either to God or man.

"A committee of the House of Commons defined the class as including those who, notwithstanding the plainest considerations of health, interest, and duty, are given over to habits of intemperance which render them unable to control themselves, and incapable of managing their own affairs, or such as to render them dangerous to themselves or others.

"Now experience has made it abundantly plain that little or no benefit accrues from punitive confinement in jails, or

from short periods of residence in asylums for the insane, or in houses of refuge or shelter, while reason and experience both lead us to believe that confinement in suitable homes for lengthened periods might, in a certain proportion of instances, effect a cure, especially if the treatment were applied at a comparatively early period of the disease. The results of experience have been distinctly encouraging. I am unable to attach much importance to the returns published in regard to some of the minor institutions in England, as their results surpass what we are entitled to expect.

"The government report for the year 1887 states, on the authority of the manager, that two-thirds of the patients discharged from the West-Gate-on-Sea Retreat were permanently cured; also that most of those who remained in Walsall Retreat for twelve months did well; while the Halesowen Retreat showed a fair proportion really cured; but results would have been better if patients had placed themselves earlier under restraint, and remained at least twelve months.

"The Twickenham results are described as more than encouraging. But the Dalrymple Home, in which the utmost confidence is placed by those well fitted to judge show, that during three and a half years after the opening of that institution, there were 103 admissions and 85 discharges, the average period of restraint being six and a half months. Of the 85 discharged, 36 are reported doing well, 2 improved, 27 not improved, 1 insane, 3 dead, 16 not heard from. I could adduce many striking results from some of the American institutions, but shall ask you to fix your attention upon the facts which I believe to be reliable and carefully sifted, that of the 103 admissions to the Dalrymple Home, 36, or upwards of one-third, are reported as discharged and doing well. Such a result is unmistakably encouraging.

"Mr. Morton's bill is framed on the lines recommended by the Select Committee of 1872, but proposes to deal only with the cases of persons able to pay a moderate board. He proposes it as a tentative measure applicable to Scotland,

and fitted to gain experience to guide in the establishment of similar institutions of the pauper class, and in other parts of the empire.

"In its preamble he states that, 'Provision is made for the care and treatment of lunatics in Scotland, but no adequate provision is made in these Acts, or by the law of Scotland, for the care and proper treatment of persons who, although not exhibiting such symptoms as would warrant a medical practitioner to grant a certificate for their confinement in a lunatic asylum, are yet laboring under a special form of mental disorder, the chief distinguishing features of which are:—excessive and secret indulgence in intoxicants, the craving for which is more or less persistent, or occurring in fits, with remissions at intervals of time, and a marked change in the mental powers and moral character. And, whereas, such persons, by their habits and conduct, embitter, disturb, or break up domestic or social relations, and in many cases, bring themselves or families or others into a state of degradation, or ruin, or danger of life, it is expedient and necessary for the protection both of them and others, that such persons as above described should be cared for by providing means for placing them in temporary retirement, in a place of residence other than a lunatic asylum, under proper care and medical treatment, and under such restraint as will prevent them from having opportunities of continuing such vicious and ruinous indulgencies, whereby a permanent cure may reasonably be expected.'

"In this preamble it will be observed that there is no reference to other kinds of indulgence than the alcoholic; none to morphia or chloral; and it may be a question whether this ought not to be considered. The memorandum prefixed to the bill discusses its provisions with great care, and explains many of the proposals. Recognizing the necessity for a qualified and central authority to carry out its provisions, the bill ordains that the Board of Commissioners in Lunacy, and the District Lunacy Boards, should be entrusted with this duty, and that the small assessments which may be

required should be raised along with those for the Lunacy Acts. It proposes to give the Lunacy Board power, after due inquiry as to the necessity for the establishment of homes in each district for the reception of inebriates, to provide general accommodation in a district home, or to license the establishment of private homes for care and treatment under due medical supervision. The Commissioners in Lunacy are also authorized to frame rules, both for the conduct of district and private homes, and scales of charges for patients of different grades as respects their ability to pay for board and treatment,—all this subject to the consideration and approval of the Secretary for Scotland.

“It proposes that patients should be admitted to one of the licensed homes upon his own application to the superintendent. If he should refuse to apply, the bill gives power for admission and forcible detention by the following process: Any member of the patient's family, any other near relative or friend taking interest in him, or when there is no relative or friend to act, a magistrate in the public interest, may present an application to the sheriff to grant an order for reception and detention in a home. It is not proposed that the application should be intimated to the patient, but the applicant must make a solemn statutory declaration equivalent to an affidavit, fully setting forth the circumstance of the case. Two private friends of the inebriate, who are well acquainted with him, his family, and circumstances, must make similar statutory declarations; that one, or, if thought proper, two medical men should also certify, upon soul and conscience, as to the patient's condition. Upon such evidence, the sheriff is to proceed to consider whether he ought to grant an order for reception and detention. It is believed that in this way the necessary powers are given, without risk of interference with the liberty of the subject.

“With regard to the period of detention, it is proposed, in accordance with the recommendation of the select committee of the House of Commons and Upper House, that it should be for twelve months at least; but power is granted

for earlier discharge, should circumstances require it, or for prolonged detention if necessary.

"It is provided that the patient may at any time appeal to the sheriff for recall of the order and discharge, or to the Commissioners in Lunacy, with, of course, the right to appeal to the Secretary of State.

"It appears to me that what has been said makes it clear that an urgent need exists for legislation, if the proper legislation can be devised; that the existing legislation, although to a certain extent of value, is insufficient to meet our necessities; and that the general scope of Mr. Morton's bill is excellent, and many of the details admirably devised, so as to give us something distinctly in advance of what we have attained. The safeguards provided for the liberty of the subject are amply sufficient, both as to the precautions taken to prevent wrong admission, and to diminish the risk of undue detention.

"Although it may seem somewhat hard to add to the duties already discharged by the Lunacy Board, certainly no existing institution could compare with it in fitness for the work, and it would be difficult to conceive how a board could be devised better fitted to discharge the duty, even if such a board were to be framed of set purpose. It may be held that there would be no need of establishing district homes at the expense of the rates, as private establishments of the kind would speedily be set up if legislation of a permanent kind warranted their formation; and it is possible that this view is correct. But in its main points it appears to me that if such an enactment as this bill proposes was passed into law, we might reasonably count upon a perceptible diminution of the sum of human misery, the cure of many who have become the subject of this evil, and much benefit to their relatives and estates."

Dr. Yellowlees, Gartnavel Royal Asylum, said:—"We are all agreed as to the misery and distress thus caused, and to the necessity for something being done, and we are all agreed as to the helplessness of such cases without some

one helping them. The misery of it is that most of these people will not have the help. We are all agreed, too, as to the frequent hopelessness of cure. He was a very sanguine man, who found two-thirds of the cases in one retreat recovered! I am quite sure that those of us who have the widest experience of such cases have the darkest tales of failure to record. I think the only hope is in enforced abstinence, and abstinence is useless unless continued a long time — a year at least.

“ We are all agreed, too, that our present mode of dealing with such cases is a miserable failure. If poor people, they get into jail. That is not to be regretted. It is the best thing that could happen to them as the law now stands.

“ Referring to the case mentioned by Dr. Stewart, I do not think it is to be regretted that that man was five years in jail. It was best for the man and best for the public, and the public have a right to be considered; if they could have kept him longer it would have been far better. The futility of the jail treatment for short periods is perfectly certain, but there are some ‘habituals’ so bad and so hopeless that the only course is to put them beyond doing mischief to their neighbors. If the patient is not poor, you may try to get him into an asylum as a voluntary patient; that is, provided you can get an asylum superintendent good-natured enough to admit him. I habitually and deliberately refuse such patients. I refuse them for their own sakes, because they presently get so absolutely certain they are well, that you cannot persuade them to remain long enough to get any real good, and I object to them for the sake of the other patients as well. I say you have no right to impose such liars and mischief-makers upon respectable lunatics. The next thing you probably do, if you cannot get them into an asylum, is to practically banish them. You send them to a remote part of the country, to Skye or to Orkney, if you can get people to keep them, where you deprive them of money, and where they associate with people as bad as themselves. I have often thought that the moral tone of these inebriate refuges must be of the lowest.

"And still another most miserable recourse is to send them abroad, to let them drink themselves to death where they won't disgrace their friends. The present modes are thus miserable failures. Legislation hitherto has been useless."

Dr. Peddie said:—"I hope that this meeting of the society may be as unanimous in opinion on the question, as was the case thirty-one years ago, when I brought the matter before it, and read a paper on the subject. That paper when published, was circulated extensively; and the suggestions then made, following, as they did, the recommendation three years previously, by the Scotch Lunacy Commission of 1855 in their report of 1857, for 'prolonged detention in asylums of cases of insanity arising from the habit of intemperance,' created a widespread interest, and was most favorably commented on at the time, in almost every newspaper and journal in the country. Between that time and the passing of the Habitual Drunkards Act, twenty-one years elapsed.

"Dr. Stewart has given something of a sketch of the fits and starts of the agitation on the question during that period of time; the outcome of all the agitation was the present Act. The bill then brought in (it was not the first bill) by Dr. Cameron, was a strong measure on the subject, but it came out of Parliament an emasculated one, a very feeble Act, which has done very little but certainly some good, as it has advanced the question somewhat; but now we have before us a draft bill, which, if carried, will, I believe, accomplish a great deal more, although it certainly cannot altogether meet the grievous evil which exists in our midst.

"I wish to emphasize in some measure what has been said on some of the most important features of the draft bill. This I have attempted to note under three heads, but will add as a fourth, what I consider to be a defect in the proposed Act.

"I. The assertion in the bill that it has to deal with a special form of mental disorder, and that its provisions proceed on the supposition of the probability that cure or alleviation may frequently be effected.

" 2. That any arrangements for the establishment of 'restorative homes,' unless providing for easy voluntary admission to such, and, if need be, for compulsory enforcement and power to detain, must cripple and seriously nullify legislation designed for personal and relative benefit.

" 3. That the safeguards afforded by this bill are amply sufficient for the protection of the liberty of the subject, and all interests connected with individuals, families, and the public.

" 4. That the defect of the proposed Act is in its limited application to the well-to-do classes, and in not extending its provisions to the laboring, the pauper, and the criminal classes.

" 1. The assertion in the bill that it has to deal with a special form of mental disorder; and that its provisions proceed on the supposition of the probability that cure or alleviation may frequently be effected.

" The right understanding that a morbid mental condition exists in those individuals for whom legislation is sought, lies at the bottom of the whole question, a condition which requires mixed physical, mental, moral, and religious treatment in a *home* or a *retreat*, as if they were *patients* in a hospital, but not in an asylum, if that can be avoided.

" It is again and again asked by those who are opposed to legislation in the case of habitual drunkards, How are you to draw the line between drinking the vice and drinking the disease, and consequently carry out a just administration of law as regards control? The diagnosis in individual cases must be perfectly easy to common-sense observers; indeed, it should be more easy than in the general run of insane cases, or sometimes of medical disease: for not only will an opinion be formed from physical manifestations which are sufficiently marked, but substantiated and confirmed, as they must always be, by what is seen in the conduct of each person, and from the testimony of reliable witnesses as to existing circumstances and statements of historical fact. The preamble of the proposed bill, read by Dr. Stewart, is most admirable as to the points and limitation for which an act is

designed, both in the way of definition and description, and could scarcely, I think, be improved.

"The habitual drunkard is not the ordinary social drinker, one who imbibes freely even to intoxication at public feasts or at markets, or with boon companions, or who soaks a great deal daily, or resorts to frequent 'nips' for the love of the drink, while yet tolerably fit to discharge the ordinary duties of life. But he is one whose desire has originated as a disease, or has passed from intemperance into a condition in which there is an irresistible, ungovernable, uncontrollable craving for intoxicants, which he gives way to solitarily, stealthily, and deceitfully; and who is notoriously untruthful as to the desire and its indulgence, and utterly regardless of consequences to himself or others, even in spite of the most sacred social and moral obligations.

"Examples of these characteristics I could easily supply from personal experience did your time permit; but I am sure that all present, of much experience in practice, must be able to recall instances in corroboration of what I have stated.

"I shall only quote one short passage from the evidence I gave before the Select Committee of the House of Commons in 1872: 'I never yet saw truth in relation to drink got out of one who was a dipsomaniac; he has sufficient reason left to tell these untruths and to understand his position, because, people in that condition are seldom dead drunk; they are seldom in the condition of total stupidity; they have generally an eye to their own affairs, and that is the main business of their existence, namely, how to obtain drink. Then they will resort to the most ingenious, mean, and degrading contrivances and practices to procure and conceal liquor, and all this, too, while closely watched, and secured in deception, although almost fabulous quantities are daily swallowed. In many of these cases with which I have had to do, ladies as well as gentlemen — and the former are generally the worst so far as untruthfulness and ingenuity are concerned — I have had the most solemn assertions that not a drop of liquor had crossed their lips for many

hours, when they could not have walked across the floor; that not a drop of liquor was within their power, when I could find bottles of liquor wrapped up in stockings and other articles of clothing, concealed in trunks and wardrobes, put up the chimneys, and under beds, or between mattresses; and on a late occasion, in the case of a lady, after all means had failed in discovering where the drink came from, on making a strict personal examination, found a bottle of brandy concealed in the armpit, hung round the neck with an elastic cord, so that she might help herself as she pleased. The next morning on seeing that the drunkenness still continued, and that something more was to be got at, there was actually found a bottle of brandy tied in the same way round the loins and placed between her thighs. Such is but an instance of the determination to obtain the wished-for supplies.'

"This, therefore, must be considered a diseased condition closely allied to, if not an actual form of insanity. Again and again memorials have been sent to government signed by the most eminent men in our profession here and elsewhere, expressing their opinion in these terms, 'That habitual drunkenness is a disease closely approximated in a great number of cases to insanity, and susceptible of successful treatment.'

"Whether arising from protracted vicious habit, or from constitutional organization, or some disease or injury, the craving for drink is an impulse as strong as that in the kleptomaniac, or suicidal or homicidal monomaniac; and while it differs from all other kinds of drinking, it is characteristic of a considerable portion of the ordinary insane, because, when under the fit, as there is a total annihilation of self-control, the individual must surely be said to have lost the most distinguishing attribute of sanity. Besides, in such cases, there is evident proof that the morbid proclivity has an intimate connection with brain structure and function, since it is found so often the outcome of HEREDITY. I have seen many, and I know of many more remarkable

examples of this which I could quote if time permitted ; and in life assurance investigations into family history, I have found many instances of fathers, mothers, brothers, and sisters, grand-parents, uncles, aunts, and cousins, having been intemperate in various forms and degrees. Also, it is well known, and I have seen many instances in the course of my practice, and in assurance examinations, of families thus alcoholically toxically tainted, having among their members those who were actually insane, or epileptic, or hydrocephalic, or affected with other forms of nervous disease — inebriety thus producing in offspring its impress on the brain, which crops up in some form or degree, if not in the early stage of life, at least at some more advanced period. Nay, I have known mere children and those in early youth, exhibiting the alcoholic propensity ; and I have no doubt our psychologist fellows now present must have seen frequent instances of this fact. I am sure, also, that they must have frequently seen the alcoholic propensity manifested in those acutely insane, and could give us some types regarding the worst types of dipsomania, who are the most troublesome inmates of any asylum.

“As additional crucial proofs of the connection of a drink-craving propensity with brain disorder, I would simply notice the fact of the former, sometimes occurring in the worst degrees, from blows on the head, sunstroke, nervous shock from any cause, hemorrhage, and some fevers. And, finally, on this branch of the argument, I would notice the singular mental associations of habitual drunkenness with crime. These individuals, in police court language called ‘*habituals*,’ have generally a low mental development or twist. They vibrate between our police court and the Colton gaol, seldom out of the latter many days or weeks, and that from year to year, to the great cost of the country.

“Regarding these psychological puzzles, our excellent sanitary officer may, perhaps, give us interesting information, and also tell us if he has observed any curious uniformity in crimes committed under the influence of more or less

drink. On this point, perhaps, I may be again permitted to quote from my evidence before the Select Committee of the House of Commons, the following facts furnished to me by the late Sheriff Barclay of Perth. He said: 'Between the years 1844 and 1865, one woman was committed to prison 137 times for being drunk, and when drunk, her invariable practice was to smash windows. Then there was a man who, when drunk, stole nothing but Bibles; he was an old soldier, wounded in the head; he was transported for the seventh act of Bible stealing. Then another man stole nothing but spades; a woman stole nothing but shoes; another, nothing but shawls; and there was a curious case (the indictment against whom, I have) of a man named Grubb, who was transported for the seventh act of stealing a tub; there was nothing in his line of life, and nothing in his prospects, no motive to make him specially desire tubs; but so it was, that when he stole, it was always, excepting one occasion, a tub.'

"Now an important question for consideration, after what has been said of the habitual drunkard's condition, is, *Can* it be cured? I unhesitatingly say, that in a considerable number of cases it is curable; and that in a larger proportion, with suitable legislative arrangements, it might be. As in insanity, it is curable in the same sense that other diseases are. The more recent and acute the case is when taken under treatment, the sooner it is likely to be cured; while the more chronic and confirmed it has become, the more difficult will it be to accomplish that. So in habitual drunkards, from the imperiousness of the desire and habit, and the unwillingness to be under restraint, they are seldom brought early enough, if ever, under the necessary mixed medical, mental, and moral reformatory treatment; and as there is generally the greatest difficulty in getting them to submit to sufficiently prolonged control, and no power to enforce such, it is not fair to push aside as visionary the reasonable expectation which even the present results, under great disadvantage fully justify.

"The experience of our private licensed homes or retreats in Scotland and England, cannot be satisfactorily ascertained from the above causes, and the absence of government or other inspection, and of statistics; but I know of several males and females treated in different establishments for considerable periods of time, who have done well afterwards. Even the lady whose case I read to you, and seemingly so unpromising, was ultimately cured.

"A few days since, I had a note from Dr. Kerr of London, the President of 'The Society for the Study and Cure of Inebriety,' regarding the Dalrymple Home for Male Inebriates, Rickmanworth, Herts, which home, he said, might be safely referred to from its being the only disinterested home under the Act (that is not a private adventure), and which issues statistics annually, so as to be of permanent value. Dr. Kerr says, that, 'of the 115 cases discharged from the home up till 31st of January, 1888, 52 were then doing well.'

"Of course the time is too short to justify the claim of all these as cures; but, Dr. Kerr avers, that 'from my experience, one-third is as large a proportion as can reasonably be hoped for in the case of males.'

"As yet in England there is no licensed home under the Act for females, but there are seven for males. However, it is the general belief, that, with an improved law and suitable arrangements, the percentage of cure may be very considerable.

"I could quote in support of this opinion from a number of eminent and respected medical men in this country and America, whose opinions are worth having; but I shall only now notice the opinions of two, who are well known to all of us. The one is that of Sir Arthur Mitchell, who said in his evidence before the Select Committee of 1872: 'We should hope to obtain a cure by prolonged compulsory abstinence under conditions favorable to health. Whether this hope would or would not be realized I cannot tell; our experience in the matter in Scotland is far from encouraging; perma-

ment and satisfactory cures are certainly very rare, *but the experiment has never yet been quite fairly made*; and it cannot be so made without special legislation. If it were fully and fairly made, the expectation of good results, I think, is a reasonable one.'

"Then Sir Arthur goes on in the same answer to his questioner to say, that as to the comfort of such legislation to families, friends, and society, 'there are no uncertainties.'

"The other opinion is that of our friend, Dr. Batty Tuke, which I see in the report of the Saughton Hall establishment for 1887, dated 1888, in which he states there were two dipsomaniacs treated under the voluntary permission law; and going on to speak generally of dipsomania, he says:—'Even amongst their number, many have submitted to treatment for lengthened periods, and their subsequent history has shown that this intractable form of insanity *can* be permanently overcome. The records of this asylum show that many bad cases of dipsomania have been either cured or very materially relieved.'

"This I consider as very valuable testimony, and I feel assured that Dr. Clouston could corroborate the same. In regard to the American experience, about which much has been said in some quarters, I think we ought to deal with it generously and without prejudice; for, while there may have been some exaggeration regarding the percentage of cures, and confusion regarding the nature of cases under treatment, as in our own country, where the homes are not licensed or inspected, the modes of treatment and the reports of success cannot be trusted; yet, on the other hand, I think there has been, as regards American institutions for inebriates, a very great amount of misrepresentation, for I know there are a number of excellent homes in the States and in Canada, conducted in the same excellent way as in our Dalrymple Home, under the superintendence of scientific, benevolent, and honest men, doing most excellent work.

"The American physicians have shown much more earnestness and more of a scientific spirit in the study and

treatment of inebriety during the last twenty years than we have done, as the reports of their 'Association for the Study and Cure of Inebriety' and their QUARTERLY JOURNAL OF INEBRIETY show ample proof. And from what I have been able to make out from these, they seem to have a fair claim to 33 per cent. of cures — cures as permanent as can be said of cures of any disease. But I hasten on to say:

"2. That any arrangements for the establishment of homes, unless providing for easy *voluntary* admission, and, if need be, *compulsory* enforcement and powers for detention, must cripple and almost nullify legislation for individual or relative benefit.

ARE HYPODERMIC INJECTIONS OF MORPHINE LAWFUL? —

A suit has just been begun in South Dakota, by a Mrs. C. M. Sweitzer, against a doctor living in Aberdeen. She alleges that the doctor repeatedly "pumped morphine into her husband, so that he became a morphine fiend," and being intellectually and morally a wreck, was unable to provide for her support. The medico-legal questions involved in this suit are of considerable interest, as what is called the morphine habit is becoming one of the notable medical signs of the day. The facility with which hypodermic injections can be made and their possible results when long continued make it the duty of the physician to be careful when he adopts such a line of treatment.

Some of the newspapers are clamoring for a law placing some restrictions upon the administration of morphine, alleging that it is as dangerous as the sale of liquors to minors. Whether the consent of parents or husbands is necessary to make a hypodermic injection of morphine proper is a question which has never been before a court for decision, but if heavy doses were given and continued for a considerable length of time without informing the patient of the character of the treatment, and evil results followed, it is very probable that the physician would be liable in damages. — *North American Practitioner.*

THE ABSENCE OF REASONABLE MOTIVE IN
THE SO-CALLED "CRIMINAL ACTS" OF THE
CONFIRMED INEBRIATE.*

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"Motive" may be defined as that which actuates or influences, or that which determines choice. It implies the presence of an unimpaired will power, at least one that is not so seriously impaired as to be incapable of volition, and to be actuated either by right or wrong desires.

Impulse is the sudden application of some powerful motive, that causes the will to act hastily without its usual deliberation, or that exercise of the reasoning faculties that occurs when a purpose is deliberately formed. The genesis of impulse may be a good or an evil motive.

In both instances, either when the act results from the motive operating upon the mind through a deliberate and logical course of reasoning, or impulsively, as when the motive acts independently of, or supersedes and dethrones reason if it attempts to assert itself, there is one condition that is common to both, and that always is present, namely, *consciousness of the act*. The person invariably knows he has performed the act whether the motive were good or evil, the result of deliberation or of impulse.

How often do we hear the expression, "What motive urged him to do such an act?" and if the person be in a normal mental condition, the law, if the act involves a legal infringement, arrests and punishes the transgressor. But are these words applied to the acts of an insane person? Cer-

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tainly not. All acknowledge that the will power in this case is held in abeyance in some instances, or permanently annulled in others in which the insanity is incurable. The actions of the acute or chronic insane are senseless and utterly devoid of reason; if a quasi motive is asserted it is insufficient, and as a rule ridiculous, incompetent to explain an act often involving matters of the greatest moment, even life itself. This is seen in certain forms of monomania. Thus the pyro-maniac sets fire to a crowded tenement, and gives as a reason for his motive in so doing that he likes the excitement and confusion incident to such a scene; all other motives based on rational explanation being excluded, such a one would be regarded and dealt with simply as a person possessing a dangerous monomania, and demanding close confinement in an insane asylum. No one is held responsible for his acts, if he is incapable of exercising his will power, the ability to reason from cause to effect or discriminate between good and evil courses, and the consequences resulting from these.

In some forms of insanity where the will power and reason are not totally annihilated, and the insane person capable of exercising a discriminating power to a certain extent, having at least a partial knowledge of right and wrong—even in these cases the insane person is never legally *punished* although he may be disciplined by "institutional forms of correction"; this treatment is much the same as that of a child who has not yet arrived at the years of discretion, and is still subject to his parents; the parent may correct the evildoer of tender years, yet the law will not punish such an one.

The law recognizes the absence of full responsibility among the more youthful class of criminals, and among the "criminal insane," so-called. In the former instances the State establishes "reformatories," in the latter, an asylum for the "criminal insane." But while the insane, the imbecile, the idiotic, and those of tender years have thus been leniently dealt with; by some strange, illogical process of reasoning, or

by actual indifference to the facts of the case, the confirmed inebriate has been excluded from all these benefits, and, moreover, his inebriety has been regarded not as an extenuating circumstance, but rather as an aggravation of his so-called criminal act.

Are his acts rational? Are they based on a reasonable motive? Are they the result of a well-balanced mind? Is he always even conscious of the acts he performs? Analyze the acts of the confirmed inebriate and you will find that they are the acts of an *insane person*. Insane from the temporary or habitual use of alcohol.

If we can show that in the majority of cases, in the acts of the confirmed inebriate there is absence of proper motive, absence of intelligent purpose, absence even of consciousness of the act in some instances, ought he not to come under the benefits of that unwritten or recorded law which excludes from penalty the insane or those of an irresponsible age, and does not hold them responsible for their acts?

It has been abundantly shown, particularly by the researches of Dr. T. D. Crothers, that amnesia, partial or complete, is the mental condition of the average confirmed inebriate. If the loss of memory is complete, he becomes a veritable automaton; his movements are mechanical, devoid of thought or reason, and he is therefore unconscious of his acts; under this condition what he does may be ridiculous or even dangerous. His actions are similar to those of a somnambulist who, walking in his sleep, performs deeds of which he is totally unconscious when awakened. The acts of the confirmed inebriate are thus often performed unconsciously, and when he comes out of this "trance state," so-called, or condition of cerebral automatism, he has not any knowledge of what he has done, and yet oftentimes there is a seemingly rational action on his part, and his condition may not be detected because not suspected, by those with whom he is brought in contact; while in this condition the inebriate may commit acts that are criminal.

Mendacity has been set down as one of the prominent

characteristics of the inebriate, but I am convinced that the denial of the inebriate of the statements he has previously made or the acts he has done, when confronted with them, is often due to his utter unconsciousness of ever having made such statements or performed such acts.

The "testamentary capacity" of a confirmed inebriate should be excluded on this ground, and no "confirmed inebriate" should be empanelled in any jury, nor should his testimony as a witness be received in any court.

The validity of the signatures of confirmed inebriates to wills, contracts, or affidavits should always be questioned if allowed, and "marriage" contracted under these conditions should be annulled. I am acquainted with an instance in which the confirmed inebriate, a young man of wealth, contracted such a misalliance. The validity of the marriage was not questioned, in order to avoid publicity, and the woman, whose sole object was money, finally consented to relinquish her claim for the sum of twenty thousand dollars. Now I maintain that such a marriage was not valid, and should not have received legal recognition.

Not only in the trance state, where consciousness seems to be annulled, and the memory temporarily abolished, may the inebriate perform acts that he is totally unconscious of, as a somnambulist or automaton, and thus render himself liable to criminal procedure, or the subject of fraud on the part of others; but there is under this condition a tendency to repeat the crime or act he may have been previously guilty of, *monomania*, so to speak, for a special act.

Dr. Alex. Peddie of Edinburgh, reports the following cases:

At the prison of Perth, one woman was committed 137 times for being drunk; *her invariable practice was to smash widows*. A man when drunk stole nothing but Bibles. Another stole nothing but shawls; another shoes. Another was transported for stealing tubs on seven different occasions; with one exception he was always guilty of tub stealing. Others have been repeatedly convicted of horse stealing.

In others the destructive tendency is marked by unusual prodigality and waste, such as scattering money in the street, or throwing it in the fire. Such persons are notorious for "cleaning out" a saloon, smashing, breaking, and throwing out on the street articles of furniture, etc. There is not any "reason in the madness" of these temporarily insane inebriates. Their actions are motiveless. The whole machinery of the will is out of order, the power of co-ordination of the faculties is lost, hence all acts are erratic.

In addition to the "trance state" and "monomaniacal acts" of the confirmed inebriate, there is another condition under which the inebriate may perpetrate higher grades of crime. We refer to that condition where the prominent characteristic of the insanity of the inebriate is the *monomania of suspicion or persecution*, a condition not uncommon in the confirmed inebriate. Under this condition the inebriate is morose, taciturn, secretive; if he communicates his suspicions to any one, it is only occasionally and with great reservation. He imagines that enemies are trying to poison him; he hears voices in the air; he is followed, and in danger of being waylaid, or his wife is unfaithful to him; suspicion of "marital infidelity" is very common in these cases. Robbery, mutilation, murder, and every possible misfortune that may happen to a person, are imagined by these insane inebriates, as being applied to their case.

Acting under erroneous suppositions, such persons prepare themselves for the imaginary danger, or assault those whom they believe would injure them; or take vengeance on the innocent wife whom they judge guilty of marital infidelity. Oftentimes their mental condition is not suspected, and oftentimes only after they have wreaked their insane fury on those about them.

And just here, in parenthesis, we would remark that though the acts of the *confirmed inebriate* may fill every grade of crime, from petty theft to homicide, yet those criminal acts which call for shrewdness, mechanical skill, involving as they do the maturing of long-continued plans, well laid,

and aptly executed, as professional burglary, systematic forgery, etc., the confirmed inebriate is incapable of.

The burglar and the systematic forger may drink liquor, but they have the fullest exercise of their mental faculties, and the ability to use liquor moderately, so that their hand is steady, their nerves unflinching, and their reason unclouded. This is the universal testimony of the governors or wardens of penitentiaries and prisons in America and Great Britain, and hence, the great distinction between the so-called "criminal inebriate" over the professional criminal. The confirmed inebriate acts without motive, without the deliberation, without that usual caution and concealment that characterize the criminal who is in a normal mental and physical condition.

The popular impression seems to be, testifies Mr. John C. Salter, the warden of the State penitentiary at Chester, Illinois, that a criminal is necessarily a drunkard.

"The large proportion of criminals, such as burglars, forgers, and counterfeiters, need clear brains, steady nerves, quick perceptions, to carry out their plans, which would be impossible under the influence of intoxicating drink."

The assassin may drink to nerve himself to the deed, but only to that extent, and no more. This form of crime, where the alcoholic stimulant is taken *deliberately*, with the intention of nerving the criminal to the act, is most aptly shown in the great Shakespearian tragedy. Lady Macbeth, so stimulated and nerved as an accomplice to Macbeth in his bloody deed, thus soliloquizes :

"That which hath made them drunk hath made me bold ;
What hath quenched them hath given me fire."

Here the antecedents, the motive, and the subsequent events of the plot take precedence, and the alcohol taken neither to produce drunkenness nor lethargy plays but a secondary and inferior part in the whole tragedy. The "deep damnation of the taking off of Duncan" is not lessened one whit by the fact that alcohol was used by the conspirators and murderers

to nerve themselves for the tragedy. The alcohol did not prompt the deed ; it was deliberately taken to enable them to perform it— a condition quite the reverse of the insane inebriate or the person suffering from "chronic alcoholic mania," in which the "mania of suspicion," or an acute alcoholic mania is developed. Here the maniac, in his sudden fury, cyclonic in its violence and rapidity, kills those nearest to him without premeditation or motive.

Hence the insane inebriate, the subject of the monomania of suspicion or persecution, is easily traced to the act committed by him, and his attempts at concealment, if made at all, are illy disguised. He is not an assassin striking from the shadow and then disappearing. His acts are often in the open day and the most conspicuous public places.

Let me cite a prominent example or so, that may more forcibly illustrate this class of insane inebriates. And these cases will also partially illustrate the acts of the inebriate epileptic—different only in this, that the period in which the precursory signs appear is longer in the inebriate having the monomania of suspicion or persecution than in the epileptic inebriate. In the latter the act occurs as soon as the coma following the convulsion has passed off. The latter class are the most dangerous of all insane inebriates, for they add to the insanity of epilepsy, that also which alcohol begets. The following cases are instances where the characteristic type of the insanity of the inebriate was the "monomania of persecution" or of suspicion.

"The patient is 43 years of age, has been drinking to excess for several years past, is insane. The insanity is the direct result of his excessive use of alcohol—there is not any hereditary taint. His insanity lasted about a year ; he recovered and resumed his business, only to relapse, and is now drinking harder than ever. The immediate cause of his relapse was a sprained ankle, from which he suffered very much. His insanity at all times is that of the 'monomania of suspicion' or 'persecution.' His suspicions are mainly directed towards his wife and child. He walks about

the house, and if he had his full liberty would no doubt assault them, for it was found before his condition was fully ascertained, that he had concealed under the stationary washstand of the bedroom occupied by himself and his wife, a dirk knife, which was covered with some old clothes." (Reported by Dr. J. C. Lester, *Journal of Inebriety*, Vol. vi, p. 32.)

The following case was reported by Dr. Drake of Cincinnati, O., and was published in the report of the New York State Inebriate Asylum for 1866, the late Dr. J. E. Turner, Superintendent. At the time of the occurrence, it attracted the attention of the medical public in its bearing on the legal responsibility of the insane.

"John Birdsall, of Harrison, in that State, was indicted in 1829 for the murder of his wife with an axe, by dividing the spinal column in the neck. He was about 50 years of age, had been married to this his second wife nineteen or twenty years, and had children by her. For some years previous he had been subject to fits of intoxication. These, of late, were followed by delirium tremens, which generally lasted several days. In these paroxysms, he entertained great fears for his safety—ran about the village as if attempting to escape pursuit. At another time he concealed himself between a straw bed and a feather bed in his own house. He would point his gun from a window as if for defense against imaginary persons. He was also very watchful.

"The prevailing maniacal delusion was that his wife was in combination with his neighbors, and his son by his first wife, against his life. He had charged her during his paroxysms with criminal intimacy with these, and had threatened to kill her on Sunday. He was intoxicated Monday, Tuesday, and Wednesday. On Wednesday evening he complained of being unwell, but seemed to be rational. He slept none that night, and the next day the family thought him crazy, but were not alarmed. In the course of the day he took an axe and went to a neighbor, whom he desired to return with him, as he stated they wanted to kill him (monomania of per-

secution). He spent the remainder of the day at home, apparently in terror and agitation, manifested jealousy of his wife, barred the doors, and fancied that the person of whom he was jealous was manufacturing ropes up stairs to hang him. In the course of the afternoon he suddenly committed murder. His wife was sitting by the fire, and he walked into the room. After the fatal blow on the neck, he followed it by two or three on the face. His eldest daughter seized the axe, which he yielded, but took a scythe and attempted to strike her. She defended herself until the door was opened. When arrested, he acknowledged the homicide, and knew, he said, that he would be hung, and regretted that he had not done it sooner. After being committed, he became regular, and expressed sorrow for what he had done. On trial three medical witnesses agreed that he labored under *mania à potu* when he committed the homicide.

"For the defense it was urged, that when *drunkenness gives rise to insanity, it should cause immunity, and hence form a legal excuse*. On the other hand the counsel for the people remarked, '*that Birdsall knew that his delirium followed his intoxication, and hence it was voluntary*.' The law therefore held him accountable for actions during such a state. The verdict was murder in the first degree, and he was sentenced to death. It is needless to add that there was not the slightest foundation for the insane vagaries of Birdsall, and no '*reasonable motive*' for his act."

Let me cite another case, reported as a newspaper item. "Alexander C. Wingate, a wealthy resident of Woodford Co., Ky., was shot dead about 4 o'clock this morning (March 29, 1882), on an Ohio and Mississippi train, near Mitchell, Ind., by a man named Haynes, who was crazed by drink and had no provocation for the shooting.

"Mr. Wingate was returning home from a business trip from the West, and was in a sleeping car. Haynes entered the car laboring under great excitement, and said to the porter and several passengers that he had been followed by thieves from San Francisco, who were bent on robbing him (*mania*

of suspicion). He begged the passengers to keep his money — which amounted to only \$90. The porter tried to pacify him, but he grew more desperate, and flourished his revolver around wildly. The train men were either too cowardly or did not have sense enough to wrest the revolver from him, and eject him from the train.

“At this time, Mr. Wingate stepped from his berth. Haynes immediately confronted him with the revolver, and exclaimed, ‘Give me my money,’ and fired. Wingate threw up both hands, cried ‘I am shot,’ and sank down dead. The maniac (from alcohol) turned and fired two random shots, then darted past the passengers and out of the car door, and jumped off the train, which was running at the rate of 45 miles an hour. He landed safely, walked half a mile to a creek, stripped himself naked and jumped into the stream. His dead body was found there this morning. His clothes were found hanging to a tree 100 yards distant, and they contained \$90 in gold, a gold watch, an express receipt for \$400 sent from El Paso, Tex., to New Salem, O., and a quart bottle of brandy, half full. In his valise was found a gambler’s ‘lay-out.’ Haynes is from Yuma, Ariz. He was evidently laboring from delirium tremens (?) at the time of the deed, or rather ‘*mania à potu*.’”

Although homicide was the prominent feature of the case, ‘homicidal mania’ was not. Haynes did not kill Wingate because a predisposition to kill some one predominated, but as an act of supposed self-defense, and to resent the injustice that he supposed Wingate had inflicted on him. In other words, the “mania of persecution” was the leading form of insanity — a form very common in cases of insanity arising from alcohol.

There is no crime in the calendar that these alcoholic maniacs may not commit. Their reason is temporarily deranged, they are unconscious of not only the character of the act, but of the acts themselves, and are therefore irresponsible. The following case shows the complete annihilation of all mental and moral responsibility.

"A young man in Madison Co., in this State, in the year 1859, was attacked with alcoholic delirium for the third time. While under the attack he killed his father and mother, cut out their hearts which he roasted and ate. He was arrested, thrown into prison, and indicted for murder. He was brought into court for trial, when Judge Gray, of the Supreme Court, stated that the case could not be tried, 'as there was no motive to prompt a man to commit such a crime.' This man was sent to an insane asylum."

Let me cite a case taken from the records of Broome County Circuit Court. "On Decoration Day, 1885, George Axtell, a young farmer of the town of Middletown, New York, visited Deposit village, and became intoxicated. While in this condition, and without provocation, he ran amuck (a mok) with a pistol and killed three men. Axtell was condemned to be hanged, but died in jail of heart disease, prior to the date fixed for his execution, or we would have had to record another case of judicial murder."

Axtell was undoubtedly affected by "mania à potu," or "alcoholic frenzy," or mania, when he committed the homicides, and was entirely irresponsible. These cases of "alcoholic homicidal mania" are not uncommon, and the daily prints often furnish us with similar examples.

I might cite many cases in point showing the various kinds of alcoholic insanity, and the crimes committed, as well as the judicial opinions expressed, but let these suffice.

The question whether "premeditation" could be proven in the case of the criminal inebriate could not, we think, weaken the position taken of the irresponsibility of the inebriate. In some instances apparent premeditation may exist; but the absence of a "reasonable motive" should certainly give force to the plea of irresponsibility.

To sum up the logical conclusions resulting from the study of criminal inebriates in a single paragraph, we would state:

An act to be criminal, and to be enrolled under the code as a crime, must show such preconception, or preparation, or

motive, as to make it an act of deliberation, and the intent must be proven by the relation of the accused party to the deed, before, during, and after its commission.

If from simple impulse, without premeditation, the act must be shown not to have been directly traceable to any drug capable of affecting the intellect and developing maniacal impulses; and further, that the person committing the act was in full possession of his mental faculties, and was uninfluenced except by a reasonable motive that prompted the deed, in special cases as in murder, the ground of self-defense being satisfactorily excluded. Under these circumstances, the person has committed a crime, and the evidence must acquit or condemn him.

In all cases, a history of previous *confirmed inebriety*, coupled with an entire absence of *reasonable motive*, should give the person committing the act the full benefit of the plea of irresponsibility, and the same "legal excuse" that is applied to the acts of "insane criminals."

And in conclusion, I have only to add that the "criminal inebriate" should be dealt with in the same manner as the "criminal insane."

THE execution of a poor lunatic who, while poisoned by spirits, committed murder, was noted with satisfaction by the press and pulpit, as an act of justice and sound judgment. Not far away such events will be a disgrace to our civilization, and reflect on the ignorance of public sentiment, that could hope to prevent crime by killing the irresponsible authors, after the crime was committed. The legal assumption of full knowledge of responsibility and accountability and of motives and causes of crime, is a repetition of the darkest ages and the densest ignorance which has cursed the race.

THE confusion of courts who sit in judgment on experts, and juries who act as experts of experts, determining questions with an assumption of knowledge that the most learned think from, is a sad travesty on justice and equity.

INTERCHANGEABILITY OF HEREDITARY
TRANSMISSIONS.*

By J. F. BURNS, M.D.,

Late Interne at Charity Hospital; Physician to the Inebriates' Home, Fort Hamilton, N. Y.

A demand for stimulation by alcohol in the human body is expressed as a morbid craving of the mind. This craving is not in itself an evidence of a diseased brain, but simply an indication of the desire for stimulation by the general nervous organization, which finds its expression in the controlling center of that system.

A craving for food in the human body is expressed by a sensation which we attribute to the stomach, but the actual demand arises from every individual cell throughout the economy. The same holds true in those having an alcoholic craving; the actual need is to be found in peripheral nerve-cells in every part of the body, and similarly with food, the sense of need in the central organ is blunted upon the introduction of alcohol into the system. The difference lies in the fact that the food craving is a normal one, the alcoholic abnormal.

The final distribution of the alcohol taken into the system is effected through the agency of the circulation, its consumption occurring principally in the peripheral nerve-cells. Corroborating evidence supporting these statements may be found in the general histories of drinkers, a microscopic examination of their tissues and nerves, and by a careful study of the different phenomena presenting themselves in individuals suffering from affections produced by indulgence in alcoholic drink.

* Paper read at the International Medical Temperance Congress, Staten Island, N. Y.

Drinkers, as a rule, begin in moderation, and do not become confirmed until the general nervous system is so involved that the demand is imperative, arising as it does from repeated over-stimulation of originally deficient cells. The increased quantity of alcohol necessary to produce that quietude sought after in successive drinkings, indicates the waste of nervous structure brought about by repeated indulgences. The stimulant accomplishes the desired object, but at an additional loss of nervous function proportionate to the amount of indulgence.

A man with the tremor produced by alcohol (which tremor it is capable of producing in common with many other poisons) is relieved of his tremor upon the introduction of a fresh supply of alcohol into his stomach. The cry from the nerve-cells has been heard, and the condition relieved, but the relief will last only until the alcohol is consumed in the ultimate cells; and as degeneration instead of regeneration occurs in the cells by the use of alcohol, the demand will increase proportionately with the consumption.

A microscopic examination of the terminal nerves of a drinker will reveal destructive changes in cell-structure, consisting principally in degeneration of protoplasm with substitution of a granular fatty material of a low order of vitality; or the nerves are found shrunken and hardened, owing to an abnormal increase in the cell elements, with subsequent contraction.

Disease of the nervous system which can be definitely traced to indulgence in alcohol, involve the terminal nerves more particularly. Paralysis of the extremities is common, and sight and hearing either temporarily or permanently interfered with, through implication of the optic or aural nerves. Cutaneous anæsthesia and hyperæsthesia are the most common and constant manifestation of alcoholic abuse. The symptoms of cerebral origin are not so marked, and consist mainly in loss of memory for recent events, with delusions concerning immediate surroundings. Events remote are quite readily recalled and dwelt upon rationally.

The condition seems to be one in which the power of receiving impressions and transmitting ideas is lost, rather than an inability to conceive them. The brain first regains its normal balance when alcohol is withdrawn and appropriate treatment instituted, while the more remote portions of the nervous system are the last to regain their normal tone, the cutaneous symptoms often persisting for months and even years.

That the brain of the drinker suffers proportionately with the rest of his nervous system is to be expected, but that the brunt of the attack should be borne by this organ (as is often taught) is not so evident. It is protected in part by that compensating law of nature which provides for the support and continuance of the higher developed forms of structure at the expense of the lower, and in part from the fact that the ill results attaching to the use of liquor are expended on the general nervous system, and not alone centrally.

If the alcohol drinker's brain were the constant and most vulnerable site of attack, it would require a doubling and trebling of the lunatic and imbecile asylums of our land for the accommodation of thousands who are now considered eminently successful in business and social circles. The hardest and most constant drinkers are not to be found within the walls of inebriate homes, but are engaged in business, or are men of leisure in society.

All this simply goes to prove that continuous indulgence in alcohol induces alteration in the tissues of the body, which find their expression in a variety of diseased conditions, involving the nervous system more especially, and contributing materially to continuance in the indulgence.

Arsenic introduced into the system in quantity will induce a paralysis and destruction of nervous structure with exactly similar symptoms and appearances. Diphtheria (which is in itself a disease) often leaves a regular condition and symptoms of the nervous system which can in no wise be distinguished from the two previously mentioned. The

difference in the name of the disease will be regulated according to our knowledge of the causative agent responsible for the production of the condition; but from a mere study of symptoms, or a microscopic study of the changes wrought in the nerves, we would be unable to state whether the condition was produced by alcohol, arsenic, or diphtheria. A history furnished, or chemical analysis of the stomach contents, might solve the question, but the fact remains that symptomatically and microscopically there exists no essential difference.

These conditions, produced by vastly dissimilar substances, are all denominated "diseases" by medical men, under the common title "neuritis," and the neuritis will be alcoholic, arsenical, or diphtheritic, in accordance with our knowledge of the agent responsible for its production.

The intimate relationship existing between these and other nervous conditions, both in their visible symptoms and invisible effects, yet produced by no strikingly dissimilar agents, has been demonstrated to the satisfaction of the medical profession, and is well understood and admitted as scientifically accurate. From this we would be led to believe that there are certain fixed laws governing and regulating the destructive changes occurring in our bodies, as there are similar laws governing the reproductive, developmental, and reconstructive processes taking place therein.

This is what we would be led to expect from a general study of physical and pathological laws. The human body is not influenced at haphazard by excitants, or irritants from without, any more than it is influenced in a different manner by each individual irritant. If the destructive changes wrought in the tissues of the human body were accomplished differently, varying with each specific cause, we would have such a multiplicity in cell destruction that we should be obliged to give up their study in despair.

A certain relationship exists, however, between these destructive processes, no matter what the nature of their production, or whether the physical or mental system be

involved. These destructive changes assume one of two forms, either there is a multiplication of the cell-elements of a part, or there is degeneration in cell-constituents with substitution of effete material. The result is the same in either case, interference with function of the organ or system, and an incapacity to meet the normal demands made upon it without stimulation. We may have this condition produced by causes acting on a previously healthy organization, or the condition occasioning the demand may have been present in the individual from birth, but as a latent unrecognized defect.

An exact balance of the physical and mental forces in man would not admit of his using alcoholic liquor, for then all his actions would be regulated by his actual physical and mental wants, which would show no departure from the normal. Departure from this normal balance in the physical or mental system is found to produce idiosyncrasy in character or being; when such idiosyncrasies become apparent, and are a source of annoyance to the individual, they assume the importance of a disease.

Alcohol drinking is a disease in that it expresses (to a lesser or greater extent) a lack of normality in the nervous structures of the body. The factors responsible for the production of this abnormal condition may be grouped under three divisions — physical, chemical, and social.

It has been shown that alterations of nervous structures may be induced in the system by substances other than alcohol. This only illustrates a similarity in the method of destruction, but there must of necessity exist primary underlying factors, which can be held accountable for the initial condition which demands stimulation. These primary factors are to be found in our physical organization; the secondary and contributing, in chemical irritants and social conditions. They are equally dependent one upon the other, and contribute, though unequally, in the production and continuance of intemperance in the race.

Foremost among the physical factors is to be placed that

vice of constitution, heredity. The general impression conveyed by this term is that of "direct transmission," that is, that children of drinking parents inherit a predisposition (diathesis) which renders them liable in turn to drink to excess. This view is correct in part, but does not entirely cover the ground, and is confusing.

That organizations deficient in vitality, and enervated by excess or disease, will produce successors deficient in vitality, with abnormalities in structure, is a well-certified and demonstrable scientific fact. This holds equally true in vegetable as well as in animal life. Certain precautions taken, or favorable conditions existing, in the life of the successors, may prevent the actual recognition of the deficiency, but it is present nevertheless.

The primary protoplasmic cell from which we all spring, as the first recognizable unit of human existence, is dependent for its normality upon the stability of the aggregation of cells in its parents, the union of which is responsible for its existence. The subsequent life of this cell and its products depends in part on the nearness to perfection to which the primary cell approximates, and in part on extrinsic circumstances.

While transmission of cell imperfection from parent to progeny so definitely follows, it does not of necessity follow that the imperfection will be transmitted in definite order, or that the manifestation produced as a result of this imperfection will assume a similar form — that is, it does not follow if the parents' nerve-cells be degenerated by alcoholic excesses, that the children of such a parent or parents will evidence this transmitted imperfection in similar manner by similar alcoholic excesses. The impression is transmitted, but the manner of its distribution will determine where and how the deficiency in the child will manifest itself.

The departures and exceptions in transmission of hereditary impressions can only be explained by a recognition of the possibility of an interchangeability in the manner of hereditary transmission.

Admit that imperfections in cell-structure may be transmitted from parent cells to their successors (and this is a fundamental principle in the cell theory), it must of necessity follow that the original cell from which we base our existence must contain that element in its protoplasm. How, then, can we account for the different manifestations produced by primary imperfection in different offspring from the same parent?

A study of the development of the embryonic cell from its inception will afford us a possible solution. This primary cell increases by the production of cells similar in all appearances with itself, and originating within itself. This multiplication continues until an aggregation of cells exist similar in all recognizable respects to itself.

After, however, this self-multiplication of the cell has continued for some little time, we notice a process of differentiation to occur—that is, these cells, similar in all particulars, are known to divide into three parts, and begin to assume specific characteristics and functions, being variously modified to meet the requirements of the system they are designed to serve.

The three divisions that result represent the three grand systems of the human body, namely, the locomotor, the nervous, and the glandular. Imperfections in the parents' cell-structure may be transmitted to each of the three systems in the differentiation, according to the distribution of the imperfect protoplasm, or they may manifest themselves in two, or altogether, as frequently happens.

While we can understand and explain the actual physical changes taken place in the embryo, it is impossible to understand or explain the manner of production of its functional attribute or the manner of the distribution of its primary protoplasm. That function is developed, and distribution of the protoplasm is known to occur, are admitted physiological facts; but the explanation for the phenomena can only be given by our Creator, and are seemingly beyond the reach of science.

Alcoholic parents, or parents the victims of other so-called vices or crimes, may transmit their peculiar nervous manifestations direct, or they may evidence themselves in one of the other systems, as various physical disorders. Conversely, parents who have never indulged in alcohol, but in whom structural changes have been wrought in the liver, kidney, heart, circulating system, etc., remote from the nervous system, may have the degeneration transmitted and manifested in the nervous system of their children as a condition seeking gratification in morbid excesses or criminal acts.

The connection between mental and physical diseases, and their mental interchangeability by hereditary transmission, may be more fully appreciated by keeping in mind the diseased conditions produced in the system by alcohol and various other substances as cited. All the conditions mentioned, pathologically considered, depend either on a multiplication of cells or their degeneration.

Alcohol may produce so-called "Bright's" disease in an individual, or "Bright's" disease may result from causes remote from alcohol. The actual changes occurring in the organization, however, are the same, resulting in destruction of tissue in one of two forms, with impairment of function.

The man having "Bright's" disease as a result of indulgence in alcohol, may beget children who will not have any craving or desire for alcoholic stimulants, but will be deficient physically. The children of the man acquiring "Bright's" disease in cause remote from alcohol may, on the other hand, beget children in whom there will be no noticeable physical defect, but who will have developed to a marked degree the nervous diathesis which predisposes them to excesses in nervous energy. On the other hand, the imperfections transmitted may be evidenced in a variety of ways in the same family.

A perfect balance and stability of the cells of the body would preclude disease or excesses of any kind, but the pre-

ponderance of elements, or transmitted peculiarities in structure in one system, does not of necessity indicate disease, although it favors it.

We have many instances where children of drinking parents have developed traits of character and habits of application which have carried them far ahead of all competitors in their respective walks in life, while brothers or sisters indulge in excesses which carry with them the physical or mental ruin of the individual.

It is possible and probable that these transmissions of imperfections, manifesting themselves in another generation as one-sidedness in physical or mental development, are responsible for the production of the brightest intellects.

This one-sidedness of character is very aptly illustrated in the so-called "genius," who is notably erratic, approximating only in a useful direction to the monomaniac. Peculiar development of mental characteristics depends on something more than mere intellectual cultivation; there is an inherent something in the organization which directs and forces recognition. Environment and circumstance, however, may change a prospective "genius" into a drunkard, or *vice versa*.

Excessive development in one direction will bring increase of perfection in that direction, but that this perfection will be transmitted as such cannot surely be expected any more than that an acquired imperfection will be transmitted as a similar imperfection. There seems to exist a conservation of the forces in this interchangeability which, according to circumstances and environment, may develop by transmission good from evil, or evil from good.

This mutual interchangeability and dependence of the physical and mental force has an analogous illustration in other natural fields, as in that mutual dependence which is found to exist between the animal, vegetable, and mineral kingdoms, as well as in the intimate relationship and dependence which exist between the various organs and systems in the human body.

The acceptance of a law permitting of interchangeability

in transmitted tendencies does not invalidate that generally accepted law admitting the transmission of imperfection in cell structure ; it only serves to emphasize it by pointing out the variety of results originating from a common source.

This conservation of the physical and mental forces, and the methods of interchangeability and compensation, is only another evidence of the merciful kindness of our Creator, evidently designed as an offset to the evil propensities and general neglect of natural laws by mankind in general. If some such law did not exist in nature, man would fast degenerate in a direction in keeping with the circumstances under which we are placed, and which certainly cannot be said to be good.

THE cases of chronic alcoholism and delirium tremens in Germany which have been treated in public institutions have increased from 4,272 in 1877 to 10,360 in 1885. Among the latter number were 673 females. Still clearer is the percentage of such cases treated when compared with other patients. The alcoholic cases furnished nearly 20 per cent. of all the cases treated in the public hospitals. The insane asylums received 1,614 patients suffering from alcoholic mania in 1885 ; 1,213 men and 121 women died of delirium tremens in 1886. Of the prisoners in German penitentiaries convicted of murder 46 per cent. used liquor, and of these again 41 per cent. were habitual drunkards. Of those who committed manslaughter 63 per cent. were drinkers. Violent assaults were in 74 per cent. of the cases committed by drunkards, rape by 60 per cent., and the other crimes varied from 40 to 68 per cent. The crime of perjury showed the smallest percentage of habitual drinkers — only 26 per cent.

INEBRIETY should never be regarded as the result of any single isolated cause, but a combination of physical, mental, and social forces, acting in favorable environment. To this is often added an organic predisposition to seek relief in substances which will quiet the nervous irritation.

Abstracts and Reviews.

INFLUENCE OF ALCOHOL UPON THE ORGANISM OF A CHILD.

BY PROF. R. DEMME OF STUTTGART, GERMANY.

I may here be permitted to call attention to one of the effects of the use of alcohol which would interest both parents and educators, and which up to the present time has not been made sufficiently clear; at least it seems not to have been thought worthy of consideration.

Throughout entire civilization of both the old and especially the restless new world, there is heard a complaint of increasing nervousness. Under the head of neurasthenia, we now class the widespread condition of exhausted nervous strength, irritable feebleness, etc. The sufferers from neurasthenia are not only those of ripened years, who are inflicted with the heavy demands made upon them by their calling, or those who have to sustain the burden of labor and are forced to work out their lives amid the hue and cry of large cities; our youth, also, has, to some extent, fallen a victim of this modern sickness. How many pupils of from twelve to fifteen years of age present examples of weakness, complain of headache, palpitation of the heart, sleeplessness, restlessness of mind, and numerous similar nervous sensations, or give the impression of stupidity on account of lack of interest in their surroundings? Loss of memory, unnatural drowsiness and lassitude complete the picture. It is certainly with justice that physicians and educators, especially in more recent years, are interesting themselves in the investigation of the causes of this increasing nervousness among school children. The examination of the efficiency of systems of instruction, and the influence of instruction, go hand in hand with the attention paid to the arrangement of

schoolrooms — the influence of conditions of light, air, and heat, and the construction of school benches.

It cannot be denied that part of the physical and psychical defects of our rising generation is to be traced back to over-exertion of the mental powers, insufficient sleep, and especially lack of free exercise. The effort now being made by our hygienists, to bring about a rapid and fundamental change in these conditions, should therefore be appreciated.

The causes of this growing nervousness among school children, however, are not confined to the detrimental influences of school life. The unsuitable and unhealthful mode of life of our children, above all the early and rapidly increasing use of alcohol, contribute largely toward that end. We have satisfied ourselves in many instances, through professional inquiry and observation, that not a small contingent of these pupils "who become nervous at an early period of life," belong to the class of young people that we are discussing, who, "from their earliest infancy, have never been free from the use of alcohol, owing to this strengthening craze of the parents." The combined paralyzing influence of alcoholic drink upon the youthful brain injures that integrity which is necessary for its normal physiological function; the organ thus injured is unable to fulfill the requirements of school routine, and then comes over-exertion of the nerve centers, forming the commencement of the nervousness which appears later. Here, again, is an opportunity for hygienists to investigate and combat the injuries produced through the early use of alcohol. Experience teaches that such nervous young old men may still be saved, and their natural youthful development restored.

The banishment of the use of alcohol from their habits of life, sensible food, and a hygienically regulated hardening mode of life, are the first conditions necessary for this regeneration. I may here mention an experiment made by two, to my knowledge, thoroughly reliable men, who were prejudiced in favor of the moderate use of wine by older children. They experimented upon their own boys, aged between ten

and fifteen, in order to convince themselves whether a moderate use of wine would tend to increase their energy for work both at school and at home, or diminish the same and tend to produce lassitude and prostration of mind and body. The quantity of light table wine given to the younger boy was about two ounces; to the older, three ounces each at dinner and at supper. The wine was always diluted with water and drunk during the progress of the meal.

These experiments were conscientiously continued for a year and a half, in such a way that several months of indulgence were alternated with several months of abstinence; as far as possible, the influence of season was also considered. The result of this experiment, kindly confided to me, was, that during the period of indulgence in wine, the boys appeared feebler, sleepier, less inclined to mental work, and that their sleep was more restless, more frequently interrupted, and consequently less restful and refreshing. So striking and troublesome were these symptoms for the boys, that, of their own accord, they begged that they might be permitted to dispense with wine.

The transmission of the qualities, faculties, and peculiarities of body and mind from parents to children, or, omitting one generation, to later generations, belongs to the most interesting, in many directions still obscure, phenomena of nature. Day after day we see that certain peculiarities of parents are transmitted to their descendants. This goes so far that in certain cases we identify the son of a man well known to us, even though we see him for the first time as the child of this acquaintance; this we do by the cut of his features, his expression, the sound of his voice, and so on.

But physical defects and deformities, or certain tendencies to diseases of mind and body, may also be carried from generation to generation. . . . Dejerine regards heredity as a factor of the greatest importance in mental diseases; he states that in the succeeding generation, either the same or another mental disease may appear, and also, that such diseases of the nervous system become more serious from

generation to generation; he designates this form of heredity as degenerative heredity.

The alcoholic habit and its various manifestations—acute alcoholism, so-called alcoholic dementia, delirium tremens, and chronic alcoholism—are now generally classed as mental diseases. They are here considered as specific alcoholic psychoses.

Regarding heredity, the preceding remarks about mental diseases in general apply. The alcoholic habit in parents may be the expression of an inheritable psychopathic disposition, which may show itself in the next generation as alcoholism or as a mental disease of some other form. The injury to the descendants of parents who abuse alcoholic drink, is explained by the fact that this abuse probably interferes with the nourishment and development of germinal cells.

The form of alcoholism which seems to have a special hereditary tendency is dipsomania; this is a periodic desire for drink occurring in the form of an unquenchable thirst. We have numerous opportunities of seeing examples of this sort, with demonstrations of undoubted heredity in the Children's Hospital in Berne.

If those pathologists who claim that peculiarities and diseases acquired during single life are hereditary are correct, then acquired alcoholism in an individual who is not affected psychopathically can be transmitted and can show its deleterious effects upon the offspring.

The depravation of posterity through the drunkenness of parents is a question of great importance to the State, with reference to the military capabilities and powers of endurance of her citizens. . . . Hitzig positively asserts that the children of drunkards inherit an equal, if not a greater disposition to diseases of the nervous system than the children of nervous parents or those of unsound mind. Such children die from convulsions and other epileptic conditions in their earliest youth more frequently even than do the children of nervous parents. A deterioration of race in so-called

"drinking regions," was also shown, according to Baer, by the fact that the military draft here produced a smaller contingent of men fit for military service than in the more temperate parts of the country. Gyllenskiöld proves that in Sweden, since the favorable influence of the statutes issued against drunkenness have taken full effect, the number of men unfit for military service on account of general weakness and too small stature has become perceptibly lessened.

I confess that the reports upon the depravity of the people through alcoholic drinks, upon the high rate of mortality and the still more alarming number of serious diseases of the nervous system among the children of alcoholic subjects, seemed to me exaggerated, too general in estimation, and too uncertain. On this account, as early as 1878, when several severe cases of alcoholism entered the child's hospital for treatment, I began to follow and observe as accurately as possible, the family relations of some notorious families of drunkards who came under my observation, with reference to the hereditary influence upon ascendants and descendants, the capabilities of their offspring, their conditions of health, and their further development. The selection of these families occurred without prejudice, and only with reference to their large families, to the absence of goitre, to the possibility of obtaining reliable information concerning their relations, or to their relationship to well-known individuals or officials. The fathers of these families were day laborers, servants, peddlers, or also stone-breakers, raftsmen, coopers, etc. By way of comparison with these notorious families of drunkards, I also select from the circle of my dispensary practice (again only with reference to large families), a number of families belonging to the same classes of labor, of whose sobriety as regards the use of alcoholic drinks I had become convinced, partly by my own continued observation, partly through the reliable information of relatives, other tenants, and employers. Thus, from 1878 until to-day, during a period of twelve years, I obtained accurate knowledge of the private circumstances of ten families belonging on the one hand to the drinking, on the other to the temperate class.

The result may be found in detail in the Twenty-Seventh Yearly Report of the Jenner Hospital for Children. I shall give here only a short *résumé*.

The direct posterity of ten families of drunkards, in which alcoholism of one parent or of both or even of previous generations, is shown, amounting to 57 children. Out of these, 25 children died during the first weeks or months of life, part of them from lack of vitality, part through aclamptic seizures (œdema of the brain and its membranes). Six children were idiots; 5 children exhibited marked backwardness of growth in height, remaining almost dwarfish. Five children, as they became older, were attacked with epilepsy. One boy was attacked with severe chorea, terminating finally in idiocy. Five children had congenital diseases (chronic hydrocephalus, hare lip, club foot). What is especially interesting is, that two of the epileptics referred to, were themselves given to the abuse of alcohol as a result of hereditary transmission; the outbreak of their trouble was directly connected with most acute alcoholic intoxication, *i. e.*, was directly continuous with it. Thus, of 57 children of drunkards, there were only 10, or 17.5 per cent., in normal condition and with normal development of body and mind, at least during their childhood. Contrast this with observations upon the ten families free from all alcoholic influence and living very temperate lives as far as alcoholic drinks were concerned. Only five out of their direct descendants of 61 children died from diseases connected with want of vitality, and four children suffered in later childhood with curable affections of the nervous system. Only two children showed congenital defects. The remaining 50 children (81.9 per cent.) of the temperate were normal in condition, and during childhood, at least, showed normal further development of physical and mental powers.

Although unavoidable sources of error are connected with this method of investigation, still a comparison of such results is valuable for the subject which we are considering.

The sad truth which results from our investigation is that among the children of drunkards the mortality is alarming,

that the survivors present a little heap of sufferers of unsound mind, of idiots, epileptics, and those otherwise affected in their nervous system, and that only a very small portion of such offspring ripen into useful members of the community. Besides, this sad story of human suffering also shows with certainty that drunkenness is hereditary, and that it transmits itself from generation to generation, until there is final extinction of the defective race. . . . Thus it is seen that the abuse of alcohol by parents falls upon their posterity even to later generations; that the use of alcoholic drinks is neither necessary nor beneficial to the healthy child, but, on the contrary, works direct harm against its development, undermining its health, and prejudicing its moral education. It may be said in opposition, that so severe a condemnation of alcohol in childhood is based upon comparatively rare observations, and that thousands of children take moderate quantities of alcoholic drinks with impunity, at least, without apparent harmful effect. It is against exactly such an argument that this study of alcohol furnishes the best weapon.

Even though the deleterious effects of alcoholic drinks in childhood do not make themselves apparent and visible in every case, they exist nevertheless; and they may show themselves in the future, if they do not do so at once.

From the standpoint of public hygiene, we should endeavor to prevent the use of alcoholics as beverages in children. It is the duty of the physicians to explain these dangers to all, the rich as well as the poor, and to caution them against the evils which follow the use of alcoholic drinks. In this way we may succeed in limiting its use to an older period of life, and to remove as far as possible quantitative abuse.—*Extracted from October number of Wood's Monographs.*

THE term sexual inebriety is used to designate a class of cases in which alcohol excites an impulsive sexual desire. A form of sub-acute delirium is always present in these cases. Suicide is a frequent termination, and profound brain exhaustion, with many complex symptoms, are always associated.

ALCOHOLISM IN FICTION.

Professor Ross, in a recent address before the Medico-Psychological Society of Great Britain, makes the following reference to a noted character in fiction :

The effect of chronic indulgence in alcohol varies greatly, according to the character of the subject.

In all cases the intellectual powers are lowered. The patient becomes more absorbed with his own thoughts and less observant of what is passing around him, and more selfish and less qualified to discharge the ordinary duties of life, but while a man of timid and poetic nature is apt to direct the current of his thoughts to vain and vapid imaginations, a man of bold and intrepid character is apt to concentrate his thoughts round one or two great passions of revenge or ambition. The consequence of allowing the thoughts to center upon one great passion is that the subject ceases to be interested in everything that does not seem to him to tend towards the realization of his aspirations, and becomes intolerant of everything that seems to oppose them.

A man in this state of mind will bear with equanimity, often with complete callousness, the greatest calamities of life, such as the death of his wife or children, so long as such events do not seem to cross the line of his ambition ; but the most trivial incident that appears to run counter to the realization of his hopes evokes the most gloomy and painful emotions, and is apt to be met by a fearful outburst of mental irritability. Again, apparent success in the line of his ambition causes the mind to become unduly elated, and is likely to lead to extravagant conduct, sure to end in disaster.

A character of this kind is finely sketched by Scott in "Waverley," in the person of Fergus MacIvor ; and although the exciting events in which Fergus was one of the chief actors were well calculated of themselves to develop this exalted mental state in one of his ardent and ambitious natures, yet I cannot but think that the subject of the

original study was one who had partaken pretty freely of alcohol, even although in those days he might have been regarded as a temperate man.

Fergus was born and bred as a conspirator, and from his youth upwards all his pleasurable emotions clustered around the correlative ideas of revenge upon the Hanoverian dynasty, and the restoration of the Stuarts, carrying with it the glorification of Fergus himself as the chief actor in the drama.

For the achievement of this idea he had planned and plotted all his life, and when at last his ambition seemed near its realization by the brilliant victory of Preston-pans, his mental balance was shaken, and henceforward all ideas of caution, of prudence, and of skillful adaptation of means to the achievement of the great enterprise in which he had embarked were thrown to the winds. His mental condition during the march into England is thus graphically described: 'As Colonel MacAvor's regiment marched in the van of the clans, he and Waverley were perpetually at the head. They marked the progress of the army, however, with very different eyes. Fergus, all air and fire, and confident against the world in arms, measured nothing but that every step was a yard nearer London. He neither asked, nor expected, nor desired any aid, except that of the clans to place the Stuarts once more on the throne.' Waverley, on the other hand, observed "that in the towns in which they proclaimed James the Third, no man cried 'God bless him.'" The mob stared, the wealthier Tories fled or feigned illness, the ignorant gazed at the clans with horror or aversion, and the prudent showed every token of their expectation that the rash enterprise would have a calamitous termination.

The unreasoning irritability of temper, and the suspicious disposition which characterized this stage is also well exemplified in the quarrel which Fergus had forced upon Waverley, at this time, ending in the dramatic scene in which the chief, by a blow on the head with the discharged pistol, laid the treacherous Callum Bey insensible at his feet, and when the collapse of the enterprise came, as it did virtually when

the retreat northward was determined upon at Derby, the transition to the stage of melancholia is so powerfully depicted that I cannot forbear to quote it. "None," says Scott, "were so sanguine as Fergus MacIvor; none, consequently, was so cruelly mortified at the change of measures."

"He argued, or rather remonstrated, with the utmost vehemence at the Council of War; and when his opinion was rejected, shed tears of grief and indignation.

"From that moment his whole manner was so much altered that he could scarcely have been recognized for the same soaring and ardent spirit for whom the whole earth seemed too narrow but a week before. And when a few days later he sought an interview of reconciliation with Waverley, he announced to him that he himself must be dead or captured before the morrow, inasmuch as he had seen the Bodach Glas, a family specter which always appeared to the Vich Jan Vohn of the day on the eve of death or some impending disaster. He thus describes his encounter with the Bodach Glas:—

"Since this unhappy retreat commenced I have never been able to sleep for thinking of my clan, and of this poor Prince, whom they are leading back like a dog in a string, whether he will or no, and of the downfall of my family. Last night I felt so feverish that I left my quarters and walked out, in hopes the keen frosty air would brace my nerves. I crossed a small foot-bridge, and kept walking backwards and forwards, when I observed with surprise, by the clear moonlight, a tall figure in a grey plaid, which, move at what pace I would, kept regularly about four yards before me. I called to him, but received no answer. I felt an anxious throbbing at my heart; and to ascertain what I dreaded, I stood still, and turned myself on the same spot successively to the four points of the compass. By heaven! Edward, turn where I would, the figure was invariably before my eyes, at precisely the same distance! I was then convinced it was the Bodach Glas. My hair stood and my knees shook. I manned myself, however,

and determined to return to my quarters. My ghastly visitant glided before me (for I cannot say he walked) until he reached the foot-bridge; there he stopped and turned around. I must either wade the river, or pass him as close as I am to you. I made the sign of the Cross, drew my sword, and uttered, "In the name of God, Evil Spirit give place!" "Vich Jan Vohn," it said, in a voice that made my very blood curdle, "Beware of to-morrow!"

The spectre then vanished. It may be said that the character of Fergus being fictitious, no useful purpose is served by analyzing it, but if it is true to nature, as it undoubtedly is, it is no more fictitious than is the most accurate record to be found in a hospital report.

The stage of melancholia to which he had attained was characterized by gloom, sleeplessness, mental agitation, restlessness, vivid but corrigible hallucinations in full light, and loss of elasticity of step, with other indications of a minor degree of motor paralysis; and instead of being exceptional, it is, in its minor degrees at least, one of commonest functional nervous affections for which our advice is sought. This is the period of self-questioning, of soliloquy, of remorse, often also of repentance, and of the formation of new habits founded upon principles of duty; and perhaps there is no more interesting period in a man's history, or one in which wise advice is of greater use, than during one of these times of depression, whether the mental conditions represent the more or less normal reaction which always follows disappointment or disaster, or the abnormal reaction which succeeds to a time of excessive excitement and exultation engendered by circumstances in a brain inherently unstable, or rendered unstable by the abuse of alcohol or other poison.

The transition from the stage of exultation to that of melancholia is not always brought about, as it was in the case of Fergus, by the sudden collapse of cherished hopes. In some cases the stage of exultation culminates in an outburst of extravagant conduct, which may display itself in reckless speculations, or in purchase of objects which are

altogether beyond the means of the patient and of no value to him when obtained.

Some of these patients have to be placed at once under legal restraint, while others are brought to their senses by financial difficulties and social ostracism as effectually as if they were placed within the locked doors of an asylum.

EARLY PSYCHICAL SYMPTOMS OF INEBRIETY.

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

Every year it is more and more apparent that the failure to recognize the early symptoms of brain degeneration and disease constantly increases the army of incurables. The crowded insane asylums, almshouses, jails, and hospitals, all refer back to early neglect and failure to recognize and apply the means of prevention and cure.

A clearer knowledge of neurology would point to conditions and methods of treatment that could be successfully applied at that time only. An outline view of some of those early stages is the central topic of this paper.

There is probably no one disease more often mistaken in its early stages than general paralysis. Even after the symptoms have become apparent, there are confusing halts, and a delusive masking of symptoms that often puzzles even experts. A long formative stage precedes the well-defined symptoms, beginning in slight changes of conduct and character, elation of spirits, increased activity of the intellect; the disposition, the manner, the temper, the habits, and general character all become altered. Then come acts and words which are unusual, the friends and associates are conscious of some change which they seek to remedy by moral advice. Finally, when some reckless conduct or strange disposition is manifest, the physician is called, and the disease is clearly made out. To the patient this has no foundation in fact, and sometimes the physician joins in this belief, and explains these changes of mind and conduct from some moral basis.

Symptoms of alcoholic and sexual excesses are explained in the same way. After a period extending over months and years, in many cases, the disease is above all question, and beyond all medical skill. This formative stage has been attended by distress, loss, sorrow, and most serious blunders. In some cases, criminal acts and sad domestic and pecuniary afflictions have marked this period. If the family physician had made an early diagnosis, and the treatment been based on this, a different history and result would have followed.

Some of the ataxies have a similar obscure, early stage, marked by psychical disturbances which are regarded as moral lapses. Nearly all forms of insanity begin with this obscure failure of the high brain centers. Early changes of temper, conduct, and character, defects of emotional control, defects of reason, slight and obscure at first, and yet clearly the oncoming shadows of diseases that should be anticipated and pointed out.

These changes and early symptoms are not new to science, but in most cases they are overlooked and seldom receive the attention they deserve.

There is a class of symptoms that are already becoming the center of serious controversy. They are not only not recognized in the early stages, but are sharply disputed by both laymen and physicians. I refer to the alcoholic, opium, and other drug symptoms, which are affirmed to be purely vicious acts and the voluntary giving way to the lower animal impulses. Public opinion has sought to control them by fine and imprisonment. The medical profession accepts this theory of treatment, only asserting after a time, that use of these drugs brings on diseased states. The impulse for alcohol and other narcotic drugs is always a symptom of some form of brain palsy. There are two classes of these cases in which this fact seems very clear. The first class are those with a history of some distinct traumatism — noticeably, sunstroke, blows on the head, profound wasting illness and severe injury of any kind.

Recovery follows, but with it appear changes of temper,

character, and emotions, then comes the drink impulse or the use of some form of opium. These drugs cover up other changes and are interpreted to be the cause of all subsequent degeneration and disease.

Many of these cases die of pneumonia, or some other acute disease, others go on to insanity and become inmates of asylums, while the majority remain as common drunkards or inebriates, slowly growing worse year after year. They are treated as low, voluntary inebriates, despised, persecuted, and punished, and die the centers of wretchedness and misery, and frequently leave defective families that are always burdens to the world.

The *second class* of inebriates or drug-takers have a distinct history of psychical traumatism. A man, previously temperate and well, will have a history of profound mental shock, such as sudden overwhelming grief at the loss of wife or children, or property, or the failure to realize some absorbing ambition, or some calamity that will distress him acutely. His entire character and disposition will change, and the drink impulse will appear suddenly, without any cause, and continue persistently.

Several instances have been noted in which the effect of a railroad accident, where no external injury was produced, was the beginning of the drink impulse. The shock of sudden fear seemed to so paralyze the brain as to demand alcohol or opium ever after. In these cases alcohol may be taken at first as a medicine and in moderation, but the degeneration which calls for it is apparent when efforts are made to discontinue its use. Another class of cases show these symptoms equally marked; thus persons who occupy centers of social care and business or professional responsibility; persons who are most active in business in the prime of life, previously temperate, who suddenly begin to take spirits and finally become excessive drinkers, and defenders of its value as a medicine. Such cases are soon incapacitated and die. The drink symptom is always treated as a moral condition in these cases.

In the first class of physical traumatism some form of brain degeneration is apparent in this morbid impulse for alcohol and opium. The beginning and progress of the case confirms this.

In the second class of psychical traumatism, a brain palsy and sudden perversion of brain function and activity takes place, and the demand for alcohol and opium is the expression of this state.

In the third class, the use of spirits is a symptom of exhaustion and general brain failure.

All these forms of palsy and degeneration are rapidly intensified by the chemical action of the spirit or drug used.

The pathological condition which calls for relief by these drugs has a uniform order of events, beginning at a certain point and passing down, marked by a regular succession of symptoms, reaching a certain termination that rarely varies.

The drink craze is a symptom which should never be misinterpreted or overlooked. Any one who persists in using alcohol or opium to excess is suffering from some brain degeneration and disease, which requires medical study and care.

The use of alcohol or other drugs is, in a certain number of cases, a marked symptom of insanity. This fact has been noted for many years, and generally occurs in neurotics who, after some great strain or mental perturbation, become excessive users of spirits, and continuously or at intervals, stupify themselves with such drugs. When arrested and deprived of spirits in jails, acute mania or melancholy follows; then it appears that the spirit and drug craze were only symptoms of insanity concealed and masked by the spirits.

The facts in this direction are numerous and startling, and unknown except to the few students who are at work in this field.

Scientific study has established this fact, viz.: that the "drink craze" (meaning the impulsive, unreasoning desire for spirits or narcotics) is a symptom of disease. Whether this is so in all cases at the beginning is not yet established;

yet nothing can be more certain than this, that the use of spirits will cause disease and diseased conditions in all cases.

Another fact is becoming more prominent, that the number of all inebriates of all forms is increasing; and with them the army of neurotics and defectives is likewise rapidly growing larger.

The problems of causation, prevention, and cure, are still involved in the realms of obscurity and quackery. Great parties and numerous societies are attempting its solution from the moral side alone.

As a scientific problem, it is practically unknown, and yet, no question of modern times is so eminently one of causes and conditions that are tangible and within the range of science to understand.

The neurologist must point out the road and stimulate the family physician to study these early psychological symptoms, which like signal flags of distress, are becoming more apparent.

Scientifically the abnormality of an increasing army of neurotics and suicidal drug-takers, who receive no care or medical attendance until they are chronic, is a reflection on modern medicine.

Over five million of laymen in this country are agitating the question of means and remedies to check this disease. Of the sixty thousand physicians, less than a hundred have given any special attention to the cure and prevention of this wide-reaching malady.

The specialists can study these cases in asylums, but the family physician must be the scientific student to point out the early causes and remedies. The drink problem can never be solved except from physiological and psychological study. This must begin with heredity, growth, nutrition, culture, surroundings, and all the phenomena of life.

The early psychological symptoms must be studied also, the automatisms, the beginnings of pathological changes that manifest themselves in the drink impulse.

This is the path along which science must seek the solution of this problem. The temperance agitator and reformer must give way to the physician. The roar and conflict of parties and societies will die away, and only the voice of science will be heard. Then the armies of inebriates, criminals, and insane will be halted, disbanded, and forced back to health and rational living. The inebriates will be protected and housed. The saloon will disappear and alcohol will be unknown. This will be a reality when medical men take up this study from a purely scientific point of view.

HYPNOTISM IN ALCOHOL AND OPIUM INEBRIETY.

Dr. Howard of Baltimore has recently published a very suggestive monograph on hypnotism *versus* morphinism from which we give extracts of the following clinical cases.

"Personally my experience in hypnotism so far has only been in its application to inebriety and narcomania.

"*Case I.* Young married lady, residing at the time she came under my care in Berlin, June 19, 1883; been married four years.

"Hysterical and hyperæsthetic. Could make no physical or mental effort except under the stimulus of morphia, taking on an average gm. 1.5 daily. Had gone through the ordinary treatment for the cure of such cases with only temporary benefit. Said she had rather die than attempt again to leave it off, even gradually. Will power weak and generally uncontrollable; but she expressed a *great desire to be cured*, but was afraid to try and leave it off even at a very slight reduction weekly. She knew it would land her in a madhouse. [NOTE.—I might say here that I did not get any of her history until after I had, unknown to her, gotten her will subservient to mine, at the request of her husband. She knew nothing about hypnotism at first, but was delighted that hypnosis could be produced, and instead of horrible dreams, and the knowledge of the torture to follow should she not

resort to her morphia, could have at any time quiet and restful hours.] It was a hard fight for several days before I could control absolutely the dominant physiological cry for the system's abnormal but accustomed pabulum. When the patient was verging upon the mania due to the decreasing of the dose of the drug and increasing the intervals of taking it, the hypnosis would last but a short time; but day by day I obtained better control of the will, until I could leave her in a hypnosis lasting several hours; therefore tiding over one or two of the customary injections. This continued until I was able to give post-hypnotic suggestion, and at the present time of writing she is free from all desire to return to the quondam habit.

"My investigation into the subject so far does not entitle me to give any definite account of the psychical or physiological changes or relations undergoing or existing in hypnosis:

"There are facts which prove the insufficiency of suggestion as an explanation. How can I account for the fact that as a boy I could hypnotize animals, even the lower orders, such as crabs and shrimps?

"*Case 2.* Young married lady aged twenty-nine years; when first seen at Southampton, Eng., was taking morphine hypodermically, gm. 2.5 daily; also alcoholic stimulants, on the advice of her physician in Paris, who had been trying to cure her of morphinomania, as had also several London physicians. She was normally a highly neurotic person, and exhibited mono-symptomatic hysteria, with at times some of its general symptoms, as insomnia, anorexia, dyspepsia, and neuralgic affections, since twelve years of age. She had tried reducing the doses daily, and before she had become such a slave to the drug had of her own will left it off suddenly. But the horrible torture she underwent in both cases was more than she could bear, and she returned to her nepenthe. She was willing to give up the habit, if it could be done without repeating those old tortures, otherwise she would prefer to remain and die a morphinomaniac. The question

now arose, "Is she a good subject?" for remember subjects are difficult to find at random. The second time I saw her I produced a slight hypnosis, and upon informing the family that I thought I could cure her, they readily consented to place her in my charge. It was a hard fight at first, the hypnosis not lasting over an hour at a time, and would have to be produced again, or the pitiful cries for morphine or brandy would come, and the foundations of the cure would have been pulled down. Gradually she became a good subject, until I could produce a hypnosis lasting seven or eight hours. All this time I was giving small doses of the bromides. By suggestions, after I had gotten her into a "mere state of passivity," she would eat heartily; and after two months of eating and sleeping well without any stimulants, with the promise to see her at any time should her "state of passivity" not last, I returned her to her friends a different woman.

"Case 3. Young woman; had been a subject of mine about ten days. Was a morphinomaniac. Had produced a large gluteal abscess by puncture with a foul needle. Opened, drained and dressed the abscess while she was in the hypnotic state. She complained of no pain, and said she was singing for me in the cabin of the steamer. This was not due to auto-suggestion, but I had placed myself in direct relation with the subject.

"Case 4. Young married woman, taking two quarts of brandy a day, and any other stimulant she could obtain. Had been a subject for some months. Had kept her from her old habits fairly well, but was unable to see her as often as was necessary. Not having seen her for some weeks she surreptitiously obtained a quantity of brandy and returned to her old habits. Delirium tremens came on suddenly and several local physicians were called in. I was telegraphed for and when I arrived found her in a raving delirium. As I opened the door to her room, where she was smashing things generally, she gave one look at me, stopped her ravings, and at my suggestion lay down upon the bed and slept calmly for eight

hours. I was able, for the first time, in this case, to give her post-hypnotic suggestions, and from the time of awakening up to the time of writing, castor oil is more agreeable to her than brandy."

A SYSTEM OF PRACTICAL THERAPEUTICS. By American and Foreign Authors. Edited by HOBART AMORY HARE, B.Sc., M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. In a series of contributions by seventy-eight eminent physicians. In three large octavo volumes of about 1000 pages each, with illustrations. Volume I., *just ready*, contains 1044 pages, with 170 illustrations; Volume II., *in press*; Volume III., *ready shortly*. Price per volume, cloth, \$5; leather, \$6; half Russia, \$7. For sale by subscription only. Address, Lea Brothers & Co., Philadelphia, Pa.

This large well-printed volume is confined to the practical knowledge of the means and methods of cure and prevention in disease. It is almost exclusively limited to the art of the practice of medicine. It is thoroughly a new book, with new facts, new methods, and new observations, that have never been given to the profession in a connected, available form before. Unlike works of prescriptions in which the exact formula is given for all kinds of diseases, it aims to give the indications and philosophy of the use of drugs, and other means for the cure of disease, to show why and when certain remedies are useful, and where and when other means and methods can be satisfactorily applied. The first volume fully sustains the expectations in the articles and editorial work.

EX-ORIENT, A STUDY OF ASIAN LIFE; By DR. E. P. THWING, 156 St. Mark's Ave., Brooklyn. 8vo. Cloth Back, \$1.00. Edition de Luxe, 300 copies, Interleaved, \$2.00.

Dr. Thwing has given in this work a very suggestive out-

line of the psychological forces at work in oriental countries. In this respect it is a revelation to most readers, indicating the vast range of physical forces that have made them what they are, also some of the possibilities that will follow from contact with western civilization. Dr. Thwing shows a clear philosophical conception of the revolutionary and evolutionary forces at work in building a new civilization on the ruins of the oldest in the history of the world. Evidently this little work is a mere preface to a larger and more exhaustive study, which will be looked for with great interest.

Dr. Thwing is a graphic, spirited writer, who rouses the reader and leaves him eager and excited to learn more of the topic. His article in last number of *JOURNAL* has attracted much attention.

PTOMAINES, LEUCOMAINES, AND BACTERIAL PROTEIDS, OR THE CHEMICAL FACTORS IN THE CAUSATION OF DISEASE; By VICTOR C. VAUGHAN, Ph.D., M.D., Professor of Physiology and Pathological Chemistry, and Associate Professor of Therapeutics and Materia Medica, in the University of Michigan, and FREDERICK G. NOVY, M.D., Instructor in Hygiene and Physiological Chemistry in the University of Michigan. New Edition. In one 12mo volume of 389 pages. Cloth, \$2.25. Lea Brothers & Co., publishers, Philadelphia, Pa.

This is a pioneer work in a new field of scientific medicine. Many of the obscure conditions which precede the drink craze are clearly outlined in these studies. The retention of poisonous matters and auto-intoxications have long been suspected as active causes in inebriety. This work is a clear study of the new pathology of many of the obscure conditions and causes of a large number of diseases. The following topics of some of the chapters will at once suggest the possible light it will throw on the first causes of both inebriety and many forms of insanity:—Foods containing Bacterial Poisons; The Relations of Bacterial Poisons to

Infectious Diseases; Some of the Bacterial Poisons of Infectious Diseases; Nature of Immunity-giving Substances; Germicidal Proteids of the Blood; The Nature and Importance of the Ptomaines—their Chemistry; The Leucomaines, their Nature and Chemistry; Autogenous Diseases. This work is particularly valuable to all specialists and readers of our journal as a suggestive study of the poisons which are generated within the body, whose power and influence may be far more potent than that of any chemical poisons introduced from without. This work introduces the reader to a new range of causes, and invites him to join in the work of exploration, which suggest discoveries in the pathology, prevention, and treatment that are beyond all present conceptions.

THE *Scientific American*, published by the great patent agency firm of Munn & Co., New York, is the most practically useful publication of its kind in the country. Indeed, it occupies a field distinctively its own. Not alone for the machinist, manufacturer, or scientist, but it is a journal for popular perusal and study. It is the standard authority on scientific and mechanical subjects. It is placed at a very low rate of subscription, \$3 per annum, which places it within the reach of all. Subscriptions will be received any time.

Wood's Monographs on medical and surgical topics comprise the latest and best literature of the day. The October number contains two very able papers: one by Prof. Demme, on the Influence of Alcohol on the Organism of Children, from which we publish a liberal extract; the other, on the Treatment of the Morphine Habit, by Dr. Fromme. These are very timely and important contributions.

The Philanthropist is a small eight-page monthly devoted to social purity, and contains many most excellent articles, which every one can read with profit. Send 50 cents for a year's subscription to Box 2,554, New York City.

The Doctor continues to come freighted with excellent matter, and grows with the years. With Editor Welles at the helm, the readers have a rich treat to expect in its coming monthly visits. Send to 36 East 14th Street, New York City, for a copy.

The Literary Digest of New York City makes such clear, concise digests that its neighbors copy them in regular pirate style. This is really a high compliment to one of the best weeklies published. Send to Funk & Wagnalls Co., New York City, for a copy.

THE principal action of alcohol is that of a narcotic when taken in full doses, and of a sedative in small doses. This is an important fact, and one that indicates much danger, in common with all remedies of this class. As their action is only palliative, they usually require repetition, and neurotic patients who are most in need of such remedies are least able to bear them. Nervous diseases and will-power are closely allied, and the soothing effects produced by stimulants are so irresistibly strong that a dangerous habit is entered upon almost before one is aware of it.

BISHOP WARREN said, "I knew a hard-drinking man always able to attend to business. But he transmitted to his children such vitiated constitutions that all died early of disease, except one, whom I knew. He had chronic dyspepsia. The appetite for liquor descended on the second generation with terrible power. His daughter early died of consumption. One son committed suicide for fear of a second attack of delirium tremens. The second son walked right on in the same path till he was placed where he could get no liquor. He lives in that confinement yet."

Editorial.

A NEW FACTOR IN INEBRIETY.

The present epidemic, influenza, called *la Grippe*, is becoming an exciting cause in a rapidly increasing number of cases of alcohol and opium inebriety. According to one author, the neurotic type of this trouble consists chiefly of nervous symptoms, fever, prostration, headaches, lumbago, pleurodynia, pains in the limbs, and sometimes a general cutaneous hyperesthesia. Delirium is often noted. Some cases show giddiness and tinnitus aurium, which may last for weeks after the disease has subsided. The olfactory nerves are frequently affected and show perversion of the sense of smell. The auditory apparatus is occasionally involved; in fact, various manifestations of the neuroses show themselves, particularly when there is a neuropathic predisposition.

In addition to these symptoms a profound depression with muscular debility is always present. Alcohol in small doses in many cases is a fascinating narcotic, which is continued indefinitely. It may be prescribed by a physician, or it may be taken as a domestic remedy. All the symptoms of the influenza disappear and the demand for spirits increases. If the effort to discontinue alcohol is painful, opium in some form is given, and this henceforth becomes the chief reliance. In some cases it seems that this epidemic has roused up some latent predisposition to use alcohol or opium. Thus a man with an alcoholic heredity previously temperate after an attack of *la Grippe* becomes a constant drinker, or contracts an opium addiction. Many cases are noted of persons who have previously used alcohol or opium to excess, and have abandoned its use and become restored, relapsing when seized with this epidemic. Such cases appear to be much worse, and show more chronicity and brain exhaustion, than others.

Dr. Day reports that delirium is more frequent in such cases, and delirium tremens more severe, and followed by more profound debility. All observers so far report unusual exhaustion, insomnia and mental disturbances, with increased temperature, followed by slow convalescence. The micro-organism, probably the active cause of this epidemic, is said to appear in three varieties or forms,—the neurotic, the catarrhal, and the gastric, or in some combination of these forms. Where the first form is prominent it is evident that alcohol is both an uncertain and dangerous drug, not only in developing a latent heredity, but producing some form of paralysis and central degeneration, which will demand a continuance of the drug irrespective of all consequences. Where there is a constitutional tendency in the brain and nervous system to marked alternation and periodicity, drink paroxysms and dipsomania will follow. In persons of weak, unstable, and exhausted nervous system, the effect of this influenza is to greatly increase the neurotic state, and make them particularly susceptible to alcohol and opium addiction. In persons who have previously suffered from these or allied diseases, the danger and possibility of relapse is greatly increased.

The indiscriminate use of alcohol or opium in any form in the treatment of *la Grippe* is clearly reprehensible and wrong. In the treatment of the various inebrieties which date from this influence as an exciting cause, the many complications should be studied and recognized, and the case should remain under treatment at least a year or more, before any permanent results can be obtained. The close association of pneumonia that is always fatal has been noticed in inebriety that began with an attack of *la Grippe*. This and many other forms of acute degeneration and death are to be expected in these cases.

We shall expect in the future some very suggestive studies in this direction, and we urge all who are treating inebriates and opium cases to make full notes and records of the many facts concerning this new factor in inebriety.

ALCOHOLIC DELUSION.

This case came to my notice, and with the assistance of a very excellent physician in the neighborhood the following facts were studied and confirmed. A clergyman of forty-eight years of age, of excellent character and reputation, had preached acceptably to a large country church for fifteen years. He had lived a uniform, regular life, working hard, and was very much esteemed by his people. He was known to be a moderate wine drinker, and for the past three years, since the death of his wife, had used stronger spirits. After a tender, emotional sermon, he burst into tears and confessed to his congregation that he had been guilty of adultery and had stolen many things and committed other serious sins. Asking their prayers and forgiveness, he offered his resignation. In an investigation which followed, it was clear that he had been using large quantities of alcohol at night, and that he had seldom received any visitors or made parish visits, and had no female friends with any apparent intimacies. To the family physician he confessed to several particular sexual sins, giving time and circumstances, which a careful inquiry proved to be false. One of the women he claimed to be intimate with was in Europe, another was visiting her son far away. Thus all the circumstantial evidence contradicted every statement. He seemed very clear and minute in his confessions, but when confronted with the inconsistencies and doubts which other facts gave to his stories, was confused, and seemed disappointed that his crimes were not believed. He claimed to use spirits as a medicine, but had no idea how much he had used. On other topics he seemed clear, but seemed to be under a settled conviction of the great disgrace he had brought on the church. He was placed under the constant care of a physician, and the spirits withdrawn, and a general improvement followed. The idea of sexual sin still lingers, although his mind is clear on other matters. This case has been the subject of much comment, and is a typical case of delusion arising from alcoholic excess.

CRIMES FROM INEBRIETY.

The past year has been noted for apparently a very unusual number of crimes committed by inebriates and persons poisoned by alcohol. Is the country passing through an epidemic of crime? Are we in the midst of a psychical wave of inebriety? Has the unusual attention paid to inebriety this year made the crimes following more prominent? While these questions remain unanswered, a casual study of the crimes noted in the large daily papers are startlingly suggestive. The following are some of the prominent examples among the better classes, noted in one week. A periodical drinker during a paroxysm (who was known to be homicidal at such times) went into a strange house, shot two persons and put fire to the house, then killed himself. A man of wealth during the drink craze piled obstructions on a railroad track, then laid down near by "to see the fun," as he expressed it; a train was wrecked and many lives were lost. A beer drinker, who was known to be dangerous when drinking, fired into a crowd of people at a church door, killing one and wounding several. A lawyer, who when intoxicated was very revengeful, shot his coachman and put fire to his barn. A prominent hotel-keeper while under the influence of spirits killed his wife, then shot himself. For months an inebriate, who when drinking has pyromania tendencies, has terrorized his neighborhood, and burned many buildings. In almost every community are numerous instances of inebriates who criminally abuse their wives and children when crazed with spirits. A large part of the police court business is the punishment for such assaults, but which is, in fact, a form of training and stimulation for other and more positive crimes.

The man who goes to jail thirty or ninety days for assault will be prepared to commit the same act again with certainty. All that is needed is a combination of circumstances and surroundings. The punishment has more unfitted him to live a healthy, temperate life. An inebriate became a defaulter, and his bank was wrecked. This crime began when

intoxicated and was continued while under the influence of spirits. A noted man while drinking committed bigamy, and years after suicided in jail awaiting his trial.

The record might be extended indefinitely, and is followed year after year by the same procession of ghastly crimes, and atrocities all committed while insane from alcohol. This year the number seems to be greater, and the crime more clearly traceable to alcoholic insanity. In many cases it is preventable, and the fault is in public sentiment and the community in allowing such cases the full liberty of sane men. An active business man after drinking a few glasses of spirits becomes deliriously irritable and sensitive of any possible reflection on his character. He goes around at such times, and he is literally a most dangerous lunatic, and will commit capital crime with great certainty in the future. A wild, passionate temperance orator drinks periodically. At such times he carries a revolver, to prevent others from cheating him. It is only a question of time when he will commit some terrible crime. Such cases are not rare and public sentiment is at fault in permitting them to go about unrestrained. As long as inebriety is regarded as a vice and the inebriate treated as willful, the same ghastly record of crime will be repeated. Given the number of inebriates and the number of atrocities can be determined in advance, with great accuracy. Every year the causes of crimes committed while crazed by alcohol become clearer. The false conception of inebriety, together with police courts and jails, and other methods of treatment are causes that are absolutely certain to produce homicides, suicides, and crimes of every description. Alcoholic crimes are preventable by recognizing the inebriate as diseased and irresponsible, and depriving him of his liberty and forcing him to abstain from all use of spirits.

An address by a very learned man has been sent us for criticism. It appears to be a protest against the progress of science that throws doubt on previous theories. It repeats

in many ways sentences like the following: "Crime is crime," "Drunkenness is drunkenness," "Vice is vice." The cure the drunkard is to stop drinking." Frequent quotations from the Bible are pressed into service, with opinions of medical men, and the whole is assumed to be the teaching of the highest scientific culture, and clearest judgment of the present time. It would be wrong to publish the name of the poor old "Rip Van Winkle," or those of his medical supporters, who have long ago lost sight of the front lines of progress. Criticism or notice would be equally unfair, in calling attention to a mental condition that is always deplorable, especially in this age of free thought.

A TRANCE CASE.

John B—, age 42, a partner in a mercantile house, was single and a moderate wine-drinker. Had never been intoxicated, but had suffered from severe headache after using wine freely. He spent the summer in Newport and became acquainted with a French lady, whose company was agreeable. No intimacy or thought of marriage had occurred to him. One day he suffered more severely than ever from the effects of the wine used the night before. Headache and profound muscular languor with mental dullness was present. He went over to the club and drank champagne, feeling much better. From this time his memory became confused. Two weeks later he recovered and found that he had married this French lady and was on a bridal trip. He had no recollection of any event which had happened, nor could he recall in the slightest degree any event of the past. It was ascertained that he had drunk steadily of champagne, and appeared particularly clear and bright, and thoroughly conscious of all his surroundings. The only unusual thing noticed was his inclination to fall asleep, if the surroundings became monotonous and still. The second day of the trance he proposed marriage at the earliest possible moment. He called on a clergyman and arranged the time. A few friends

were present, and nothing unusual was noticed in his manner or conversation. After the marriage they went by short journeys to Boston, Portland, Montreal, and Saratoga, where he awoke. In the meantime he drank champagne regularly and seemed cheerful and happy. He applied for a divorce and alleged that he was in a state of stupor and did not comprehend what he had done. This was denied by the court, after which a mutual settlement was agreed upon. The clergyman and other friends noted that he drank more than usual and seemed under the influence of spirits, but acted rationally, and was apparently conscious of all his acts. Some of his friends were skeptical of his alleged amnesia, or trance condition. One year later, while traveling for the firm on business, he suddenly took a steamer for Liverpool and awoke at sea without the slightest idea of any plan or possible motive. He remembered to have drunk freely with a friend at Boston, and retired to the hotel. It appears the next morning after paying his bill he drove to the steamer, bought a round trip, and after wandering around went to his stateroom and remained until he awoke four days later. Evidently this is a typical case of trance that is growing worse, and unless he abstains absolutely from spirits and has exact medical treatment the future will be doubtful.

NEW REMEDIES.

The first literature of new remedies, and the credulous enthusiasm of physicians to establish a reputation as pioneer discoverers, can never be trusted. These marvel-hunters are constitutionally endowed to welcome and accept any statement or theory of facts that is novel and revolutionary. If Dr. Smith reports ten cases cured by some unusual remedy, Dr. Jones will soon have a similar experience; then Dr. Brown will appear with a record of a few cases, some of which will long antedate Dr. Smith's cases. Of course he will claim a priority of discovery. The drug is now fairly launched, and the enterprising pharmacists hoist all sails to

catch every breeze that blows towards fortune and fame. The careful conservative physicians are astonished that the sample drugs received for experiment are either innocuous, or dangerously toxic in their effects. Then follows fatal cases which are due to the drug, and finally some careful study is made in which the drug is found to have no therapeutic value, and in certain conditions to be dangerous. Then the remedy disappears only to be followed by another claimant, with precisely the same history and termination.

Thus a steady procession of new remedies and new methods of treatment come and go. Some live through the stage of credulity, and attain permanence, but a large proportion soon disappear forever. The loss of life and injury which follow this empirical drug credulity seem to increase yearly. Recently the use of strychnine has been urged as a specific in inebriety. Many very extravagant statements of its curative value have gone the rounds of the medical press. In one case a visiting physician of a charity hospital ordered it in large doses to a number of chronic inebriates, several of which had convulsions that ended fatally. In another case in private practice a credulous physician gave one-tenth of a grain every two hours, and soon after the patient died. Many other cases have appeared of similar character, particularly in alcoholic delirium where strychnine was given freely. Some time ago the same credulity was manifest concerning the tonic effects of cocaine, and the results of this advice can be traced in the inmates of many asylums for insane and inebriates. The advice to use morphia in catarrh, urged some years ago by an eminent specialist as a specific remedy, was followed by a large number of persons who became narcomaniacs. Unthinking physicians often prescribe chloral for insomnia, and continue it for long periods, which often end in chloral addiction. The effort to extricate themselves from this is often followed by alcohol or opium inebriety. Jamaica ginger is ordered as a table drink or a slight tonic in feeble digestion. Analysis of the various fluids of this name on the market reveals from three to thirty per cent. of alcohol.

The alcohols used are of the cheapest and most poisonous character, so that literally this drink is as uncertain and dangerous as any of the alcohols found in the lowest saloons of large cities. Ginger ale may be a very harmless, or the most dangerous, of all concealed drinks, and no one can discriminate. Remedies that are prized for their effects in relieving the entailments of alcohol are open to question, and should be required to pass the ordeal of severe criticism and test before they are accepted. New hypnotics and narcotics or antipyretics should never be accepted on the statements of those who first use them. The more extravagant these claims of a new remedy, the more suspicious they appear. If a new remedy is discovered, or a new method of treatment adopted that is veritable and real, this fact will not remain unknown long. It will soon be recognized and accepted above all praise or extravagant laudation.

The specialists of inebriety are constantly pressed to try this or that drug, or method of treatment. The experience of some obscure physician, or some prominent specialists of the eye, or surgeon or obstetrician is urged as evidence of its value in these cases. Not unfrequently both the remedy and method of treatment is unphysiological and based on an erroneous conception of the nature of inebriety. Experiments with such drugs are always failures, and the experimenter is supposed to have some personal bias when he reaches opposite conclusions. Practically every physician is an experimenter, and should always be skeptical and severely critical of individual opinions, and dogmatic statements of remedies and methods of treatment. While it may not be possible to prove all things, we can certainly hold fast to that which is good.

THE delusion that inebriety would be checked by greater severity of physical punishment has broken out anew. This time a physician who stands at the head of a medical college, (and is no doubt an expert) has appeared as defender of this view. His statements are startling, and are sustained by

several clergymen, one judge and two police court justices. He is absolutely certain that inebriety will never decrease until the whipping post is established, and the dungeon, and bread-and-water treatment, with frequent hangings, are adopted. He has not the slightest doubt that all the scientific men who think otherwise are self-deluded, and measures to treat inebriety as a disease are deceptions. His learned friends of the clerical and legal professions sustain his position. This is alarming news for all the societies for the study of inebriety, and the asylums for its treatment. But practically this is out of the line of evolution, and the upward movement of science. It is a devolution or retrograde, and we fear this bold physician's mental vision resembles the owl who is bewildered by the bright sunlight that has come unexpectedly. The new century of advanced thought only confuses and bewilders. Such men are mentally in the thick shadows of the past. They have eyes but they see not, ears but they hear not. Their hoarse cries of alarm will be unheard in the march of events, and soon the oncoming tide of progress will engulf them and their theories forever.

ALCOHOLIC PHTHISIS.

Dr. McKensie of the Brompton Hospital, London, gave his experience in relation to phthisis in alcoholic subjects, as found upon the examination of cases, their course, and observations made on *post-mortem* examinations. It was remarked by the lecturer that the subject was one of great importance and very little had been written upon it, some authorities denying altogether any relation between alcoholism and phthisis, but there was conclusive proof that alcohol did very markedly modify and control the disease. In a series of seventy-five *post-mortem* examinations on alcoholics, tubercular lesions had been found in each case. Of this number, sixty-seven had the lungs principally affected. In the remaining cases the lesions were found in the peritoneum

and pleura. Hepatic cirrhosis was found in forty-five cases. Miliary tubercles, cheesy degeneration, consolidations, and excavations were found. The cases where an excess of connective tissue formation existed were very few. The vomicae were generally small and their presence frequently was not found during life. In only ten of the seventy-five cases was there any family history, making a marked distinction from non-alcoholic forms of the disease. The diagnosis in many cases, especially early in the disease, could be made only by examination of the sputum, as the phthisical symptoms might be masked by the hepatic and nervous. Repeated examinations of the lungs were necessary. When tubercular formations once commenced, the progress was very rapid, and a fatal termination almost inevitable. The patients were sometimes fat and pasty, and again emaciation was present. The circulation was always bad. The lecturer here stated that he believed in all cases of consumption the best guide in prognosis was the pulse. Troublesome cough is usually present. The treatment is unsatisfactory. It is best not to use alcohol in any form, as the habits of the patients would probably cause the amount prescribed for medicinal purposes to be exceeded, with the most harmful results. In all cases of marked alcoholism, even when the liver or the nervous system seem to be the part affected, examination should be made of the lungs. If there is ever expectoration, the sputum should be examined.

The following memorial has been presented to the Canada Parliament, and is sustained by an immense petition from leading citizens:

"The Commissioners recommend that the government, out of the funds derived from the fees for Provincial licenses (which might be temporarily increased for that purpose) shall erect in the centers of population one or more industrial reformatories for inebriates. Every such reformatory

should be near a city, and should have attached to it a sufficient area of good land for the employment of the inmates in farming and market gardening; it should also be furnished with means for employing the inmates in suitable industrial occupations. That to this reformatory be committed all habitual drunkards, that is to say, all who have been previously convicted of drunkenness three times within two years; such other persons addicted to the use of strong drink as in the opinion of the county judge may be reclaimed by timely restraint and judicious treatment; and those who may be compulsorily committed to an inebriate asylum under the provisions of the Inebriate Asylum Act. The first committal to this reformatory should be for a period not shorter than six months; the second for not less than one year, and the third for two years, less one day. That any inmate whose term of imprisonment exceeds six months may, after he has been detained for six months or more, be permitted to return home on parole if he has given satisfactory evidence of a sincere desire to live soberly and of strength of mind sufficient to enable him to keep his good resolution — such license to be granted on the recommendation of the Superintendent, endorsed by the Inspector of Prisons, and approved by the Provincial Secretary; such license to be revoked if the conditions on which it is granted be not observed. That if the families of any inmates of a reformatory for inebriates be wholly dependent on them for support, a portion of the proceeds of the earnings of such inmates be paid to their families; also that a portion of the net earnings of the inmates, after defraying cost of maintenance, shall be set apart to form a fund, out of which those whose general conduct has been good and who give evidence of being reformed, shall be assisted in their efforts to earn a living for a time after leaving the reformatory. That if after a third commitment to an Industrial Reformatory for inebriates, a drunkard again be convicted of drunkenness, he shall then be sentenced to the Central Prison for the full period authorized by law.”

Clinical Notes and Comments.

TREATMENT OF HABITUAL DRUNKENNESS.

The Hahnemannian Monthly recently gives the following review. We commend it to our readers as evidence that the subject is not yet exhausted, and the medical millennium of exact science may not be very far beyond us:

"Gallavardin of Lyons, in his work *Alcoholism et Criminalité, Traitement Médical de l'Ivrognerie et de l'Ivresse*, shows up the evil habit of alcoholism, and then advises in relation to treatment to consider principally the mental symptoms, and in chronic diseases the single dose which often suffices for several months, and thus permanent cures can be effected. He recommends:

"*Nux Vomica*: Tendency to anger; forced by worry and anxiety to benumb the mental troubles; spitting. When sober, kind and retiring; when drunk, quarrelsome or crying. Easily jealous and envious; suicide by drowning, or death by revolver and knife. Tendency to melancholy; increased or diminished sexual nisus. Small doses of liquors cause drunkenness. Desire for red or white wines, beer, absinthe, or rum; from doing nothing; from neurasthenia. Women often want stimulants during or after pregnancy; lascivious thoughts and acts; does not care for medical advice; often longs to steal, and cunning; tendency to constipation, vomiting and rumination from difficult digestion; great smoker, gambler, spendthrift to others, but avaricious in the family; is never satisfied at home, but roams about with strangers.

"*Lachesis*: Disagreeable quarrelsome people; vindictive, malicious, just as leave kill somebody, but no tendency to suicide, except to be crushed by a car or wagon. Talkative during drunkenness; tell to others all their thoughts and how

to execute them, which they would carefully guard when sober. Do not care about anybody. Smoker. Sometimes wasteful and squandering, at other times avaricious; always careless; desire for absinthe.

"*Causticum*: Stubborn, quarrelsome or touchy, and easily crying during and after the spree; sexually excited before and during it (very characteristic of causticum); desire for brandy and rum. In persons who lost very dear friends. Adults as careless as children. Takes no interest in anybody. Smoker. Inclined to steal, as he cannot keep his hands off. Young women who want to get married. Very wasteful.

"*Sulphur*: Herpetic and hæmorrhoidal constitution; is slow at work and when walking; likes to sleep late, but does not feel refreshed by it; muscles relaxed and flabby; tries to get drunk when alone; has neither will-power nor a sense of his duties; desire for beer and wine. Mild when sober, uncouth when drunk. Talks to everybody what he would keep to himself, or does actions which he would never do when sober; careless in mind and body; inclined to obesity; lies and steals; envious; somewhat dissolute; gambler and smoker.

"*Calcareo carb.*: Fat and lazy, hence not obliging to others, and causeless apathy to some persons; lies and steals; brainfag from mental overwork. Envious, hateful, revengeful, somewhat dissolute, sometimes gambler. Wasteful, and at other times avaricious; will-power nearly abolished; has not the moral courage to refuse a glass of wine.

"*Hepar*: No heart, constantly dissatisfied, hot-headed, and could kill anybody in his rage; criminal tendency; cannot perform any mental labor without his glass of wine.

"*Arsenicum*: Wicked, revengeful without charitableness, jealous, inclined to commit crime, suicidal tendency to hang, to drown, to poison or stab himself. Constant desire to drink, even if it is only water. Tendency to vomit, and especially to diarrhoea; loves to persecute others.

"*Mercurius vivus*: Discontent with himself, with others, with everything. Teeth easily become carious, gums swell

up, ptyalism, neuralgia, diarrhoea and dysentery, helminthiasis; great gambler, spendthrift or avaricious; spend everything as quick as they earn it; unbearable behavior; suffering from diseases which can be palliated.

"*Petroleum*: Drunkard without any will power; cannot refuse liquors, though they vomit as soon as they have the least too much. Garrulous during their spree.

"*Opium*: Whiskyists, who drown their debasement in liquor. Easily moved to tears. Very funny but dull, and during their inebriety, sleeping. They are funny from wine, but drowsy and sleepy from beer, cider, and whisky.

"*Staphisagria*: Drunkards, who excel in *Baccho et Venere*, and who try to strengthen their broken-down constitutions by liquors, especially sweet ones. Ill-humored and downcast before, during, and after their drunkenness; hypochondria with delusions of persecutions. Old bachelors or married men given to adultery; onanists; smokers, jealousy.

"*Conium mac*: He drinks to brace up; full of envy; cold and icy manners; has to indulge in everything he wants; fails to take interest in anything; mental capacity limited. Adults weak-minded like children; weakness of spine, with tendency to paraplegia.

"*Pulsatilla*: Drinks to strengthen his stomach, as digestion is poor. During intoxication, down-hearted, with desire for cider. Chlorotic girls and women who indulge on account of their debility; fond of candies and sweets; jealous, envious, and malicious. Spendthrift in order to show off. Bashful even to cowardice.

"*Magnesia carb.*: Prefers sweets and fine liquors; irritable, down-hearted, talkative or silent, face deep red; insomnia at night, sleepy in daytime; garrulous when drunk.

"Gallavardin prescribes the drug in the 200th potency, a dose every two, three, four, six, seven weeks, given without the knowledge of the patient.

"During the intoxication, he prefers the following remedies in the 3d, 6th, 11th, or 30th potency, 6 to 8 pellets in half a glass of water, a teaspoonful every five, ten, fifteen,

twenty minutes. In the *convulsive form* of intoxication with convulsions of extremities, trunk and head: Nux vom., bell. *Jealousy*: Nux vom., lachesis, pulsatilla, staphisagria, hyoscyamus. *Fighting mood*: Nux vom., hepar, veratrum, hyoscyamus. *Destructive mood*: Bell., veratrum. *Killing mood*: Bell., hepar, hyoscyamus. *Suicidal mood*, by poison, dagger, hanging, or being crushed: Arsenicum. By dagger, pistol, or drowning: Nux vom. By poison or throwing himself down from a height: Bell. *Full of fun and mirth*: Opium, coffee. *Playing the actor*: Stram., bell. *Clear-minded*: Calcarea, sulphur. *Dull-minded*: Opium, stramonium. *Sleepy or sleeping*: Opium, bell. *Insomnia*: Nux vom., coffee. *Garrulous*: Lachesis, causticum, hepar, petroleum, magnesia carb. *Screaming*: Stramonium, hyoscyamus, ignatia, causticum. *Scolding*: Nux vom., hepar, petroleum. *Crossness* before, during, and after the spree: Hydrastis, nux vom., caust., lachesis. *Desire to go naked*: Hyoscyamus. *Excited sexuality*: Nux vom., china, phosphor., cantharides, and especially causticum.

"It is far better the patient does not know that he is treated for his vice. Drunkenness is a mental alienation with its obstinacy towards doctor and friends, and the drug shows the same effect when given in soup, wine, coffee, or even in liquor.

"There is an acquired and a hereditary drunkenness; the former yields more easily to treatment, the latter is often the bane of the descendants of drunken parents, especially when conceived during the bout. To prevent such dire consequences such children must be treated from their thirteenth to fifteenth years and longer, with the following remedies in the order given and in the 200th potency: 1. Sulphur, forty days. 2. Nux vom., forty days. 3. Arsenicum, forty days. 4. Mercur. vivus, forty days. 5. Opium, forty days. 6. Lachesis, forty days. 7. Pulsatilla, forty days. 8. Petroleum, sixty days. 9. Conium, sixty days. 10. Causticum, sixty days. 11. Magnesia carb., sixty days. 12. Staphisagria, forty days. 13. Calcarea carb., sixty days. Only the

high potencies answer; low dilutions will fail. Children under thirteen years may be treated with the 30th potency, and then the intervals can be shortened, as sulphur after twenty, petroleum after thirty days. Modification in the sequence may be necessary according to the individuality of the case, and the attending physician must be the judge. In relation to diet hardly any measures can be proposed, as the treatment must be carried on without the knowledge of the patient; still we might advise a diminution of animal food and must raise our voice against tobacco, as it increases the thirst. Fat meat, bacon, butter, cream, milk, and vegetables, diminish thirst and hunger. A habitual tippler cannot break up his evil habit at once, and it is questionable whether it is advisable, for alcohol increases the activity of the heart and removes an exhausted feeling. We know that soldiers after a long and tedious march are strengthened by a small portion of spirits, whereas, when they take it before they set out, they become far earlier fatigued. Stanley reports, that alcoholic beverages in central Africa cause too often hepatic troubles; heat-fever, mental troubles, even inside of their tents, while, when taken before retiring in small doses they quiet the heart and produce sleep. Alienists often prescribe to their excited patients small doses of alcohol in the evening to make them sleep. It was an old fashion when the host presented a nightcap to his guests before retiring, and the use of alcohol in pernicious fevers and against the bites of poisonous animals is a mode of treatment recognized in all schools. It is not an easy matter to treat habitual drunkenness; it takes patience and time."

In a recent lecture by Dr. Day on "Mysteries of Inebriety," occur the following passages: "There is more or less mystery connected with all things in this world — with science, the arts, medicine, matters of business, and even with religion. Species of mysteries are connected with inebriety of every form, and strikingly so with oenomania, or an inordinate and uncontrollable thirst for excessive quantities

of alcoholic drinks, and yet the general public look at all matters tending to reformation as "through a glass darkly."

"From the first the disease has been shrouded in mystery, and its pathology has not been understood. As a disease it has been as little comprehended as insanity. There is a division line which separates inebriety into two classes, those who drink from pure love of mental excitement, and are satisfied with nothing less than complete intoxication, and those who drink from social habit.

"We live at railroad speed. Everything is driven by steam or electric power, and our nervous system is tried to the utmost. Never before was there so great a demand for brain and muscle. The work of human hands is only outdone by Omnipotence. The mind has become a slave and the lightning a toy. To sustain the high rate of speed at which mankind is rushing along, the engine must be kept supplied with fuel, and the safety-valve loaded with weights or tied down. This false and feverish state of human existence accounts for much of the inebriation that now prevails. We drink as we do other things, on the high pressure principle, and no wonder the iron weakens and the boiler explodes."

THE RESPONSIBILITY OF INEBRIATES.

AN INTERVIEW WITH DR. NORMAN KERR, F.L.S.

The following striking passages occur in a leading London paper:

"That our existing practice in dealing with inebriate criminals is a complete failure, no one conversant with the facts will deny. Just look at a few of the failures. I know of one female inebriate who was convicted over 600 times, though her husband had paid nearly £200 in fines on her behalf. There are drunken women who have spent

NEARLY ALL THEIR LIVES IN PRISON.

Another was 52 times in prison in one year, or once a week, while one woman, thirty-five years of age only, had been imprisoned 700 times."

"The women beat the record, but inebriate males can show a long chronicle of repeated terms of imprisonment. The present plan of short sentences simply affords time for the drunkard, when his ability to go on drinking has gone from him for the nonce, to be reinvigorated under hygienic and sanitary conditions in a

GOVERNMENT TEETOTAL CLUB-HOUSE,

and thus, at the expense of the ratepayers, once more to be enabled on his discharge to renew his career of intoxication. Our judicial procedure thus constitutes a grand training school of inebriates, re-establishing their shattered health, and refitting them for their drunken excesses. Yet, I contend that a large proportion of these people are as fully under the dominion of a morbid uncontrollable impulse as are the unfortunate subjects of epilepsy."

"By an application of pains and penalties to the prisoner whose crime was committed while he was intoxicated, we may punish him with even the highest penalty of the law for an act done without criminal intention, and often without consciousness of it or remembrance of it, when recovering sobriety. Delirium tremens and acute alcoholic mania are manifestly diseases which destroy consciousness for the moment, inability to distinguish right and wrong, and control, yet persons have been convicted who were suffering from one or other of these diseases, when they made themselves amenable to the law."

"Inebriates are never healthy. Their powers of perception, of sensation, and of thought, are all diminished, deadened, and restricted. Mental co-ordination is destroyed, and their thinking is as confused as their visual capacity is impaired. They live in a maze of false impressions, while themselves and their own importance dwarf all else. Driven back on their own imperfect and deceptive imaginings, their world of mind is a chaos of indefiniteness, with a growing and unswerving dogmatic self-sufficiency the more their senses are clouded and their reason diseased. Hence, in the

truest meaning of the phrase, an inebriate is nearly always *non compos mentis*. Narcotics wield an influence over the higher faculties which is not possessed by other poisonous substances. As no one can alter the poisonous action in body and brain once the poison has been taken and is careering through the blood, no one can with justice be held accountable for the results of any poison once it has been taken. He can be held accountable only for the taking.

"I think the Legislature ought to fulfill a long-neglected duty to the victims of their legislation, and make adequate provision (1st) for the compulsory seclusion and treatment of all diseased inebriates who have no will left to apply for voluntary admission to an institution; (2d) for the prompt reception and detention of voluntary applicants without the forbidding ordeal of an appearance before justices; and (3d) for institutions for the proper care and treatment of the poor and for inebriates of limited means."

"As to inebriate criminals?"

"It ought to be the work of legislation to confine them, not in prison for punitive purposes, but in suitable hospitals for the treatment of inebriety. Yes, I would suggest that in all criminal trials in which the alleged criminal act has been committed by the accused when under the influence of liquor, or has been committed by an inebriate, there should be an investigation into the previous medical history of the prisoner. This would, in many cases, reveal a fall on the head, an attack of heat apoplexy, or some other accident or disease which had been the starting point of a true intoxication mania. There should also be an enquiry into the family history, so as to elucidate the heredity with especial reference to inebriety, insanity, and other neurotic affections."

"I would entrust this two-fold enquiry either to a medical expert or a mixed committee composed of legal and medical experts acting together. The object of this investigation would be to ascertain how far the accused had been cognizant of his alleged criminal offense, and as to whether, if so cognizant and so competent, he was able to resist criminal

impulse. Such an expert enquiry should be provided for the accused, whatever their circumstances, as a judicial provision to ensure a fair and just trial.

"In the next place I would propose the appointment of a

MIXED COMMISSION OF JUDGES,

counsel, solicitor, and medical experts for the consideration of the question of dealing with inebriates who have been convicted of a criminal offense. This enquiry should have special reference to the best procedure to be pursued, which, if penal, should be by cumulative punishment or otherwise, and, if curative, by medical treatment for a diseased condition, with due provision for classification, hygienic measures, and elevating influences. By some researches of this kind such light might be thrown on the genesis of crime complicated with drinking, and the morbid conditions which precipitate not a few individuals into inebriate criminality, as might aid in the prevention of crime, as well as improve the criminal's chances of reformation, and increase the majesty and power of the law by avoiding even the semblance of injustice."

INEBRIATE RETREATS IN ENGLAND.

The Inspector of Retreats under the Inebriate Acts, 1879 and 1888, has issued his annual report upon the seven retreats licensed during the year 1890. In a schedule annexed the situation of each retreat, the name of the licensee, and the number of patients who were admitted and discharged during the year are set forth. No fault is found either with the sanitary or general condition of any of the retreats. On the whole, the health of the inmates has been remarkably good. No death has taken place. One new retreat was opened, The Grove, Fallowfield, near Manchester, a license for which was obtained in the month of July. It was filled with twenty female patients shortly after the date of opening. In the aggregate, 109 patients were admitted to the different establishments during the twelve months. This is the highest

number of admissions in any one year since the passing of the Acts. Some observations by the licensees on the working of the Acts and the results of treatment during the year record more than one opinion that the longest period of detention permitted by the Act (twelve months) is too short in many cases to accomplish the desired end. The licensee of the Rickmansworth Retreat (Dr. R. W. Branthwaite) put forward the following points "requiring urgent attention to make legislation for inebriates of more universal value": (1) Less obstruction to the entrance of voluntary patients by doing away with appearance before justices, or, at all events, by appearance before one justice; (2) compulsory reception and detention of inebriates too will-paralyzed to apply of their own account; and (3) need for provision for the poorer classes. A summary of the 244 cases discharged since the opening of the home under the charge of this gentleman contains some exceedingly interesting and valuable figures. Most of the patients were between the ages of thirty and forty; the numbers of married and single were almost equal; and nearly all had received a good, if not what is described as a "college," education. Among the ranks of those treated were men of all professions and occupations. The largest number coming under one head are described as "gentlemen of no occupation." It is worthy of note that, whereas only one retired naval officer figures on the list, no less than eleven retired army officers have been treated at the home. The proportion of solicitors to barristers is almost, but not quite, as large. The difficulty of obtaining accurate facts as to hereditary tendency is shown by the failure in exactly half the cases treated to obtain any details of the family history of the patients. After leaving the institution ninety-four have done well, ten have improved, ten became insane, one died, seventy-four failed to make any improvement, and thirty-five have not been heard from. A new retreat is to be opened at Saltash, in Cornwall, during the present year.—*Times.*

THE COCAINE HABIT.

In a summary of recent papers upon the cocaine habit, now regarded by some as "one of the three scourges of mankind," Dr. Edmund Falk points out that it has a characteristic clinical picture: on the one side in the cachexia or bodily ruin, on the other side in the moral impairment and pronounced mental affection. Patients who use cocaine alone — and those who have endeavored to wean themselves from morphine by its aid, and so added cocainism to the morphine habit — appear marasmatic. The skin is of a pale yellowish, almost cadaveric tint and withered feel; the extremities are cool and covered with cold sweat. The eyes are deeply sunken, glistening, and surrounded by a dark ring; the pupils widely dilated. Appetite is lost; digestion disturbed. Salivation with dryness of throat may be complained of, and further, partial sensory disturbances or total analgesia. From the paralyzing action of cocaine upon the blood-vessels, patients complain of palpitation and breathlessness, troublesome sweating and noises in the ears, and also syncopal attacks and dyspnoea. The pulse is more frequent and easily compressible. They suffer from a want which must be satisfied; they become nervous, trembling, and fall into a wretched condition of neurasthenia. Speech is disconnected and can scarcely be understood; impotence and incontinence of urine may appear. Sleeplessness sets in early. One of the most characteristic effects of this habit is the occurrence of muscular twitching, tonic and clonic convulsions, and finally epileptic attacks in which the patient may die. The mental symptoms may take the form of hallucinations, usually of general sensation, but not infrequently of sight as well. General mental weakness may set in rather early, to be observed in a loss of memory and unusual prolixity in conversation and correspondence. When the drug is withdrawn, besides the vasomotor symptoms there may be seen depression, impairment of will-power, weeping, etc. The chronic form does not protect from acute intoxication. — (*Therap.*

Monatshefte, No. 12, 1891.)

VOL. XIV.—13

DEER PARK SANATORIUM, TORONTO.

This institution was formally opened in November, 1891, in the presence of about 200 prominent citizens, all of whom are deeply interested in the success of this new institution. Addresses were delivered by Mr. Kilgour, the Rev. Dr. Parsons, the Rev. Dr. Thomas, Mr. James Beaty, Dr. Elliot, and others. All of the speakers expressed their best wishes for the prosperity of the grand work commenced, and urged the founders of the institution to be encouraged by the measure of success which had already fallen to them.

About four years ago, through the influence of ex-Mayor Howland, an effort was made to establish an inebriate asylum in the city, but a by-law asking the appropriation of \$30,000 for that purpose was defeated. Realizing the necessity for an institution of this kind, in January, 1889, the late Alderman Gillespie and Dr. C. S. Elliot obtained a charter from the Ontario government and began soliciting purchasers of stock, the capital being \$50,000. Their efforts were eminently successful, and recently the residence and grounds of Mr. Hague, formerly manager of the Merchants' Bank here, were purchased at a cost of about \$30,000. The building was very much enlarged, and the new sanatorium is now one of the prettiest places in Toronto, being three stories high, and over 100 feet in length. It is situated in one of the most beautiful parts of Toronto. There are three acres of ground in connection with the institution, and this is really a delightful spot. The grounds have been well laid out, and the walks and drives, shaded by great maples and oaks, would seem in themselves to be life-giving. The sanatorium is a private retreat for the subjects of inebriety or narcomania, and accommodation has been made for about thirty-five patients. The interior of the building has every appearance of a home, and one of the main objects of the founders is to surround a patient with a Christian influence and send him out, not only cured of his appetite for alcohol and other narcotics, but a restored man.

INSANE CRIMINALS IN BELGIUM. — There has recently been established in Belgium, by royal decree, under the Department of Justice, a service of mental medicine in connection with the prisons. The report of the Minister of Justice to the king calls attention to the large number of prisoners who, while in confinement, show symptoms, real or feigned, of insanity. Good discipline demands the punishment of a feigner, and humanity that the insane convict shall be treated in an asylum. Thus the first step has been taken in Belgium towards the establishment of special asylums for insane criminals. The prisons of the kingdom have been set off into three districts for the purposes of this new service, to each of which an experienced alienist has been assigned. The first district will have the expert services of Dr. Jules Marel of the Hospice Guislain, Ghent, who, it is safe to surmise, has, doubtless, much to do with this enlightened policy of the Department of Justice. The second and third districts are in charge of Dr. Masoin, professor at the University of Louvain, and Dr. Serne, medical superintendent of the asylum at Mons. — *Journal of Insanity.*

FORT HAMILTON.

The twenty-second and twenty-third annual reports of the Inebriates' Home, at Fort Hamilton, N. Y., gives some very interesting statistics. In 1889, there were 509 patients under treatment; four of this number died, eleven were transferred to other hospitals, and 325 left. One hundred and forty-four have gone back to business, and are doing well. Sixty-two went away unimproved, seventy-eight have been lost sight of, thirty-two were re-admissions, nine have died since leaving the institution. The largest number of admissions were in December and February. The oldest patient was 74 and the youngest 18. The largest number were between 30 and 40 years of age; 4 were under 20 and 3 were over 70.

The twenty-third annual report shows that 617 patients were under treatment for 1890. During the year 5 patients

have died in the Home, 1 was transferred to hospitals, 6 to the lunatic asylum, 434 left during the year; 217 of these are engaged in business and doing well, 56 unimproved, 118 have been lost sight of, 37 were re-admissions, 6 have died since leaving the institution. The oldest patient was 74 and the youngest was 19. The largest number of cases were admitted in January, February, and April; 2 were under 20 years old, and 3 were over 70, and the largest number were between 30 and 40 years of age. This institution has been in active operation for twenty-four years, as one of the great charities of New York State. It was in active operation several years before it became a State asylum. Under the care of Dr. Blanchard it has become the leading asylum of the world to-day. Its consulting physician, Dr. Mason, is well known to our readers. Some statistical studies of the records of this institution have already been made, and we are confident that many of the disputed questions of science will be decided by an appeal to the records of this asylum in the future.

THE ACTION OF ALCOHOL ON THE POWER OF MUSCLE TO DO WORK. — Messrs. Gréhant and Quinquand have published in the *Comptes Rendu de la Société de Biologie*, 1891, p. 415, a series of interesting experiments showing the effect of alcohol on the working power of muscle. The muscle used was the gastrocnæmius of dogs, and the mode of excitation was by a constant current of fifteen milliamperes strength, one pole being at the upper insertion of the muscle, the other at the tendon of Achilles. The alcohol was given by the stomach, 100 cc. of 25 per cent. alcohol (alcool à 25 degrés) being injected every fifteen minutes. The record was taken with a Gréhant dynamometer-myograph. As the dogs came more and more under the influence of alcohol the muscular power diminished notably, sinking in one instance from 1221 to 921 grammes, and in another from 1021 to 721 grammes. [These experiments made directly on muscle confirm the results of observations

on miners and soldiers — that when an extra amount of work was to be done coffee, and not alcohol, was the stimulant to administer. — K.]

PHYSICIAN'S VISITING LIST: Lindsay & Blakiston, for 1892. Philadelphia, Pa.: Blakiston, Son & Co.

The New Year's number of this popular visiting list shows a marked improvement in many ways. It is no doubt one of the best pocket account books published. Physicians who use it once rarely ever give it up.

Bromida of Battle & Co., St. Louis, is well known, and is unrivaled as a safe and reliable hypnotic.

Oxford Retreat, at Oxford, Ohio, managed by Dr. Cook, is among the best asylums for mental and alcoholic cases.

Lactopeptine has been found of unexceptional value in cases of the prevailing influenza, where gastric troubles were prominent.

Horsford's Acid Phosphate needs no praise; it has passed beyond all question as an essential remedy in the practice of medicine.

The *Homewood Retreat* at Guelph, Ont., is well known as the finest asylum in Canada for private cases of the insane and inebriates.

Lithia Water of the Georgia Bowdoin Springs is growing in medical value very rapidly, and promises to be the most valuable medicinal water of the country.

The *Battle Creek Sanitarium* is one of the most palatial hotel-hospitals in the world. The superintendent, Dr. Kellogg, is also a leader in the front ranks of medical progress.

Fellows' Hypophosphites are in great demand for the exhaustion from the prevailing influenza, and seem to be a double tonic of rare power and rapid tonic action.

The Highlands at Winchendon, Mass., under the care of Dr. Russell, is one of the most attractive asylum homes, in a beautiful village, and situated in a romantic country.

Dr. Smith's Asylum at South Wilton, Conn., is a very attractive place, and combines all the finest hospital appliances with an elegant home, looking over the Sound and a fine stretch of country.

Bromo-Potassa of Warner's is found to be a capital remedy in the *grippe*. For the headaches and insomnias it is almost a specific. In many cases it has effectually broken up the attack at the start.

Neurosine is the new anodyne and hypnotic, which is claimed to be a remedy par excellence in delirium and convulsive neuroses. The Dios Chemical Company of St. Louis are the manufacturers.

Parke, Davis & Co.'s advertisement is an announcement that should attract the attention of every medical man. They have for many years sent out some of the most valuable drugs of the pharmacy.

The *Antikamnia Chemical Company* offers to mail a trial package of Antikamnia to any physician. It is a valuable remedy, and should be tried and thoroughly tested; then it will be used as a safe and reliable narcotic.

The *Inebriate's Home* at Fort Hamilton, N. Y., under the care of Dr. Blanchard, and the *Washingtonian Home* at Boston, Mass., with the veteran Dr. Day at the head, are the largest and most complete asylums in America.

W. H. Schieffelin & Co. of New York city have for years placed on the market many of the more complex chemical drugs, which have become popular and valuable. The last product, *Europhen*, noted in our last number, is found to be a remedy of great value.

A MENSTRUUM.

Horsford's Acid Phosphate.

This preparation has been found especially serviceable as menstruum for the administration of such alkaloids as morphine, quinine, and other organic bases which are usually exhibited in acid combination.

The admixture with pepsin has been introduced with advantage when indicated.

The acid phosphate does not disarrange the stomach, but, on the contrary, promotes in a marked degree the process of digestion.

Dr. R. S. MILES, Glencoe, Minn., says: "I use it in a great many cases as a menstruum for quinine, when an acid is necessary."

Dr. J. L. POWERS, Reinbeck, Ia., says: "I have used it as a satisfactory menstruum for the administration of quinine, when the combination is indicated."

Dr. O. J. PRICE, Chicago, says: "I am using it either alone or in combination with such agents as quinia, nux vomica, pepsin, etc., in certain forms of dyspepsia, characterized by lack of tone, or deficient muscular power, and have derived very satisfactory and beneficial results."

Dr. A. S. MAY, Forest, O., says: "I find it an excellent menstruum for the administration of comp. tr. cinchona, in recovery from malarial fevers, where there is impaired digestion."

Dr. A. H. SAGER, Williams Centre, O., says: "I have found it to be one of the best menstruums to administer quinia, or any of the alkaloids, that I have ever been able to procure. It is an admirable solvent."

Send for descriptive circular. Physicians who wish to test it will be furnished a bottle on application, without expense, except express charges.

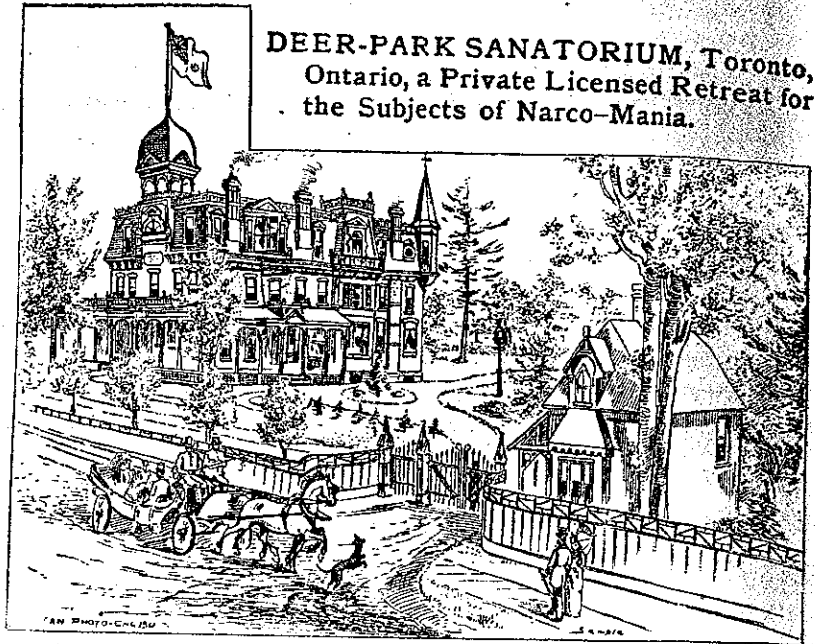
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Ontario, a Private Licensed Retreat for
the Subjects of Narco-Mania.**



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Vice-Presidents :

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Ex-Minister of Agriculture.

Medical Superintendent :

C. SCHOMBERG ELLIOT, M.D., M. C. P. & S.,
*Member of the American Association for the
Study and Cure of Inebriety, New York,
For three years Examiner in Medical Jur-
isprudence and Sanitary Science for the
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is situated at Deer Park, one of the most healthful and beautifully situated suburbs of Toronto, on the high lands immediately skirting the northern limits of the city, and commanding a magnificent view of Lake Ontario and the Queen City of the West. The neighborhood abounds in richly wooded glens and dales and elevated summits, interspersed with gardens, groves, and orchards, with lovely walks and drives in all directions. It is situated in ample grounds, which are adorned by trees, shrubs, and flower gardens, with extensive bowling green and lawn tennis court, and it is very accessible, being not more than two minutes' walk from the Metropolitan Electric Railway on Yonge Street, and only ten minutes from the Toronto Street Cars.

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

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

Patients are admitted upon their voluntary application, or may be committed by the County Judge, under the provisions of the R. S. O., Chap. 246, secs. 100 to 111.

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FROM GEORGIA.

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15.234 grs. Magnesium Bromide,	1.670 grs. Lithium Bi-Carb,
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	.280 grs. Strontium Sulphate.

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

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

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

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

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ITS ESSENTIAL POINTS may be thus formulated:

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PRECISION as to weight and division.
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PROMPT SOLUBILITY of mass and coating.
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PURITY OF MEDICAMENTS is, of course, indispensable to the perfect pill. It is obvious, but equally true, is the proposition that upon this factor the value of its other qualities is largely dependent. Exactitude of weight and uniformity of preparation have little significance if the medicament be impure, while indifferently prepared drugs are liable to chemical changes which affect their stability and activity.

SAFE AND CERTAIN RESULTS are only to be obtained with pure remedies. The methodical treatment of disease calls for therapeutic agents which are as near absolute in quality as they can be made by the combined resources of chemist and pharmacy under competent and conscientious direction.

IN THE W. H. S. & CO. pill these conditions are fully realized. Only the pure materials are employed; no component is substituted, either for economy's sake or for any other reason; and the formula is exactly followed. We believe that the W. H. S. & Co. pill fully meets the requirements of modern therapeutics.

SOME OF THESE PREPARATIONS are specified below, and they are offered as being especially useful at this time.

Pil. Phenacetine (Bayer), "W. H. S. & Co."

For All Forms of Fever, Pain, Rheumatism and Neuralgia; for Pertussis, and for all conditions in which pain or fever, or both, are to be combated. (Pills of 2, 3, 4 and 5 grs.)

Pil. Phenacetine et Salol, 5 grs., "W. H. S. & Co."

For Influenza, (La Grippe), Acute Articular Rheumatism, Neuralgia, Migraine, Whooping Cough, and all painful febrile conditions. (Pills containing 2½ grains each of Phenacetine-Bayer and Salol. Half strength also prepared.)

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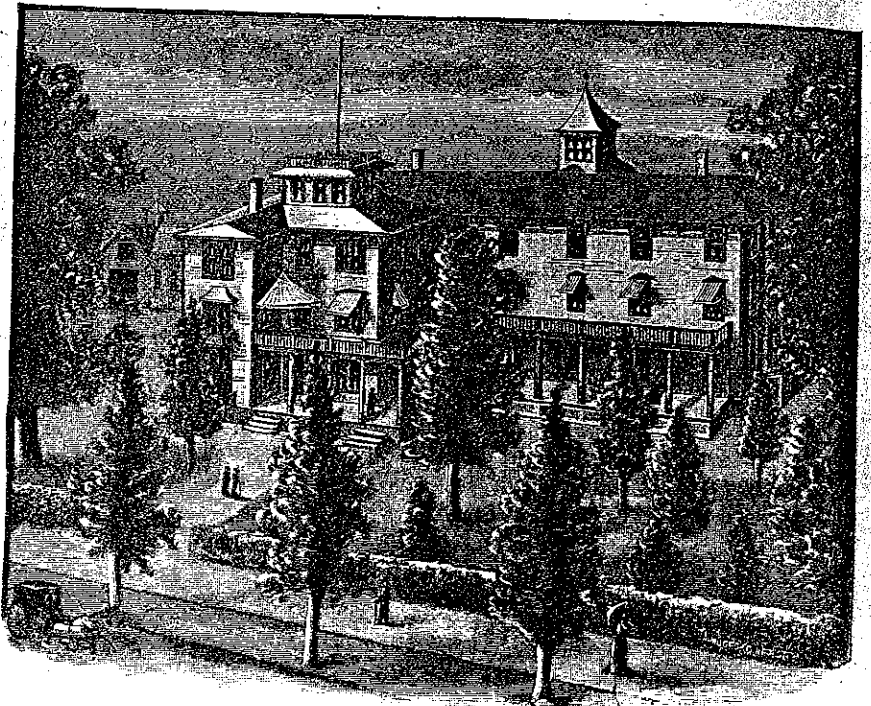
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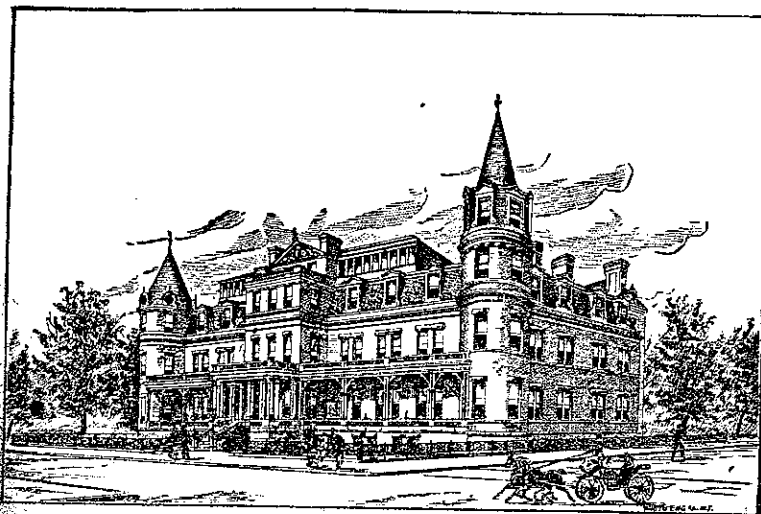
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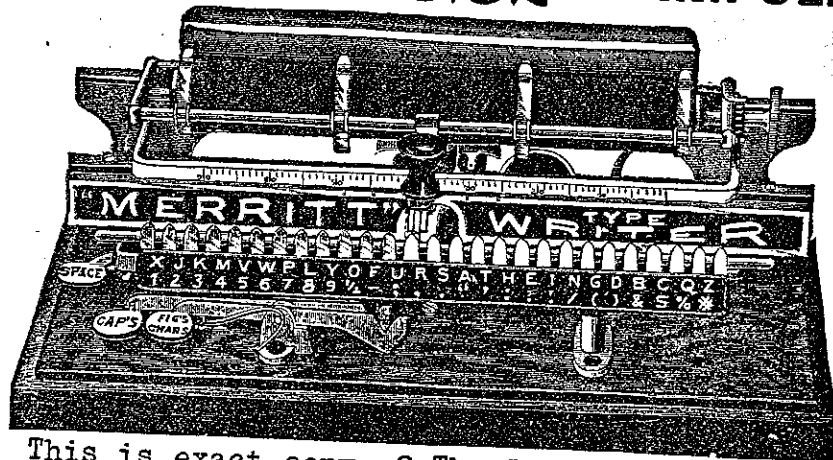
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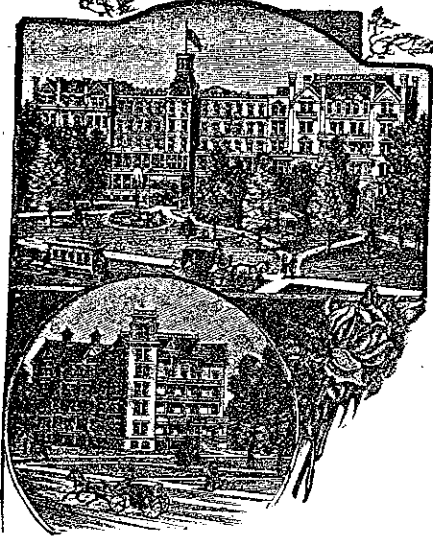
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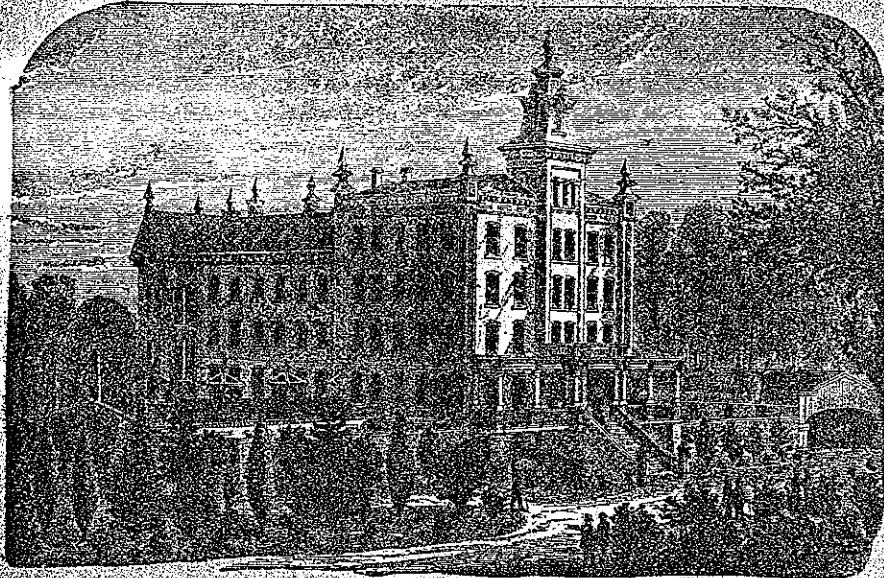
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