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MEDICAL TREATMENT OF INEBRIETY.

By T. D. CROTHERS, M.D.,

Superintendent Walnut Lodge Hospital, Hartford, Conn.

The medical treatment of inebriety appears first in pictorial representations found in the ancient tombs of Egypt. Here can be seen the states of stupor, nausea, vomiting, administration of drugs, showering by water, massage, flagellation, and attempts to counteract the narcotism by external stimulation, also inunctions of the body, convalescence, and restoration, all faithfully outlined on these old tombs, whose origin is lost in antiquity.

Fragmentary records of early Greek physicians contain references to the treatment of excessive wine drinkers.

The great philosopher and physician, Hippocrates, clearly recognized the disease of inebriety, and left some very sensible rules of treatment.

From time to time, for the past twenty centuries, the question of the disease of inebriety and its treatment has come into prominence at intervals, then died away. Finally, at the close of the last century and the beginning of this,

Dr. Rush of this country and several eminent European physicians affirmed the fact of disease, and laid down lines of treatment. But it was not until 1864 that the scientific treatment of inebriety became a practical reality, in the asylum at Binghamton, N. Y. From this time the rational study and treatment of inebriety begins.

Unlike other great medical topics, public sentiment has gone on in advance of scientific knowledge of this subject in its demands for means of treatment that shall control and cure the victim. In the meantime, all rational study and treatment of inebriety has been obstructed by false theories and delusive misconceptions, that cling tenaciously as fog-banks along the shore.

Notwithstanding all the evidence, based on facts and experience, against the present methods of treatment, they still continue.

Temperance revivalists still boast of the number of pledged and converted as cured. As an evolution from this comes the empiric, with his secret specifics, boasting to have first affirmed the theory of disease, and claiming equally astonishing results with unknown drugs.

While the question of disease and treatment is passing through the period of renaissance, there are landmarks and clearly defined facts to guide all future studies.

Some of these outline facts grouped may help to clear away the errors that cloud the present conception of this subject.

The disease of inebriety, like other diseases of the brain and nervous system, follows a uniform movement, controlled by laws of dissolution, and conditions and causes that can be determined.

In the question of treatment, the first fact is, What is the present condition, the organic and functional derangements of the brain and nervous system, also nutrition and digestion?

Second: What are the special effects of alcohol on the nerves and brain?

Third: Is the use of spirits a symptom of other brain states? or is it an active factor in the causation?

Fourth: What neuroses and conditions of heredity are the active and latest factors in the history of the case?

From a study of these questions the lines of rational treatment will appear. Take a common case as an illustration. You are called to a case of gastritis. The man has drunk spirits for a long time and taken but little food; both digestion and nutrition are seriously impaired. Alcohol has affected the sensory and motor nerves, it has made the brain unstable, and lessened power of control, with evident hyperæmia. If the treatment is based on these symptoms alone but little can be expected. If we go back and find that the use of spirits began after some severe strain or state of exhaustion, or following as an entailment of some disease or traumatism, either physical or psychical, or originated in contagious surroundings and faulty conditions of living, new lines of treatment are indicated. If further inquiry show a neurotic inheritance, direct as from alcoholic ancestors, or indirect as from insane consumptive epileptic, or any other neurosis, new indications appear.

The treatment of a case which checks the brain and nerve irritation by narcotics, and by the withdrawal of spirits and the use of eliminatives relieves the functional disturbances, is only partial. If at this period the pledge or conversion fills the mind by auto-suggestion with confidence that cure has taken place, or if the system is kept saturated with narcotics until the dominant idea of cure prevails or the mind is buoyed up on the delusive hope of final and permanent cure, the results are accidental and uncertain. Should final restoration follow the use of these means, the real causes of cure are unknown and belong to the realm of psycho-therapeutics. Cases which recover after the use of these psychical remedies are those in which the drink craze or symptom dies out or becomes exhausted, through the operation of inherent forces, and not by the last means or remedies used.

The medical treatment of inebriety must depend on the causes and conditions of the case. Without this knowledge all remedies are empirical. From such a clinical knowledge the physician may point out the lines from which a return to health may be expected. He can foresee the oncoming insanity of which the drink impulse is a clear symptom ; or the paresis with this stage of exaltation and spirit excess ; the acute delirium, the melancholia, the masked epilepsy in the dipsomaniac, and many other conditions that can be anticipated and studied. Many of these cases, in which to a superficial observer only the drink symptom is prominent, are found to have a uniform line of progress and termination. Take a hundred cases of inebriety and from a careful study of heredity, present condition, and the action of alcohol, etc., etc., a prognosis can be made that will be verified in over ninety per cent. of all cases. The first question to be determined in a given case is the physical condition of the patient. As a rule all inebriates suffer from degrees of paralysis, both vaso-motor, sensory, and functional. Sub-acute inflammations and reflex irritations are common. The heart's action is variable, and the organ is enlarged. The liver is also enlarged and frequently the seat of low grade of inflammation. The stomach also suffers from both organic and functional derangements. Neurites is very common and of all degrees, usually called alcoholic rheumatisms and neuralgias. These are only the most general and prominent symptoms and call for general eliminative treatment. There is present in all these cases defective elimination of waste matter, also chemical changes of both cell and tissue, due in part to the direct action of alcohol and its indirect action on the nervous mechanism. As a result ptomaine poisonings, new soils for the growth of bacteria, also new centers of congestion and irritations occur. The bath corrects these indications by stimulating the cutaneous surface. Hot air baths or hot water baths, with rubbing once or twice a day, are the first essentials in treatment. Following this should be given what is termed internal

lavage, or washing based on the same principle. This is best secured by saline and mercurial cathartics, with copious draughts of warm or acid waters. The patient should be placed in conditions where a certain amount of control over his habits and conduct can be obtained. Either at home, under the charge of a trusted nurse, or in an institution where all the surroundings can be guarded.

All spirits should be removed at once, and a careful watch of the case be maintained to ascertain any organic or other diseases which may be marked by the use of spirits. Epilepsy, tuberculosis, paresis, hysteria, and other affections often come into great prominence when spirits are abandoned. The remedies most valuable following the removal of spirits and baths are the cinchonia bark infusions, nuxvomica preparations, together with the bromides, codiac, sulfonal, and other narcotics for the control of the nervous irritations. Strychnia is inferior to nuxvomica in my practice. Choral is unsafe and uncertain in many cases. All narcotics should be given in large doses for a short time and changed frequently and discontinued. Beef tea, hot milk, hot acid drinks, are often very effectual as narcotics, allaying nervous irritation. Rest and frequent massage with the baths, mild tonics, salines, and good foods are often all the means essential for restoration. In many cases the drink craze disappears from the use of these means alone. In a certain number of cases the origin of the drink symptoms is associated with syphilis and bad living, or the advent of syphilis has been followed by excessive use of spirits. In these cases mercury, arsenic, and the iodides should enter very prominently into the treatment. In a certain number of cases unusual states of stupor and delirium follow each other with explosive violence, unusual to ordinary alcoholic intoxication. A suspicion of specific poison followed by mercurial treatment gives the strongest confirmatory evidence in the good results from such means.

When inebriety is traceable to head injuries, from blows, heat, shocks, sudden emotional strains, etc., etc., sub-acute

inflammation and degenerative cell and functional changes present, are noted in the impulsive exhaustive drink symptoms. Both the prognosis and treatment should anticipate grave brain troubles.

Direct heredity, noted by inebriate ancestors, demands in the treatment total change of life and long periods of brain and nerve rest. Where the heredity is indirect, coming from allied states of brain degeneration, such as insane, idiotic, criminal, pauper, epileptic, and other profound brain diseases, the medication should be directed to lessen and favor return to states of health. In some of these cases the action of spirits varies widely. The insanity of the drink symptoms and the organic degeneration is so pronounced as to suggest various causes. These are the cases which become drug-takers of all kinds, and the cure or subsidence of one drug addiction is followed by another. These are the cases which appear in every community as shining examples of cure by "gold specifics," by prayer and pledge, and who very often secretly use opium or other narcotic drugs.

The hysterical confidence in permanent cure by unknown measures in a brief time is always open to grave suspicion of hysterical credulity or duplicity.

In neurotic cases where alcohol is quickly followed by intoxication, especially in young persons, a grave prognosis is present. The treatment should be a radical change of life and also include all the constitutional remedies found valuable, such as baths, tonics, foods, and mineral drugs.

In cases where cell and brain exhaustion from imperfect rest and food are present, the treatment must be nutrient and hygienic, rather than by drugs. Dyspepsia and the various disturbances of the stomach and liver, which are relieved by spirits concealed in bitters, are always grave troubles. Faulty or no mental control and unstable brain equilibrium, with its irregularities and exhaustion in inebriety requires long persistent treatment. Many of these neurotic cases are benefited by mental treatment. There is a realm of psycho-therapeutics in which the medical man

can foster dominant ideas and direct the activities of the brain along hygienic lines of living. Hypnotism has been tried in this way with indifferent success, so far. New surroundings, with change of thought and impulse, have been very patent in some cases. A primary condition in all these cases is exhaustion of the central brain structure. In most cases full restoration never occurs. The drink craze dies out, but the weakness and lowered vitality remains. In periodic cases the explosive character of the brain energy accumulating and discharging at intervals suggests a line of treatment which will afford an outlet for this abnormality. In some cases restraint by drugs at the period of discharge is valuable; in others baths, exercise, cathartics seem to divert the energies and relieve the paroxysm. In one case a prolonged hot air bath, with severe massage, avails; in another, a long tramp in the country, with dog and gun, and severe exercise; in another, cessation of all work and rest in bed, assisted with bromides; another case abstains from food at this period, and in other cases eats to excess for two or three days, and thus avoids the paroxysm.

Various measures to control the drink paroxysm in these cases will depend on a study of the case. The premonitory symptoms are often very clear, and means of prevention can be provided. Where the case is in an asylum the application of means are more positive, but when the case is not under control greater skill is required. Many of these periodic cases drink only on holidays, or days of general rejoicing. If they can be carried over these periods they remain sober until similar occasions recur again. For many years I treated a case who never drank except during the holidays. A week before the approach of this season he was given mineral waters, nux-vomica, bromides at night, severe exercise and hot baths, with sharp rubbing, every day. This was continued for two or three weeks, then discontinued, and the drink craze was averted. In one case a man never drank except when on the seacoast; change of residence to the mountains was followed by perfect abstinence. States

of contagion are very patent causes in some cases, and **when** recognized can be remedied. A form of hypnotic influence prevails, in which men drink to excess in certain surroundings and in certain company, and abstain where conditions are removed. Asylum care and study reveal many very curious facts along this line. Often pronounced cures follow from a careful study and recognition of these symptoms. The tendency to epilepsy, suicide, dementia, and other grave diseases should always be considered in such cases, and both local and constitutional remedies be persistently applied.

The continuous drinker, either in moderation or excess, has always the strong possibility of paresis, dementia, and cerebral hemorrhage before him. The continuous action of spirits is that of a paralyzant, disturbing and breaking up all the chemical and vital processes, either slowly or rapidly. The condition to be treated, after the removal of the active or apparent causes, is that of brain anæmia and profound central exhaustion, and degeneration of all the vital processes.

Institutional cure and treatment of these cases are obviously the most important and practical. In the near future, when the disease of these cases is recognized, their early treatment at home by the family physician may be practical. His knowledge of the family history and surroundings will enable him to apply preventive means and measures that are impracticable later on.

Public sentiment permits these cases to grow up in every community under the impression that all excess of spirits is simply moral weakness, within control of the victim. Thus, the period of curability is passed, and only when the disease and insanity of the victim is unmistakable are rational means applied. In an experience of seventeen years in asylums for these cases, I have rarely seen recent cases of inebriety coming for treatment. As a rule, all persons admitted to asylums are those who have exhausted every other means for relief, and who have used spirits until both the brain and organism are obviously diseased. To expect cure or permanent restoration in a few weeks from any form of treat-

ment in such cases is impossible, or even to expect cure from long medical care in any very large number of cases cannot be reasonably expected. Yet, the most reliable statistics show that fully thirty per cent. are restored from institutional medical care extending over ten or twelve months. I am sustained by the best authorities in asserting that the inebriate is more curable than the insane, but the treatment must be based on his actual condition and extend over a long period of time, and be founded on general principles of rest and organic restoration.

The restraint and care of an asylum is of more value for its control of the surroundings, and the facility for the application of exact methods of treatment, than for its removal and restraint from alcohol. Rest and building up of brain and nerve tissue takes away the demand for alcohol more positively than locks and barred doors.

The central object of all treatment is to remove the causes which demand spirits for relief. To silence this craze for alcohol is not curative any more than the narcotism of opium removes the cause of pain.

While the use of alcohol will create general organic degeneration, the demand for its use is always symptomatic of grave central irritations and lesions.

Locks and bars, pledges, chemical restraint by drugs, appeals to diseased higher brain sections, appeals to the credulity and disordered senses and emotions by "gold cures," or specifics, are all empirical. Yet, excepting imprisonment in jail, all these measures claim to be curative, and refer to examples whose conditions can be explained by other and more rational causes. The drink symptom is in many cases self limited and will change and disappear as a natural dissolution process, sometimes merging into organic disease of the stomach, heart, liver, kidneys, nerves, and brain. Cerebral hemorrhages, organic diseases of the lungs, kidneys, and nerves are very common entailments following the excessive use of spirits. The examples of cure by specifics or moral means are as a rule diseased, and the

change of the drink symptom is followed by other concealed or pronounced organic lesions. The breaking up of the drink craze by narcotics and other powerful drugs will of necessity increase the degeneration, and directly predispose to insanity.

Another central object of all treatment is to restore the organism so that the narcotic of alcohol or other drugs will not be demanded. This is a brief outline of some of the more prominent facts in the treatment of inebriety. It will be evident that we have scarcely touched the subject. Only in the most general way have the real facts and principles of treatment been recognized. The noise and confusion of empirics and specific vaunters are only foam bubbles on the surface, whose only significance is the agitation and movement that presages the oncoming truth. No question of practical medicine appeals more strongly to physicians in every community for solution. What shall we do with the inebriates is answered to-day by quacks, pietists, politicians, and reformed inebriates. The mystery, credulity, and dogmatism of their answers is "confusion worse confounded."

From scientific studies by medical men the correct answer must come. They are the real teachers of the nature and treatment of inebriety, and yet to-day nearly half a million politicians, empirics, reformers, clergy, temperance men, and reformed inebriates are talking, writing, and teaching what inebriety is and how to cure it, and not a single score of physicians in this country have given the subject any study. What a startling reflection this is on medical science and medical men. Some of the facts which may be considered as starting points in the study and treatment may be outlined as follows :

The treatment of inebriety extends far back to antiquity. Public sentiment is to-day far in advance of any real knowledge of the nature and treatment of inebriety; hence, the armies of specific vaunters and temperance revivalists who claim such remarkable results. The disease of inebriety, like all other diseases, follows a uniform line of events, from

certain special causes and conditions. Its treatment must begin from a knowledge of the present condition of the case and the effects of alcohol on the system; how far the use of alcohol is the symptom of other diseases and what heredity and neurosis enter into the case. A study of these and other conditions point out the lines of rational treatment.

The prognosis and treatment depends altogether on a clear apprehension of the case. The first thing is to place the patient in the most favorable conditions for cure, where all his surroundings can be helpful, and the best means applied to build up and restore his brain and nervous system. This may be done in an institution or at home under the care of a nurse.

The withdrawal of spirits and the use of baths and massage daily, with brain rest, are essential. Remedies such as the bitter tonics, mineral salts, and acids, nux-vomica, and often the bromides and the iodides are valuable. The use of nutrients, with rest and baths, fulfill most all the demands in each case. Reconstruction of cell and tissue is the object to be sought.

Specific poisons, such as syphilis or injuries to the head, starvation, and other conditions require special lines of medication. Heredity and all its allied neuroses are constitutional states of degeneration, to be treated on general principles; change of living and surroundings, with appropriate medication to build up the entire organism, must be applied in all cases.

Restraint, protection, liberty, and the application of means to meet all the demands and abnormalities must be applied.

The public treatment of the pauper inebriates must be in military hospitals, especially organized for this class. The treatment for those able to pay can be more completely carried out in special hospitals, which will combine all the best appliances of science to meet the wants of each one.

The entire subject must be studied from a higher level, and along the line of accurately observed facts.

THE ÆTIOLOGY AND THERAPEUTICS OF
ALCOHOLIC INEBRIETY.

BY LEWIS D. MASON, M.D., BROOKLYN, N. Y.

Consulting Physician to King's County Inebriate Home.

Mr. President and members of the Kings County Medical Association:

The "alcohol habit," "drink craze," "thirst for alcoholic liquors," oinomania, dipsomania, comprehended under the general title Inebriety, and for which the latter is a synonym, is oftentimes, if not always, the symptom or outward and prominent manifestation of diseased conditions, which antedate the alcoholic craving, and are its predisposing and exciting causes not only, but complications, which retard and sometimes even prevent a cure.

In the popular, and too often in the professional mind, alcohol is regarded as the cause and the root of the whole evil of inebriety. We desire to assert that inebriety is frequently dependent upon causes with which alcohol has nothing to do. There is a neurotic craving, it may be congenital, it may be developed as the result of disease or accident. This craving demands the various forms of narcotic stimulants, those that first excite, then produce narcosis, more or less complete. Alcohol fulfills this condition, is easily accessible, reasonably inexpensive, and is the one drug that meets a morbid craving that seems to be almost universal. But what about the origin of this craving, this abnormal desire for alcohol or other drugs.

We do not fail to recognize the deteriorating effects alcohol manifested principally, at least, more pronounce upon the nervous system as seen in the various forms

* Read before the Kings County Medical Association, April, 1893.

insanity, and the various neuroses, neuritis, epilepsy, alcoholic paralysis. We also note the degenerative effects of alcohol on lung, liver, kidney, or other organs and tissues of the body; or as a special poison in the same sense that lead, arsenic, and tobacco produce their effects.

But beyond and back of the direct, deleterious effects of alcohol, functional or organic, upon the nervous system, or its alterative effect on tissue, or its direct poisonous effects, as far as alcohol may be regarded as a factor in the production of inebriety, we believe that we may practically exclude it from consideration as a prime factor, certainly the most important factor in the ætiology of inebriety.

We believe that the great majority of inebriates become so from necessity, not from choice, that there is a "vis a tergo" of heredity, environment, and disease, that produces physical degeneracy and pushes them over and plunges them into inebriety.

With some of the various predisposing and exciting causes of inebriety we are reasonably familiar; these by their direct or reflex influence upon the cerebro-spinal axis, produce or lead to habits of involuntary drunkenness or inebriety. The patient with fever craves and may drink water freely, excessively, and injuriously. The diabetic is an aquamaniac in a certain sense, but in neither case do we recognize the aqua-mania or water craving as the disease, but rather as proceeding from certain abnormal conditions which we readily recognize. So the liquor thirst is the result of morbid conditions that produce an abnormal desire, which alcohol seems, temporarily at least, to satisfy.

Whether there are any definite lesions of the nervous system which produce dipsomania as other well-defined lesions of the nervous system have produced definite well-known symptoms, we are not prepared to say, but classify dipsomania with erotomania, kleptomania, pyromania, or other forms of periodical and impulsive insanity, which are marked by nerve storms or crises, which, like tidal waves, come suddenly, overwhelm the individual and plunge him into characteristic forms of dissipation, violence, or crime.

The excessive use of alcohol, while it is oftentimes the cause of various diseases of the nervous system, and also a frequent cause of insanity, is also the precursor or initiatory symptom of certain diseases of the nervous system and also of insanity.

The parietic will crave and use alcohol in the earlier stages of his malady. The victim of nervous syphilis is addicted to it, more especially in the later stages when the nervous system becomes involved; about one in six of the several thousand inebriates that have passed under our observation at the Fort Hamilton institution, were so affected.

I have reason to believe that many did not use alcohol in excess until the nervous symptoms of syphilis were developed. Any depressing, exhausting, or painful disease may produce the alcoholic craving, alcohol being sought for its stimulating properties. The neurasthenic craves alcohol, and it temporarily relieves the "nerve exhaustion," so common amongst the great army of neurotics.

Alcohol, moreover, is second only to opium, ether, or chloroform as an anæsthetic, indeed, has been used as a substitute for the latter. Hence, persons find, experimentally, that alcohol relieves pain, and its use is carried to a harmful extent, its deleterious effects follow and inebriety is established. Indeed, there is an analogy here between the opium and the alcohol habit. While the former almost invariably has its starting point as a pain-relieving agent, the latter has also, not infrequently, the relieving of pain as its beginning.

It is possible that a healthy individual with good personal and family history may use alcohol sociably or as a matter of custom, until the habit becomes firmly established.

The alcohol breaks down the constitution, invades and degenerates the nervous system, and thus develops inebriety, because the alcoholic degenerations, or even functional disturbances of the nervous system, are the very conditions under which inebriety is established. We say this is possible, but we assert again, that behind the large majority of inebriates will be found a defective family or personal his-

tory, not only complicating but causing the inebriety, retarding, oftentimes preventing a cure.

It can be thus seen that inebriety is but a symptom, a flag of distress hung out by the nervous system. As some one has aptly said, "neuralgia is the cry of a diseased nerve," so the "drink craze" is the cry of the neurasthenic for a stimulant, of the pain-tortured nerve for an anæsthetic, of the victim of insomnia for a hypnotic.

It is but reasonable to infer, then, that the therapeutics of inebriety must be as varied as the causes that underlie and call it forth. Not any patient that applies for relief to the physician needs a more careful examination than does the inebriate. You may rest assured that there is some underlying cause, probably several, that must be removed if we would restore the inebriate to his former habits of sobriety. If he is found suffering from the later manifestations of syphilis, he will need special treatment for this condition, especially if the nervous system is involved; a painful stricture of the urethra may require division.

Chronic malarial poisoning, with its complicating disorder of stomach, liver, and spleen, will demand special treatment. In a case on record the irritation of a tapeworm produced a tendency to the excessive use of alcohol, which tendency passed away when the worm was expelled.

In a word, the large majority of inebriates are diseased persons, and that primarily and antecedent to their inebriety, which is appended to and aggravates their diseased condition.

Special diseases, therefore, require special treatment, irrespective of the inebriety, if we would cure the inebriate. In this connection we may ask, Are there any drugs that we can substitute for alcohol that will take its place and satisfy the inebriate, as a substitute for alcohol?

Opium and the salts of morphia will do so in a marked degree, although cocaine, chloral, and the bromides have been so used. The use of opium or morphia is not uncommon among inebriates who desire to "leave off alcohol." The inebriate, as a rule, is a congenital neurotic. From

birth almost, he reaches out for some drug that will gratify or meet his neurotic craving. He will "ring the changes" on all drugs that affect the nervous system; he will try all things (drugs) and hold fast to that which is bad. The alcohol and the opium habit to the inebriate are convertible habits, and the inebriate, like a pendulum, will swing from alcohol to opium; not infrequently the two habits are combined, as in the form of *tinct. opii.*, constituting a mixed habit, in which the effects of both alcohol and opium have to be considered. Occasionally a case is presented in which morphia is used hypodermically, and the alcohol used in the usual manner. In cases where opium addiction is associated with the habitual use of alcohol, the opium habit is of paramount importance, and the alcohol assumes a secondary place.

The fact that opium can substitute alcohol is the keynote to many vaunted secret cures, in the so-called "narcotic treatment" for alcohol. It simply substitutes one habit for another, and as long as the victim is taking the so called remedy he is reasonably comfortable. But I admit if the "narcotic treatment" was carefully practiced, in judicious hands it might, in conjunction with such other remedial measures as would best eradicate the primal causes of the inebriety, prove useful, if not curative, in cases of inebriety.

Are there any drugs that are specifically beneficial for the treatment of inebriety as such? We would state that drugs that act directly as a stimulant to the nervous system, are of value. Strychnia is a type of this class of drugs, and one of the best of its class.

Luton of Rheims, Belgium, was the first to point out its value in alcoholism. Then the Russians used it largely, and it was known as the "Russian treatment," and, finally, the Americans adopted its use in such cases.

Strychnia has proved serviceable as both abortive and curative in acute alcoholic delirium, as well as useful in the more chronic forms of alcoholism. It seems to be tolerated in such cases; in cases of alcoholic poisoning under normal conditions, we have no record of the value of strychnia as an

antidote; interesting experiments might be made on the lower animals with the view of determining this point. Strychnia is an excellent cardiac tonic, and one of the best respiratory stimulants, and might be used in general medicine in cases in which alcohol is oftentimes prescribed.

Oxide of zinc, during the past twenty years, has been used with advantage in cases of chronic alcoholic intoxication. This drug was largely brought to the notice of the profession by Dr. W. Marcet of London, who had an extensive hospital and dispensary practice, especially in diseases of the nervous system; and as he found zinc of value in various chronic disorders of the nervous system, he used it also in cases of chronic alcoholism. His observations published in a small work entitled, "Chronic Alcoholic Intoxication," are an extremely valuable addition to the literature of alcoholism.

Quinine has been used more particularly in the later or convalescent period of the treatment of alcoholism.

The so-called "Red Cinchona Cure," for a time interested the public. Rational medicine does not recognize any special drug or specific remedy as a universal cure for inebriety, nor does clinical experience form any basis for such a claim. From the very nature of the case, such a remedy would be impossible. The ætiology of inebriety is dependent on such a variety of causes and its environments and complications so numerous, that any one remedy could not fulfill all, or even meet the more important of these conditions. However valuable drugs may be to meet certain indications in the various conditions incident to inebriety, we believe that so far as the curative treatment of inebriety is concerned, drugs must assume a secondary place, valuable as they may be in their respective spheres.

In the treatment of the alcohol habit we place first: *Restraint, and seclusion in a special asylum, for a definite period, and total abstinence during this period.*

In a few words, concisely expressed, this statement includes the plan now adopted by the leading asylums of this country and of Europe for the recovery of the inebriate. It

involves restraint (legal, if need be), seclusion, a special institution, in which all the latest and best methods of dealing with the inebriate are procurable, a sufficient period in which to apply these measures, and we need hardly add, a long period of total abstinence from all alcoholic liquors. We need hardly add that diet, rest, recreation, hygienic surroundings, and the exhibition of appropriate drugs are all included in the above plan.

The causes of degeneration being removed, the factors of regeneration being brought into action, new formation of nerve, muscle, and tissue must supplant degenerated tissue, if haply organic disease has not resulted in irreparable injury.

We have hinted at an hysterical element in the history of inebriety. The inebriate, whatever may be his condition, is largely influenced by his surroundings; hence, as almost in no other disease, must we recognize the value of psychotherapeutical agencies hitherto, if not altogether, used by the charlatan, but recently recognized and practiced by leading neurologists, as of value in their specialty.

In the light of such an hysterical element in the clinical history of inebriety, we can readily account for the apparent success of the so-called temperance movements that sweep over communities periodically and effect many apparent cures, or rather, in the language of the day, reformations. Such an element will also explain why, after such a tidal wave of excitement, relapses take place oftentimes in large numbers, and the period of excitement is followed by a period of reaction.

The occurrence of relapses is readily accounted for by the fact that the stimulus of the period of excitement buoys up the inebriate for the time being, during which strong mental emotion is a powerful factor. He is keyed up, as it were, for the time, and sustained by a moral stimulus. When this is withdrawn, reaction, followed by corresponding depression, sets in, and the old method of stimulation is again imperatively demanded and yielded to.

Why some inebriates go through such a period of excitement and do not relapse, and why others do, can be accounted

for by the fact that the former are in a reasonable degree of physical health, and are not burdened, dragged down, and handicapped, either by disease that is non-alcoholic, or that is the result of alcoholic degeneration. The inebriates so affected are not influenced, or if at all, only temporarily, by the so-called "temperance revivals" that appear and disappear with almost stated regularity, in large and small communities, and we must add, do good, but only in the channel indicated.

It is also, operating through this hysterical feature of inebriety, that charlatanism may effect a temporary, possibly a permanent, success in a certain class of cases.

A physician observed to me that he had visited many asylums for the cure of the inebriate, and that when the medical superintendents were men of strong will power and personal magnetism, as he expressed it, more cures were effected than when the reverse was true.

When the inebriety is due largely to neurasthenia, or in cases where the hysterical element largely preponderates, we believe psycho-therapeutical agencies, or even those that appeal to purely mental conditions, will be of service, but they will not cure a cirrlosed liver, lung, or kidney, or remove the physical causes upon which the inebriety may depend. In addition to those measures that appeal to the higher moral nature, there ought also to be combined such as meet certain intelligent wants. To this end all reasonable amusements, entertainments, and especially such occupations as will interest the person and keep him busy, should be encouraged, if not made compulsory.

The therapeutics of inebriety is a new field as yet not fairly occupied, but we believe that the only true road to successful treatment will be along the lines we have indicated. That is, a knowledge of the underlying causes and the use of such therapeutic agencies as will best remove these.

"Tolle Causam," the legend emblazoned on the standard of rational medicine, the watch-word of every true physician and surgeon, should guide the specialist and direct his methods in his endeavors to cure the inebriate.

THE SUCCESSFUL MANAGEMENT OF INEBRIETY WITHOUT SECRECY IN THERAPEUTICS.*

By C. H. HUGHES, M.D., ST. LOUIS.

Dr. Benjamin Rush, in his "Diseases of the Mind," published in 1812, recommends "The establishment of a hospital in every city and town in the United States for the exclusive reception of hard drinkers," and says "they are as much objects of public humanity and charity as mad people; and religious, moral, and physical remedies . . . should be employed . . . for the complete and radical cure of their disease."

Since the immortal Rush rested from his labors, vast progress has been made and vaster still is making in the management of the drink habit and in the treatment of the drink disease. Facts which but a few years ago advanced observers, like Morel, Magnan, and the few neurologists of their time first took note of, touching the hereditary transmission of neuropathic instability and dipsomaniacal tendencies through ancestral alcoholic excesses and *vice versa*, have not only passed into the possession of the profession generally as practical knowledge, but have become largely the mental possessions of the people. The profession, the people, and even the unfortunate victim of the drink habit himself, have come to the understanding that habitual resistless inebriety is a disease and chiefly of the brain and nerves, and, under this impression, resulting from medical research and teaching, the drunkard and the dipsomaniac now seek and the profession now give medical relief to the sufferer, or the friends of the inebriate procure this relief for him.

The general professional consent and popular recognition

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of the fact that inebriety is a disease are the results of the impressive and persistent efforts of the British and American associations and other medical societies having in view the cure of inebriety.

In the general recognition of the fact of the disease basis and remedial possibilities respecting this baneful, morbid vice of man's nervous system, we are hopeful of such an inestimable physical and moral fruition as must ultimately result in marked national re-invigoration, and in the postponement, at least, of national degeneracy impending through this, as one of the causes of racial decline.

We know now how to successfully scaffold and prop and steady the tottering nervous structure of an inebriate neuropath, and sustain it in fairly normal function pending its effectual reconstruction, and we know how to permanently rebuild this damaged nervous system, through the advances neurology has made during the life of the present generation of physicians, though, alas, we cannot always remove the baneful neuropathic entailments of chronic alcoholism upon the immediately succeeding generations of the drunkard, while we may do much to ameliorate, modify, and ward off the baneful neurotic sequelæ.

The unchecked degeneration of whole families through generations of neuropathic descent, such as Morel and others have presented, as the frightful admonitions of scientific research against the fatal neural and psycho-neural degeneracy of alcoholic excess, are not possible under the skillful management of modern medical art as now practiced, especially in the neurological department of medical work.

It may profit us at this juncture to recur again (as mentally we often do to similar personal observation) to one of Morel's typical tables illustrative of the course of alcoholic neuropathic degeneration unassisted by our art, and I take this table from our classical and observant *confrère* across the ocean, Dr. Henry Maudsley, because the interesting researches of Morel into the formation of degenerate or morbid

varieties of the human race have served to furnish to the philosophical mind of this distinguished neurophysiologist, as it has to you and me, a philosophical view of the chain of events by which alcoholism as a cause of individual degeneracy continues its morbid action through generations and finally issues, when unchecked by the arts of our profession, in extinction of the family.

First generation — Immorality, alcoholic excess, brutal degradation.

Second generation — Hereditary drunkenness, maniacal attacks, general paralysis.

Third generation — Sobriety, hypochondria, Lypemania, systematic mania, homicidal tendencies.

Fourth generation — Feeble intelligence, stupidity, first attack of mania at sixteen, transition to complete idiocy, and probable extinction of family.

How many painfully impressive pictures like this have we not seen in our several spheres of observation and practice, and how many impending family calamities like this are now avertable through the resources of medicine and philanthropy which our present advanced neurology offers the neuropathically unstable? It is a source of professional congratulation that the medical profession, and especially our department of professional endeavor, has brought relief to the inebriate, and mitigation, with the hope of ultimate extinction of its entailed neuropathic evils to the human family, if only we are permitted to treat this disease as its pathology demands, and an enlightened public sentiment promises this as the consummation of our professional labors and hopes in behalf of man's highest and best interests for the closing of the nineteenth century.

The profession and the public believe that inebriety is a disease. They now believe it can be successfully treated and that it ought to be treated, not only for the good of the inebriate, but for the welfare of his descendants. They have now the knowledge that precedes wise action.

Drunkenness is unpopular ; inebriety is on the decline ;

dipsomania is dangerous to the drunkard's descendants, as well as detrimental to himself.

Medicine has given to the world the substantial basis of a new reformation. It has sounded the alarm ; it offers the remedy, and, on this score, we think humanity is on the road to safety.

This is one of the jewels we place in the crown of nineteenth century progress. We give it freely to the cause we crown without copyright, letters patent, or secret process.

With the diffusion of knowledge among the people and their advisers, the general profession, and especially the family doctor, that alcoholism and dipsomania are grave diseases, with graver physical and psychical sequelæ, hope has dawned for the drunkard, and the prospect of the final obliteration of inebriety and its terrible evils to the individual, the family, and the state, brightens. Henceforth, the unfortunate victim of alcohol is to be cured and then reformed through the seeking of medical relief, and such as are not confirmed in baneful habits of intemperance will turn in time from the social tempter and avoid the neuropathic thralldom of this devil's chain of evil tyranny.

Many men who fall into the drink habit are unaware of the terrible neuropathic heritage of unsteady nervous organism bequeathed through bibulosity and other nerve-depressing influences operating on their ancestors. They know but little of the organic evils and entailments of alcohol. They know chiefly physical, moral, and social discomforts and inconveniences of getting drunk, which are as nothing compared with the damage to their brains, nervous systems, blood-vessels, and vital organs.

Not understanding the tyranny of their unstable nervous systems they censure themselves as fools for each repetition of a bout of drinking and resolve and re-resolve not to do it again, then go on and die the same, in the majority of instances, unless aided by medical art to overcome the otherwise resistless tyranny of a viciously endowed organism,

which impels to the fate they dread without the power to draw away from, yet thinking each time they drink it will be the last.

The trouble in the past about this blended vice and disease has been in the failure to seek, by suitable change of environment and proper medical treatment, that renovation and rebuilding of the damaged organism which makes resistance to alcoholic enslavement a possibility in the organism of the average habitual or periodic inebriate. That profession which has rescued mankind from so many portentous evils after other resources have failed is ready to succor him now from the thralldom of damaged organism and psychical weakness and neuropathic instability.

We need not now go deeply into the pathology of chronic alcoholism, but, cursorily glancing at the subject, we have only to recall the findings of Virchow, Richardson, Horsley, Percy, and Binz, of water decreased and fibrine changes in the blood, sometimes quite fluid, at others, coagulated, pure alcohol in the tissues, fatty globules in the circulation, fibrinous clots and excrescences in the vessels, vascular dilations, anæmia, deficient hæmoglobin, of old and excessive alcoholics.

Nor need we dwell upon other destructive and degenerative changes, which, like the annihilated phagocytes of alcoholized persons, to which their well-known lack of resistance to general morbid influence is due, are secondary to the poison. We have to treat these conditions as sequelæ. This fact and the other prominent fact that alcohol abstracts fluid from the tissues of an organism whose very nerve cell is bathed in lymph, whose cerebro-spinal axis, as Obersteiner tells us, lies in a sea of lymph, an organism to which water is the *sine qua non* of life, give us the chart and compass of our course; and the polar star is the care and cure of the damaged brain, the brain and associate spinal and ganglionic system from whence originate the illusions, the hallucinations, delusions, anæsthesias, paræsthesias, hyperæsthesias, and hyperalgæcias

or the peculiar polyæsthesias of these cases. All of these sensory troubles, together with the well-known motor symptoms, the motor paresis, muscular tremor, twitchings, and inco-ordination, the *paresis* of the cortical areas of the brain, where the volitions center and whence they proceed, impaired and vitiated, in the drunkard. To these and other symptoms which go to make up what Bevin Lewis designates as the motor anomalies of an alcoholic etiology and all the psychical symptomatology, which this writer and Huss and Magnan and Maudsley, Usher, Wilson, and many others describe, gives us adequate outline of the detail work necessary for the thorough and permanent cure of the inebriate. He will be largely made over and made whole. No three weeks' treatment will suffice. We may break him for the time of his habit in three weeks and yet leave him a wreck for life. Our duty is to repair him and make him anew if he will permit us to do it. We cannot ignore the protean nature of alcoholic symptomatology or forget the fact in our treatment of this disease that no poison except the virus of syphilis plays so extensive a rôle in the morbid affections and degenerations of the tissues, nervous or non-nervous, as alcohol.

When illustrated chapters in the pathological anatomy of alcoholism, especially like those in Bevin Lewis's recent text-book on "Mental Diseases," are so readily accessible, and when, besides, the cultured character of my distinguished auditors is considered, it is obviously unnecessary to dwell in detail on the pathology of alcoholism. I could not enlighten you—you could rather enlighten me on the subject.

The point of this paper is psychical assistance and neurotic support, and neurotic and organic reconstruction. We must first secure the man's safety from the thralldom of drink and repair the secondary damage later. We must first put out the fire and save what remains of the still standing structure, prop the weakened walls, and then rebuild and remove the damages.

The foundation and framework of all reconstruction of the drink-damaged dipsomaniac is in the nervous system. If we can rescue that from immediate and ancestral damage, we can save the man, but we must not leave him, after our treatment, damaged and shattered, in his brain or nerves or blood or vital organs. We must make him strong and resistive in the higher inhibitory volition and directing realms of the cerebral cortex and restore the normal functions within and presided over by the lower cerebro-spinal and ganglionic centers.

It is obvious that in attempting to effectually and permanently cure and reform the inebriate we undertake a large contract, one that cannot be fully complied with in the brief space of a few weeks. When we have broken the chain of morbid habit there yet devolves upon us the duty of after-care that the victim's health may not be permanently shattered, and that insanity and other evils may not follow.

The first essential to the cure of inebriety is the substitution of a less harmful support to the shattered brain, nerves, and damaged vital organs, than alcohol, and I name them in their order of preference. The morphias or opium, strychnia, the quinas and cinchonias, valerianates, cocas, the ammonium bromide, etc., etc.

The second and concomitant essential is water — plenty of water or its equivalent, milk. The tissues must have water, the blood must have it, the emunctories and the skin must have it.

The third and concomitant essential is rest. Normal nature tired prescribes it for every bodily or mental overtax. Exhausted abnormal nature always needs it and demands it often. The machinery of the human organism in all its parts — psychical or physical — must be put at rest for the best repair.

The chief essential for rest is a new and proper environment, and subsidiary to this are the chemical restraints therapeutics may place on over-acting cells; choral, sulphonal, the bromides, the vegetable narcotics, old and new, the va-

lerianates, the opiates, cephalic galvanization, and soothing music and the bath.

The fourth essential is the removal of the *debris* of the last and previous drunks and of the interim and organic torpidity and depressed vitality. The scavenger cells, diminished in number or absent as they are *in toto* from the blood, and the emunctories have failed in their physiologically appointed work; the congested brain, liver, stomach, intestinal tract, mucous membranes generally, torpid liver, bowels, and skin, are to be relieved and set at their proper work again.

Here water, saline laxative water without stint, is the remedy *par excellence*. It flushes the intestinal tract and the excreting organs. Nature suggests it first of all after the rest she enforces after a prostrating spree.

I need not here dwell on the proper therapeutic blendings for this hydrotherapy to give more special direction to liver, kidney, skin, or bowels.

My preference is for an effervescent saline that clears out the alimentary tract and tranquilizes the brain and nerves at the same time (though mercurials are often not amiss), and then to properly start all the pumps of the system that may not be acting well and maintain them in moderate activity till there remains no pathological clogging of the wheels of physiological activity, but I do not approve of over-active catharsis. Moderation and not violence in this regard is my motto.

The fifth and concomitant essential is reconstruction of the undoubtedly damaged cerebro-spinal centers and the several affected organs of vegetative life. A drunkard is more or less damaged in many parts of his anatomy at the same time. He comes more nearly to being affected all over in spots than most patients we have to treat.

We begin reconstruction with the beginning of treatment. It begins with rest and sleep and food and change of surroundings, when Nature, without further aid, can effect it, rest, nutrition, and phosphates, the hypophosphites and the reconstructive hæmatics and other rebuilders of the blood.

Milk, beef-tea, and capsicum and other stomachics. Early in the treatment the wines of coca, the beef, wine, iron, and strychnine compounds, calisaya cordials, egg phosphates, and stimulant tonics, are temporarily admissible.

When the patient is cured of his recent attack of delirium tremens, or recuperated from his last debauch, then the hypodermic medication that is to hold him from further relapse, to re-tone his system, and break him of his taste, must be instituted, if we have not begun it sooner.

The sixth and final essential, to which all our previous efforts lead us, is destruction of the drink craving, and this is done on physiological principles. The drink craving is pathological perversion of physiological cell action, and lies in the realm of the cerebral cortex. This part of our subject belongs to psychiatry and psychical suggestion, effected by a therapy directed to these morbidly acting centers of the brain, accomplishes our purpose. When the drink craving comes on, having in the meantime rebuilt the shattered brain and nervous system, and restored the mental tone as much as possible, we do not absolutely inhibit the use of the accustomed drink, but train the drink victim's own inhibitions, first, by suggestion, second, by moderate indulgence properly treated.

We do not say, "You shall not, but you had better not drink. You know it is poison to you and you are its slave. You should resist. Your treatment has made you strong. You *can* resist. Whisky no longer tastes as good to you. You no longer need it. You have the power now and should assert your manhood," and with these suggestions, perhaps the victim will try the liquor, we give him *spiritus frumenti* f3ij, *cum vini antimonii* f3i, and repeat *ad libitum*, or we have previously given him apomorphia with aurum bichloride for psychical effect.

Under this or similar management of the appetite, the victim acquires a disgust for his favorite drink, he discovers his inhibition of the propensity is strengthened, and a disgust supplants the taste, which abides till he is fully restored

in nerve, tone, and power, to permanently resist and assert his manhood and maintain it against all future assaults of the foe.

As I cannot, in the brief time allowed, further detail my plan of treatment, this outline must suffice, with the promise in another communication of special prescriptions and combinations embodying the plan of treatment here outlined, and which has proven successful in desperate cases.

After your patient is cured, after the toxic effects of alcohol have gone from the blood, and the higher and lower nerve centers and the damaged tissues of the body have regained their normal nutrition, powers of assimilation, and strength of physiological action and resistance; after confidence in his strength has returned to the patient, he must be warned to never again have confidence in his power of resistance with alcohol in his blood. Let him that thinketh he standeth then take heed lest he fall again. The cure of the drink habit is not always perpetual; it is not everlasting without the aid of the patient himself. Though to some the appetite never comes back, to others it is not safe to trust it with temptation. So that the safe plan, since no inebriate fully knows the full extent of his own inherent organic instability, is to "touch not, taste not, handle not," ever after. His treatment leaves him strong enough to say "No," and "Get thee behind me, Satan," to his tempter. It does not always leave him so strong that he can take the tempter to his bosom. He cannot always try a tussle with the tempter and not be thrown.

IN a study of the mortality in France, extending over five years, the following curious fact appears: Butchers have a low death rate up to twenty-five, from that time to thirty-five years the mortality is far above the average; and this increases steadily each year. Death from inebriety, suicide, and disease of the kidneys, is most frequent. Phthisis is also common.

INEBRIETY.*

BY R. M. WIGGINTON, M.D., WAUKESHA, WIS.

Ex. Supt. Wisconsin Insane Asylum, etc.

It is hardly necessary to state that this subject needs more than a passing notice. The drink problem of this country is of vast proportions. One million of arrests for drunkenness in the United States during the period of one year, with all its resulting misery and expense, is a matter well worthy the attention of the public. There is probably no question to-day before the peoples of all civilized nations that is receiving so much attention as that of inebriety.

No matter how we look at the subject, whether as a source of great revenue to the state, as a political factor, as a great moral question, or as an agent for the ultimate destruction of the physical and psychical organization of man, it is rapidly attracting the best thought of the thinking men and women of the world. States are adopting stringent rules. Norway is already leading the van with its national regulations. Christianity is uttering its most fervent appeals; philanthropists, philosophers, and statesmen are racking their brains for a proper remedy; and even princes and potentates of the Eastern world are seriously considering the subject in all its aspects.

A subject so far-reaching and of such vast importance, a subject that has engaged the attention of the civilized world for ages; a problem so hard to solve, a problem so vital to our social fabric, a problem which involves the very life of the nation, a problem which has for its foundation the health, happiness, and well-being of the individual, must of necessity deeply interest the medical fraternity of this country. The very nature and make-up of the medical mind, and the phy-

* Read before Wisconsin State Medical Society, 1893.

sician's duty in regard to preventive medicine and general philanthropy must naturally fit him for this work.

Already many of the best medical men in the nation have come prominently to the front in trying to evolve from their knowledge and experience a remedy for this great evil — an incubus which hangs like a pall over the human race, eclipsing all other evils combined.

In treating a social evil of this magnitude it is first necessary to understand fully its character and causation; and I regret that the time allowed will only admit of the briefest reference, and of the more cardinal points being given.

The physician in treating his patient first tries to get a correct knowledge of his case; in other words, he must make a correct diagnosis. So it is with the subject before us; unless we get a clear understanding of the subject, and reach correct conclusions, we shall go along groping in the dark, and no further progress will be made toward solving the problem.

Without further comment or argument we will state that it is pretty generally conceded now by the scientific world that inebriety is a disease. By this statement we do not mean to say that every one who takes a drink, but who can control or stop it, and who does so, or that he who may even take too much under peculiarly tempting circumstances, or to drown sorrow and the like (if he has no morbid desire or taste for it), should be called *an inebriate*. So the alienist reasons when he says that every apparently suicidal act is not alone positive evidence that the person committing the act was mentally deranged. So we might reason in regard to the taking of chloroform, chloral, opium, and the like, as remedies in disease, notwithstanding the bad effects to which they too often lead. It is only where the imbibition of these articles becomes a fixed and uncontrollable habit with the will power weakened or gone, that we recognize disease.

In treating of organized life, every deviation from a normal or healthy standard must be considered in the light

of disease. This fact is recognized in the vegetable as well as the animal kingdom. No one is so familiar with this fact as the horticulturist, the agriculturist, or the breeder of fancy stock. So pauperism and the crime habit must be looked upon and treated as disease in the proper acceptation of the term; and until these facts are recognized, and the proper remedies applied in accordance with rational and proved science, we shall continue to be cursed with these unnecessary and remediable evils. Inebriety, properly so-called, is a disease; and as such is known by the same morbid phenomena, and is governed by the same pathological laws as other diseases are known and governed.

It is a psychosis; a species of insanity. It is a disease of the brain affecting the mind, in which the predominant and characteristic symptom is a weakening of the will-power and the mental faculties, hence a form of dementia. Not only this, but it is a *disease of the entire nervous and physical organization of the man*; no tissue, no cell escapes; all is involved in one common ruin. These facts are pretty generally conceded by the best men in the medical profession in this country and in Europe. As it is a disease, we must deal with it as such, even as other diseases are considered, in regard to causation, treatment, and prevention.

Causation: The causes of inebriety may be indirect or predisposing, and direct or exciting.

Of the indirect or predisposing causes, chiefest of all is that of heredity. We may quibble all we like over the term heredity — that a man is not born insane or an inebriate, or a genius, or a criminal, and the like — but we *do* know, that birth *does* take place with these tendencies.

By heredity we do not mean to say that the child *will* of *necessity* inherit the *peculiar* disease or diseases of the parents, or that the child will *surely* turn out a vagabond because the parents belong to the defective classes; for we frequently see children born of diseased parents, parents with marked physical, mental, and normal defects, who under proper environment grow up to excellent manhood, who go

through life perfect specimens of temperance, sobriety, and moral integrity, but we tremble with uncertainty when we learn the history of these cases, for we know for a *certainty* that the offspring is *always* born with these tendencies strongly marked.

Environment often "makes the man or damns the child." This re-enforces heredity, and by these two great laws health as well as disease is governed. By these processes nature makes her selections and moulds her atoms into things of physical, mental, and moral beauty and utility.

Knowing what we do of heredity and its subtle laws and processes, we must conclude that the fundamental or ultimate principle lies first in the primitive cell which dates from the time of conception. During the process of cell segmentation, proliferation, and growth which follows fecundation, this morbid element or principle is capable of transmission from cell to cell all through uterine life, and when child-life begins, the same parental reflex is carried on until the child reaches man's estate, *when he stands forth a complete composite picture of his progenitors.*

Now, when we remember that man in his physical organization is simply an aggregation of cells, and that every manifestation of this wonderful combination, whether it be physical, mental, moral, or emotional, is simply a reflex of active cell growth, we can readily conceive how an *unhealthy cell* growth may contribute to disease. As a result we get *an* unhealthy physical organization, a weak, vacillating, and *unsteady* mind, a loss of will power, the emotions excessive, and the morals low. This tendency of parent to reproduce *itself*, is a law governing all organic life.

Next in importance as predisposing causes may be mentioned sex, nationality, the drink habit, pauperism, ignorance, and the crime habit. In regard to sex, for obvious reasons, *it is* vastly greater in the male than in the female.

Nationality no doubt cuts a large figure in the production of inebriety. The drink habit, through the influence of heredity and environment is, beyond doubt, the most prolific

of all causes. Pauperism and the crime habit act in the same manner.

Next in the order of causes may be mentioned the neuroses (which more properly come under the head of predisposing causes) such as insanity, epilepsy, chorea, progressive general paralysis, hysteria, and the like.

The exciting or direct causes of inebriety are many. To summarize we might say that *environment* was the exciting cause and covered the whole subject; that all the surroundings and conditions of life of the individual together act as a cause. To particularize we might mention: Bad associations, lack of education, occupation, overwork, ill health, insufficient food and clothing, excitable temperament, disappointments, financial disasters, loss of dear friends, and *unpleasant home surroundings*. This latter condition might be considered as the most prolific of all the exciting causes of inebriety.

It commences in early youth and drives the child from the home hearth, and for want of careful nurture, parental training, and Christian influences, the boy seeks his pleasure in forbidden places, and is soon on the road to ruin. Thus we see that *heredity* and *environment* are the two great factors in the production of inebriety.

Treatment: After what has been said of inebriety and its cause, it will be readily understood that it is a disease, not like the ordinary ailments with which the physician is brought in contact, but rather a complicated complex affair in which the whole organism of the individual has been laboring under pathological conditions, perhaps, for years. Upon close inspection, it will be found that the executive or will power is weak, that the mind is vacillating and unsteady, that the morals are depraved and the emotions are beyond control. By further examination the bodily health will be found considerably below normal. The man is unable to stand fatigue. He is either too fleshy or considerably emaciated. The heart becomes excitable, the kidneys congested, and undergoing pathological change, the liver slowly taking on hypertrophy, atrophy, and cirrhosis, and the lungs

assuming that peculiar form of interstitial hyperæmia so common with chronic alcoholism. His power to do or to command is departed; his ability to grasp a subject, and the power of concentration and retention of thoughts is almost nil. He readily sinks into all kinds of vice and immorality; trifles look like mountains. He is easily elated and as easily depressed. His love of family is changed. His health, habits, tastes, inclinations, yea, even his *desires*, have all become morbid and depraved, and you behold the man only a semblance of what he should be. Every tissue of his body has become diseased.

Under these circumstances, may I ask, is it possible that any one remedy or medicine, or any combination of medicines, alone can be relied upon as a cure? In other words, can any morbid habit or taste, like the drink habit or the morphine habit, etc., be cured by medicine alone?

Again, it is possible that a habit in which the entire man presents a complexity of pathological phenomena can be recovered from in the short space of three or four weeks?

Does not every honest and intelligent physician turn his back indignantly upon such sophistry? To be sure, the patient might be placed upon proper treatment in that short space of time, and if continued under proper surroundings or environment may ultimately recover. Because a man suddenly ceases to get drunk is no sign that he is cured of inebriety, as evidenced by the large number, who, under temptation, so readily return to their former habits of dissipation.

Inebriety is a very complex disease, and presents a variety of morbid phenomena which require for its treatment and cure the proper application of all those rational and approved remedies and appliances which experience has taught us may be relied upon for the restoration of health. Medicine alone will not do it; confinement will not do it; and imprisonment is worse than useless, as statistics abundantly demonstrate.

As the entire physical, mental, moral, and emotional faculties of the individual are diseased, he is a complete wreck.

He becomes incompetent as a citizen, and should be cared for and treated as a ward of the state. The public has a right to demand this : first, for the welfare of the ward ; second, as a public protection ; and third, as a matter of economy. In regard to the welfare of the inebriate, no one can question the propriety of proper treatment. Unaided, he is unable to rise above his degradation. He has fallen so low and has become so helpless, that he sinks deeper and deeper, day by day, in the wretched temptations and debaucheries thrown around him on every side, that he finally becomes lost to all sense of shame, or obligation to the public as a citizen, or to his family as a provider and protector. He holds his miserable existence by tolerance only. He has forfeited all rights as a citizen, and ought to be treated as an incompetent. He already has an unsavory record in the police courts, has often done duty in the House of Correction, and has cost the public many an expensive law suit. Under such circumstances no one can question the right and duty of the state to take charge of this class of defectives. As a public protection, it is also the province of the state to take care of itself. The right-living public have rights that the evil-doer must respect, and no community can carry self-respect unless this prerogative is recognized and its mandates obeyed. The evil effects, humiliations, inconveniences, losses, and injuries, not to mention the vast number of murders and other major crimes that so often follow as a result of the drink habit, are too numerous and exasperating to go unrebuked much longer. In regard to economy, the mind in its wildest conceptions can form only a faint idea of the vast array of figures required to represent the loss in moneyed value to the public from the drink habit. We need only refer to the nearly one million arrests made in this country during the past year from this cause alone ; and this has no reference to the fabulous collateral expense growing out of the same cause. In regard to *treatment*, the cardinal point to be kept constantly in view, and which is paramount to every other consideration, is the welfare of the unfortunate victim ; the

danger to the public, and the matter of economy being considerations of minor importance, and will follow as a natural sequence. What seems to be the great need, is a just and systematic law by which these unfortunates may be judged incompetent, and placed in properly constructed institutions, built and governed by the State, and maintained by the State, and in part, possibly, by the inmates when able to pay. This want is recognized by private individuals in the form of the so-called "Keeley Cures," which are springing up all over the land.

These institutions should harmoniously combine the medical, moral, educational, industrial, correctional, and custodial qualities. They should be built with due regard to proper classification. The inmates should be committed under the indeterminate sentence, and a clause admitting patients voluntarily should be inserted in the law, but being subject to the same discipline.

Each institution should possess sufficient land, as farming and gardening should be made strong features in the treatment. With proper machinery a limited amount of manufacturing could be carried on. With the exception of a foreman or two, the institution should be carried on by the inmates, thus making it as far as possible self-supporting. The institution should be properly officered; and at the head, under the general supervision of the State board of control, should be placed a physician of known intelligence and experience, with assistants under whose immediate charge the entire workings of the establishment should be placed. In regard to specific treatment (which we have no faith in) the physician in charge should be well qualified and the treatment left to them. All the moral influences of a first-class institution should be thrown around the inmates.

The industrial and educational features of the establishment should receive marked consideration. In fact, herein lies two of the most pronounced features of the treatment, especially with the younger classes. In regard to correction I think nothing of a so-called punitive nature should be used,

simply the correction that naturally inheres to a well regulated hospital where a strictly humane and disciplinary regimen is faithfully carried out. The custodial feature of the institution will always be a pronounced one. Herein will gather a large class, without friends or kin, aged and homeless, weakened in body and mind, and beyond any hope of recovery. Like other diseases, not all can be cured, but all can be benefited. And while all may not be cured, these unfortunate creatures can be kept away from all harm to themselves and others, and the public relieved from the burden of arrests, suits-at-law growing out of personal encounters, crimes of all kinds, murders, divorces, etc., and many other bad conditions of society, the direct result of the drink habit.

There will be three classes represented, the upper, the middle, and the lower. The upper class will include all those from the higher walks of life, the educated, the wealthy, those in professional life, higher official life, etc. From this class, coming as it does from a higher social scale, we must expect the largest per cent. of recoveries. However, this does not always follow, for we occasionally observe the most degraded coming from this class. From this higher social scale will "graduate" the so-called "Keeley Cure" cases. As a class they have better organization, their surroundings are superior, they have more to live for, and they are received back into life, into the arms of friends and comfort, and as a matter of course be much more likely to remain cured than those coming from the more defective classes. The middle class will comprise that large body of workers and toilers, principally in agricultural, industrial, and mechanical pursuits, from which we may reasonably expect many recoveries, but not in such a large proportion as from the higher walks of life. They represent on an average a somewhat lower grade in the social scale of life, and as a result will yield a less number of recoveries. To this class will naturally fall the principal industrial pursuits of the institution, through which the establishment will be made at least partially self-sustaining.

To the third and last class belong all that vast horde who have been born in ignorance, poverty, wretchedness, and vice, and comprise what is commonly called the "criminal classes." They have not the *ability* or even the *desire* to rise above the low level to which they were born, and from this class we must expect but few recoveries. Custodial treatment, with the moral influences of a well-regulated institution thrown around the unfortunates, will be about all that can be done for this class.

And now what shall we say in regard to prevention. We may state that it is vastly superior to cure. As in other diseases, our first duty is in the line of prevention. The science of prophylaxis, which is rapidly coming to the front in all forms of disease, is no less important in the one under consideration. Here is an evil that surpasses all others combined, and it is preventable. It is a disease whose chiefest cause is hereditary. Every medical, reasonable, and legal remedy should be used to prevent its spread and propagation. It is claimed by good authority that sixty per cent. of all drunkards inherit a tendency to the disease. That is, they inherit an unstable nervous and physical organization which predisposes to inebriety. I think the above is a low estimate. In my somewhat extended experience in caring for this unfortunate class of humanity, I have seen but few inebriates who did not inherit some mental, moral, or physical obliquity, if careful pains were taken to look up the ancestry. I believe seventy-five per cent. is nearer the figure. Now, if this large per cent. of drunkenness comes from inheritance as a predisposing cause, and if we were sure that this diseased state of society is preventable, and that large numbers can be cured, how essential it is that every responsible and legal effort should be made to suppress the evil. The law of inheritance, as already shown, is a wonderful process. By it, in the one instance, all the virtues and beauties of a perfect parentage are reflected in the child; by the same law, in the other instance, all that is hateful, hideous, and damnable may be handed down from the parent

to the offspring to the perpetual torment of future generations.

To prevent the propagation and spread of this evil, the state should have a guiding hand. The two chief factors to be considered are isolation and the interdiction of marriage with the defective classes. These two problems are far-reaching in their nature, but not beyond the hope of accomplishment in the near future. As soon as the unfortunate is isolated and his surroundings changed, improvement begins. He is out of harm's way, and no longer in a position to hand his diseased organism down to other generations. He is provided with a good home and taught industry ; he is placed in an atmosphere of morality and taught to respect the rights of others. No sane person can question for a moment the right and duty of the state to care for its own defective classes. In regard to the interdiction of marriage, it will be a more difficult question. It might be a hard matter to determine or to draw the line and say who should be debarred ; yet this can be done through the combined action of good men, governed by a just and humane law, which should be national in character. When the national government shall see fit to create a department of health, with a cabinet officer at its head, and with proper branches throughout the different States and territories, these public health problems will all naturally fall under this department, and can be equitably adjusted as the needs of each seem to require. Already the lax and unstable character of the marriage laws of the different States is being investigated by legislators and others who have the best interest of the nation at heart, and before long we hope to see the United States enjoying a marriage code, uniform and national in character, which will forever put a stop to the present lax and almost indiscriminate mixing of the sexes. Under one grand department of health, all the sanitary measures of the country should be placed, including the vexed one of immigration, disinfection, and preventive medicine, epidemics, and defective classes of every description, and by just and humane laws, in time, eradicating for-

ever these mental, moral, and physical imperfections from the land.

The next (possibly the first) great factor to be considered in regard to the prevention of inebriety, is the presence of alcoholic beverages throughout the length and breadth of our country. To suppress or regulate the manufacture and sale of alcohol is now, and has been, taxing many of the brightest minds in Christendom. A business of such vast proportions as the liquor traffic of this country, cannot be regulated except through the wisest, most deliberate, and persistent action of the state. The manufacture and sale of alcohol cannot be stopped, but it *should* and can be limited. A business that has been allowed to grow to such vast proportions under the laws of the state, and thereby fostered in its growth, cannot now be suppressed without compensation, and to purchase the plants by taxation, the people would never submit to. But it seems to me by the very nature of their tolerance, the state, by legislative enactment, has full power to limit the *sale*, and the *demand* would regulate its manufacture. South Carolina, I believe, is now entering upon an experiment in this direction, which will be watched with much interest. Norway, it is said, has proved the success of governmental control. At present in this country, a license sufficiently high to control its sale is by many thought to be the only way out of the difficulty; and even this can only be done where the citizens are educated up to it. Again, when any incorporated industry injures its employes or the public, there is ample means of redress and compensation. With just reason the same rule may be applied in regard to individual or public damage done through the liquor traffic. This is a broad, difficult, but interesting subject, and time has allowed me only to touch upon the cardinal points. If I draw the attention of the profession a little closer to this subject, the object of this somewhat desultory paper will be accomplished.

INFLUENCE OF INEBRIETY ON PUBLIC
HEALTH.*

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All growth, development, and civilization begins and ends in the individual. Train and develop the citizen, and both the community and nation are raised. Sanitary science is founded on this principle. Any evils which increase the number of diseased and defective persons bring additional obstacles to life and peril to all law and order. Defective and diseased persons always impede the army of advance. The laws of evolution teach the survival of the fittest; also the stern process of elimination, with its crushing out and crowding out. The unfit and defective must go to the rear; they have no right or place on the active field of conflict.

Inebriety is clearly more prominent as a cause of disease and degeneration than any other factors known at present. The various authorities who have tried to tabulate the number of defectives due directly and indirectly to inebriety have varied widely in their estimates, showing that the facts are not yet all grouped and studied. These estimates have placed inebriety as the active cause of from ten to sixty per cent. of all insanity; from thirty to eighty per cent. of all pauperism; from sixty to ninety per cent. of all criminality; and from thirty to seventy per cent. of all idiocy. These are the highest and lowest estimates made by various authorities in this country and Europe, and bring unmistakable evidence of the influence of inebriety not only over public health, but all growth and civilization.

The mortality from this source is equally startling, no

* Read before the American Public Health Association, at Chicago, Oct. 11, 1893.

matter what the exact figures may be. Inquiry and observation in every community will bring ample confirmation of the magnitude of inebriety in disease and degeneration. Some of the relations of inebriety to public health will illustrate the extent of its influence.

It is a remarkable fact that public sentiment concerning inebriety and the drink problem is far beyond all medical and scientific interest in this subject.

A political party with the central object of obtaining power to control and thus break up this evil received two hundred and seventy-nine thousand votes last year. A large number of organized societies, composed of thousands of earnest men and women, are working for the same purpose. A host of revival orators are penetrating into every town of the country, holding meetings, and rousing up public sentiment to antagonize the drink evils. The churches are in this field with organized societies, urging moral means and remedies for this disorder. Over eighty journals and magazines are issued regularly from the press, devoted to this one cause. Hundreds of volumes and pamphlets are coming yearly from all parts of the country, and this literature is constantly growing more voluminous and aggressive. A feeling of alarm, with increasing efforts to find some means to check and neutralize this evil, is apparent everywhere.

On the medical and scientific side of this topic a half a dozen volumes have been written, a single journal devoted to this study is issued, and less than a hundred physicians have given any attention or become prominent as students or writers in this field.

In all the great scientific questions of the times public sentiment follows timidly the lead of science. Here public opinion is leading, and is growing more agitated and earnest to find relief, while medical science has so far failed to either direct or point out the lines of march.

If we ascend above the agitation and conflict of theories, we are startled to find this great "drink army" to be the product of distinct causes and physical conditions,— to be

born, bred, grown, and developed in soils and environments that we can realize and control.

The recruiting grounds, the sources and springs from which the inebriate comes, the direction of his march, destination, and end, and the forces accelerating or retarding this movement are clearly apparent to scientific inquiry. We are still more startled to find that this army of inebriates are increased and become more incurable by the blundering theories of public opinion, which seeks by law, pledge, and prayer to halt and drive them back to sobriety and health.

Some idea may be formed of the influence of inebriety on the health of the public, from this fact. In 1891, eight hundred thousand persons were arrested, charged with intoxication and crime following. At least half a million more are known to be using spirits and drugs to excess. This practically represents a vast army of non-producers, who are centers of the most unsanitary conditions of life and living.

Also, an army that is "switched off the main line" of evolutionary growth and development, who are becoming more unfit, more degenerate, forming centers of pauperism, criminality, insanity, and progressive degeneration, not only being eliminated and crowded out, but concentrating a tide of evil that is transmitted to the next generation. A point of view a little higher up reveals this drink army as a great retrograde movement of individuals, whose brain structure is breaking down, beginning at the highest levels and following a uniform line of march, beyond the uncertainties of human will and the feebleness of personal effort.

The possibility of scientific interference, of limitation and prevention, increases with every advance of our knowledge of the causes. Already there is unmistakable evidence that inebriety can be checked and its evils removed, but only by the means of physical laws whose operations are above caprice. The same problem confronts us, as in other great remedial epidemics. Remove the causes and conditions which favor the growth and development of the disease, and place the victim in the best condition for returning health.

Over a million recognized and unrecognized inebriates are scattered over all parts of the country, each one of whom is a center of degeneration, disease, and unhealthy sanitary life and living. Each one will transmit to the next generation a legacy of disease, lessened vigor, and imperfect development, crippling the generation to follow, with defects and limitations that cannot be described.

The delusion of free will to do otherwise is the fatal error which permits this army of inebriates to continue, year after year, not only destroying themselves and families, but to build up veritable centers of physical and mental ruin. Our indifference and criminal neglect of these classes results in literal breeding-places for a perpetuation and increase of all the evils and losses which follow from inebriety.

Sanitary science teaches clearly that no one has a right to destroy himself and peril the health and comfort of others. The inebriate is always a source of danger, and to permit him to become a criminal and pauper, before any legal remedy is applied, is a fatal error. The inebriate is a criminal pauper and madman, whose conduct forfeits all right to personal liberty, and who is practically an outlaw to his own and all other interests. The only remedy is legal control and quarantining in hospitals; not as criminals, but as diseased and helpless, the same as in cases of yellow fever, small-pox, typhus, and other contagious diseases. The inebriate is a border-land maniac, and needs control, isolation, and treatment in special surroundings and in special conditions. Saloons and places for the free sale of spirits are breeding-centers of inebriety in every community. The sanitary perils which follow these places, and the physical and mental health of all its patrons are not only destroyed, but the worst sanitary conditions are encouraged and grow up about these places. The saloon has no claim for recognition as a business. It is simply a parasite thriving on the decay and degeneration of the community. It is only tolerated by the densest ignorance and selfishness of its defenders. Saloons should be literally classed with foul sewers, dangerous waters,

and the worst unsanitary death-dealing agents. Persecution as a moral evil only keeps it alive, but any study from a scientific point of view would be fatal to its perpetuity.

Unregulated marriages is another unrecognized great breeding-center for the growth of inebriety. To-day inebriates, insane, and neurotics of all stages, also criminals, are permitted to propagate and transmit their defects to the next generation. The result is a race of defectives who develop, under any or all circumstances, inebriety and all its associated degenerations. Thus, the inebriate pauper, criminal and insane, is born and bred with absolute certainty. All authorities agree that from sixty to eighty per cent. of all inebriates who come for treatment in asylums are so by inheritance. Every community furnishes illustrations of this fact. This alcoholic stream, with all its criminal paupers and insane, is permitted to flow down through every community, and the inmates of every hospital, and the victims of every police court are living witnesses of this stupid blunder.

Another recruiting-place for inebriety is the station-house and jail, and the legal treatment by fines and imprisonment. Of the eight hundred thousand persons who were arrested for inebriety, less than one-tenth of one per cent. received any benefit. They were all made worse and transformed into armies of inebriates who never desert nor leave the ranks.

Physically the short imprisonment of the inebriate simply removes him from spirits and leaves him less capable of leading a temperate life. Mentally he has lost a certain self-respect and pride of character essential to recovery. The first legal punishment of inebriates is followed by a species of fatality seen in a constant repetition of the same or allied offenses.

This fact is so apparent that these cases are called "repeaters" in the courts, and the number of sentences to the same person often extends to hundreds.

In one thousand cases confined at Blackwell's Island, New York, 935 had been sentenced for the same offense, drunkenness, from one to 28 times.

The first sentence was a regular switch point from which the victim was precipitated to a constantly descending grade, becoming more and more incapacitated for temperate living.

The system of fines is equally ruinous, because it falls most heavily on the families, making it more difficult to support themselves, thereby increasing the perils of pauperism, both to the victim and those who depend on him for support.

It may be said, and the statement is sustained by many facts, that the legal treatment by the lower courts of cases of inebriety is fully as fatal as the saloons themselves where spirits are sold.

The saloon and police court are literally the school and college for the training and graduation of classes of incurable inebriates that peril every sanitary interest in the country.

The fault is not in the courts and their administration of the law, but in the laws themselves, and in that state of public opinion which urges that all inebriates should be treated as willful criminals, and arrested and punished as such.

Thus, year after year, this terrible farce of prevention of inebriety by fines and short imprisonments goes on, and the incurability of the poor victims increases. Crime is increased, pauperism is increased, the most dangerous sanitary conditions are fostered, and the burdens of taxpayers and producers are increased.

The inebriate is always debilitated, and suffers from impaired brain and nerve force. Alcohol has broken up all healthy action of the body.

In prison both the quality and quantity of food are ill adapted to restore or build up the weakened organism.

The hygienic influences of jails and prisons are defective in every respect, and adverse to any healthy growth of body or mind.

The psychological influences also are of the worst possible character. The surroundings and the associates precipitate the victim into conditions of mental despair, from which recovery is difficult, if not impossible.

The only compensation to the inebriate is the removal of

alcohol, and in this deprivation the State most terribly unfits him and makes him more and more helpless for the future.

Thus, while false theories are one of the sources from which inebriety is produced, the blundering effort to remove it by penal punishment is an actual factor in increasing and intensifying the disorder.

The treatment of inebriety from a scientific standpoint has passed the stage of experiment and is supported by a great variety of experience and collateral evidence that cannot be disputed.

Probably the largest class of inebriates in this country are without means of support, and may be termed the indigent and pauper class.

This class, non-supporting and burdensome, should come under legal recognition and be committed to workhouse hospitals, built for this purpose, preferably in the country, upon large farms and amid the most favorable environment.

These hospitals should be training schools in which medical care, occupation, physical and mental training could be applied for years, or until the inmates had so far recovered as to be able to become good citizens.

These places would receive the classes who now are sent to jail, and that other class who are neglected until they have passed into the chronic stage and have become inmates of prisons and insane asylums.

A very large proportion of these several classes could be made self-supporting while under treatment, and in many cases be an actual source of revenue. The hospitals would naturally be divided into two classes. The first would receive the better, or less chronic cases; the second would have the incurables, and those whose recovery was deemed more or less doubtful. In one case the surroundings and discipline would be more adapted for the special inmates than in the other, but the same general restraint would be followed in each.

In both recoveries would follow. A large class would be restored to society and become producers. In the second,

cases would be housed and made to take care of themselves, which would be an immense gain to society in economy and safety.

Private enterprise should be encouraged by legislation to provide smaller hospitals for the better class and those who would be unwilling, or whom it would be undesirable to compel to enter public asylums. Here the commitments should be both forced and voluntary, and the restraint combined with the fullest and latest appliances of science for the end to be accomplished, blending seclusion and good surroundings to build up and make recovery possible.

The first step is to recognize the fact that the inebriate, whether continuous or periodic, has, to a greater or less degree, forfeited his personal liberty, become a public nuisance, and an obstacle to social progress and civilization. Second, that he is suffering from a disease which affects society and every member of the community in which he lives, and from which he cannot recover without aid from other sources making it absolutely necessary that he should be forced into quarantine on the same principle as the small-pox or yellow fever patient. This is simply carrying out the primitive law of self-preservation. Naturally, the money to accomplish this shall come from the license revenue, on the principle that every business should provide for the accidents and injuries which follow from it. Railroad companies and other corporations are required to pay damages for the accidents which follow their business, and this is conceded to be justice. But to-day the tax on the liquor traffic is used to support courts and jails where the inebriate, by fines and imprisonment, is only made worse or more incurable. Thus, literally, the business of selling spirits is increased by the almost barbaric efforts of courts and jails, and every person so punished is made a permanent patron of that business. Against this all the teachings of science and all practical study utter loud protest.

The practical success of workhouse hospitals for inebriates is demonstrated in every self-supporting jail and state's

prison in the country where the obstacles are greater and the possibilities of accomplishing this end more remote. This can also be seen in asylums for both insane and inebriates, in the various sanitarium and hospitals through the country, where the capacity for self-support and the curability of these cases are established facts.

More than that, these hospitals would relieve society of great burdens, of loss and suffering, the diminution of the number of the inebriates indeed become a practical certainty, the extent of which we can have no conception of at present.

It is impossible, at the present time, to estimate the beneficial results that would follow a systematized plan of thus housing and treating the inebriate, but there are positive indications that its effect would be felt in all circles. One of the great fountain heads of insanity, criminality, and pauperism would be closed, and a new era would dawn in the evolution of science.

The neglect to study inebriety scientifically, and its influence on public health, has opened the door for an army of quacks who rush in with secret remedies to drive out this disorder. It is the same old story of credulity, disappointment, and loss; a repetition of the blind leading the blind and both falling into the ditch. The failure to study inebriety as a problem in sanitary and medical science is a neglect for which the severest penalties must be paid. These armies of inebriates who are uncontrolled and practically unknown, infest our communities, and are the certain promise of misery, sorrow, and loss in the future. The failure to study the conditions and causes which produce inebriety, and remove them, is to increase inebriety, criminality, and pauperism, and all their attendant evils, in the years to come. New asylums and homes will be required to-morrow; new burdens of disease, loss, sorrow, and death will follow in the next generation. Thus, the evils we recognize in part, and the burdens we are called to bear, are growing and being cultivated in our midst, and will bear fruit as surely as the oak comes from the acorn.

The public health of to-day and to-morrow depends very largely on the prevalence of inebriety. If we can control and stamp this out, one of the great fountain-heads of criminality, pauperism, and insanity will be closed. If all the efforts of church, state, moralists, and quacks could be concentrated along the side of exact science, by a study of the facts, conditions, and laws which control the origin and growth of inebriety, the means and remedies for its prevention and cure would be no mystery. To the student of this subject, the possibilities of preventing and stamping out inebriety are only limited by our want of exact knowledge. Looking over into this unknown realm of sanitary science, we see clearly the same reign of physical laws, the same cause and effect, the same circumstances and conditions which develop insanity, pauperism, idiocy, and literally switch the victim from the main track of growth, development, and evolution, to the side lines of degeneration, disease, and dissolution.

The same germ forces are at work here, following lines as fixed and eternal as those which govern the stars.

The influence of inebriety on public health is profound and far-reaching, and within the observation of every one. Its remedy must come from the teachings of accurately-observed facts, and along the line of great natural laws.

DR. WOOD, in a recent lecture, remarked: "When I was a student in the hospitals we used to have cases of shock in abundance, and we would pour alcohol into them and wonder we got no more effect. It seemed like pouring alcohol into a rat-hole. Alcohol is probably of no value whatever in shock; indeed, I am perfectly sure that a large dose of alcohol in shock puts one nail in the coffin of the patient, and if you want your patients to come out of shock you will be very careful in giving them alcohol. Alcohol stimulates the heart, but it paralyzes rather than stimulates the blood vessels."

Abstracts and Reviews.

INEBRIETY AND ITS TREATMENT.

Dr. Kynett, the able editor of the *Medical and Surgical Reporter* of Philadelphia, makes the following editorial remarks:

“ We have recently seen elsewhere a distinction which would help the diagnosis and treatment of inebriety. That distinction draws a broad line between the *drink habit* and the *drink traffic*. Inebriety, as a disease, is of the former, and not of the latter, unless it be of the body politic. The treatment of inebriety, as a disease of the *individual*, is for the medical profession. The treatment of the drink traffic as a disease of the state is for statesmanship. Both are proper subjects for study and discussion and the education of public sentiment, and should be conducted on right lines. Prevention is vastly superior to cure, and our first duty is in the line of prevention, and the presence of alcoholic beverages throughout the length and breadth of our country is one of the most potent, exciting, or direct causes of inebriety, under the law of environment. Is it logical, is it scientific to suggest that a license sufficiently high to control its sale is the only way out of the difficulty? Does experience anywhere suggest just how high license needs to be to control its sale sufficiently to prevent this exciting cause of inebriety? License has been tried all the way from fifty to five thousand dollars, and inebriety and its existing cause have continued without abatement all along the line.

“ Does medical science suggest parallel remedies for other diseases? Are our health authorities now treating the threatened invasion of cholera and yellow fever on this plan? Everywhere the most energetic measures within reach are employed to stamp out their first appearance. If it be wise

for statesmanship, in dealing with the liquor traffic as a disease of the body politic, or as the chief exciting cause of disease among its citizens, to continue and protect by law the presence of alcoholic beverages throughout the length and breadth of our country, why not recognize and protect the presence of the exciting causes of other diseases? If 'the right-living public have rights that the evil-doers must respect,' and to prevent the propagation and spread of this evil the state should have a guiding hand, then why should not the state employ its power in stamping out this disease as well as others? Why should the state license and 'regulate' the exciting cause, and then establish and maintain hospitals and asylums for the treatment of the disease? True, inebriety is a disease, but the *manufacture* of and *traffic* in intoxicating beverages that produce it, *is not a disease*. Inebriety is a form of insanity, but liquor-makers and vendors are not insane. The two classes,—the disease-producer and the diseased,—are as widely separated as are the physician and his patients,—the disease healer and the diseased.

"These and other queries will seem to the physician, who, accepting inebriety as a disease, knows the hopelessness of its treatment while its cause persists in vigorous existence, to demand more rational and scientific treatment.

"Let the medical profession and our statesmen and all good citizens study this subject in the light of reason and common sense, and let the several sections of our country in which the various remedies have been tried, be carefully studied as to the persistence of the exciting cause under diverse treatment, and let the lessons be applied, and we may come to that condition of public health which will give relief alike from cholera, yellow fever, diphtheria, *inebriety*, and all destructive diseases.

"Since the government has had such gratifying success in preventing thus far the invasion of cholera and yellow fever by the improved methods which medical science has suggested, why should not Congress at once yield to the reasonable demand which has been urged for almost a quarter of a

century, and appoint a commission to inquire into the causes and cure of inebriety? No thoughtful citizen can fail to see that this is a most important and promising field for such inquiry; and yet, while one branch of Congress has repeatedly passed the measure, the other has as often defeated it. Why? It surely is not because the subject is not of sufficient importance. Neither is it because the public health and morals are not involved; nor because it does not concern the material prosperity of the country. As a mere question of finance, it is of far greater magnitude than the government purchase of silver bullion, or any possible change in the tariff. Do any dissent? Then why not create the commission of inquiry? It is not because the information is not accessible. It is, in every possible relation to the subject. Inebriety is an old disease, and yet but recently recognized as a disease, and even yet there are many who do not so regard it. All sorts of remedies have been tried by scientific and quack statesmanship, and the most conflicting reports of results fill the air. Why not have a commission of able, scientific gentlemen who will search out and set in order the real facts as they relate to causes and cure? The best talent of the medical profession and the best statesmanship the country affords should be represented on such commission, and the best facilities which the government can provide should be given it; and then its labors should be consecrated by a devotion to science, philanthropy, and patriotism superior to all mercenary and party considerations. Let us have a *commission on the causes and the cure of inebriety.*"

ALL authorities agree that alcohol in large doses is a narcotic poison, killing by suffocation through its paralyzing influence on the respiratory nerve-centers; and in smaller and continuous doses by structural changes, which it exerts on the several organs and tissues of the body. By its action on the blood cells it checks oxidation and limits the power of absorbing oxygen and eliminating carbonic gas.

ALCOHOLISM AMONG DOCTORS.

The above subject, strange indeed for the Royal Society, was introduced at its last meeting by Dr. J. W. Barrett, who read a paper on the subject. He said that a valued friend of his stated some time ago that alcohol was the causal agent in effecting the physical and moral ruin of about 12 per cent. of the population of this colony. He thought the judgment of his friend biased, but he set to work to find out, as far as he could, what were the facts of the case, and made an investigation with respect to members of the medical profession who had graduated at the Melbourne University, as he could not get what he considered authentic data about other persons. In the University calendar for 1881-2 there were fifty-six bachelors of medicine on the list, forty-three of whom might be classed as above suspicion with regard to the excessive use of alcohol. The remaining thirteen, or 21 per cent., were decidedly injured by the excessive use of alcohol, and the great majority of them were now dead. In the University calendar for 1883-4 there were eighty-six bachelors of medicine on the list, of whom ten, or about 12 per cent., used alcohol in excess, and were much injured thereby in every respect. Some of those ten were included in the thirteen previously mentioned, several of whom had died in the interval. In the University calendar for 1885-6 there were 106 bachelors of medicine on the list, of whom twelve, or about 11 per cent., became distinct alcoholics. In all the cases affected with alcoholism, the habits of intemperance began, he believed, subsequent to their entry into student life, and in most cases they were not pronounced until leaving it. The diminution in the percentage in the more recent years might, or might not, be fallacious. It might be due, possibly, to increasing civilization in the colony, or it might be due, on the other hand, to the shortness of the time allowed for the alcohol to take effect. This is a serious indictment for a professional gentleman who is not at all known in what may be

called teetotal circles. Read before such a society as "The Royal," and by a doctor of medicine, it ought to cause many to consider over again the question of alcoholic stimulants, and be a warning against their use both by doctor and by patient.—*Australian Christian World.*

MODERATE DRINKER.

In a recent editorial in the *Temperance Record* occurs the following:

"What is a drunkard? We apply the name to persons who are affected by alcoholic liquor; but we arbitrarily limit the application of the name to persons in whom the effect of the liquor is made visible through a staggering walk, violent conduct, or utter helplessness. We affect to distinguish between a drinker and a drunkard, without being able to say what amount of liquor may be drunk under the respectable name of moderate drinking, and what deserves to be denounced as drunkenness. And every day's observation teaches us that the same quantity of liquor will make one person a debased drunkard, and leave his neighbor in the respectable position of a moderate drinker. But it should be borne in mind that such indications of drunkenness as a staggering walk, violent conduct, or utter helplessness are only accidents, not essentials, of the condition designated by the word 'drunk.' The essence of the condition is to be found in the physiological changes produced by the alcohol in the tissues of the body, in the blood, etc.; and it is of comparatively little importance whether the existence of the condition is made visible through any of those outward signs which, popularly speaking, give us authority to say, 'that man or woman is drunk.' The distinction popularly made between the moderate drinker and the drunkard is not only a purely arbitrary one, but it is dishonestly misleading. The drunkard is universally admitted to have imbibed what has done him harm; but the phrase

'moderate drinker' is claimed as indicating a consumption of intoxicating liquor which has done the drinker good. But physiology supports no such fiction as that. The alcoholic liquor imbibed by the moderate drinker is as harmful to him as that which is imbibed by the man who becomes drunk under its influence; and the degree of harm is not to be measured by the outward indication of drunkenness. Could we see day by day the deteriorating effects of strong drink on those who call themselves moderate drinkers, and compare them with its effects on those who drink and make themselves drunken, we would be constrained to admit that the difference was only a difference of degree."

RESPONSIBILITY OF INEBRIATES.

Dr. Hollister in *North American Practitioner* makes the following very sensible remarks:

"In view of the enormous percentage of crime committed by men, for the time insane from the effects of alcohol, it becomes a very serious medico-legal question as to how far they should be held responsible for criminal acts committed while in a state of intoxication. Experience in the past has certainly demonstrated the fact that men are not deterred from inebriety by reason of the possibility of their committing crime while in this condition. We think this to be a self-evident proposition, to wit: If inebriety is capable of developing such a mental condition that men thus affected have no longer the power of self-control, that while in this state they should not be held responsible for their acts. We do not raise the question as to who is responsible for bringing them to this condition, but being in this state with whom does the responsibility of their action rest? If inebriety be a disease, as is so ably asserted by such eminent men as Carpenter and Kerr and McIlwaith in England, and by Crothers of Connecticut, and by others in this country, then as a disease it is justly a matter of legal as

well as medical concern. If inebriety be responsible for crime, then inebriety should be not only subject to medical treatment but to legal restraint as well. In dealing with the habit, the man who is its victim and slave is necessarily included. If by reason of a diseased condition of his brain, his will-power is lost, and he cannot restrain himself, then the habitual drunkard should be subject to control other than his own. He should be treated medically, and if guilty of habitual drunkenness he should be restrained.

"The question as to how far the law of England affects the habitual drunkard is now being seriously discussed in that country, and we see no reason why it should not be considered in a like serious manner in America. The good of the unfortunate victim requires that he should be wisely and judiciously controlled. The safety of his family is a plea for it; the security of life and property demands it, and from an economic standpoint the criminal records show that far more than for all things else the Commonwealth is taxed for the trial and conviction of those who were criminals only because they were insanelly drunk."

EFFECTS OF MORPHINE ON THE FEMALE ORGANS.

Passower (*Centralbl. f. Gynæk*, No. 2, 1893) recently read a paper before the Obstetric Society of St. Petersburg in which he related the course of two cases under his own observation. It confirmed an opinion already supported by the observation of others, that the abuse of morphine eventually leads to atrophy of the female organs. Passower's cases were of the ages of twenty-nine and thirty. One consulted him on account of the resultant amenorrhea. The drug was discontinued, and the catamenia reappeared. The patient took to morphine again, and straightway the menses ceased. Between 1887 and 1889 Passower observed the case. Sixteen pounds weight was lost, and the subcutaneous fat disap-

peared. The vulva atrophied. The measurements of the uterus during that period ran as follows: December, 1887, three and one-tenth inches; May, 1888, two and nine-tenths inches; November, 1888, two and seven-tenths inches; April, 1889, two and three-fifths inches; September, 1889, two and three-tenths inches; and July, 1890, one and nine-tenths inches. The atrophic process no doubt began in the ovaries and spread to the other parts of the genital tract. This is evident from the early appearance of amenorrhœa and the later atrophy of the vulva, and also from physiological evidence. Thus the submaxillary glands atrophy in dogs subjected to doses of morphine. How much of the drug can be taken without danger of these ill effects is entirely an individual question.— *British Medical Journal*.

THE TREATMENT OF INEBRIETY.

At the Twelfth Congress for Internal Medicine, recently held at Weisbaden, Smith (Supplement to *Centralbl. f. klin. Medicin*, 1893, No. 25, p. 90) pointed out that the stage at which chronic alcoholism usually comes under the observation of the physician presents two distinct features: (1) A psychic degeneration and depravity, affecting the character, with an extinction of all energy, so that it is impossible for the victim, from his own resources, to rid himself of his condition — inebriety proper; and (2) a series of organic and systemic changes engendered by, but not peculiar to, the alcoholic poison, and the symptoms of which are referable to demonstrable pathologic changes. In view of the psychic condition it is essential that the patient be placed in an institution devoted solely to the treatment of inebriety. Such an establishment should be situated in the country and isolated from all external communication. It should be under the care of a physician in whose family the use of alcohol in any form should be rigidly proscribed. There should be no actual restraint, but the most vigilant supervision should be exercised. The institution should be equipped with appa-

tus for Swedish resistance gymnastics, and opportunities should be afforded for light and useful occupation such as wood-turning. To be efficient and permanent the treatment must be continued for a period of from six to twelve months, and in cases of periodic inebriety and other severe varieties for eighteen months. Of the whole number of cases under treatment at Marbach 30 per cent. were cured; of those that remained under treatment for more than six months the proportion of recoveries was 80 per cent. The essential element of treatment is immediate and rigid abstinence. Should manifestations of delirium and collapse appear camphor should be given. After several months of treatment the character of the patient will have changed for the better. Upon dismissal his future associations should receive thoughtful consideration. Such incurable conditions as alcoholic dementia, alcoholic paranoia, and profound alcoholic mania will necessitate detention in an insane asylum, as well as such cases in which the alcoholism is but a manifestation of moral irresponsibility. Among the curable conditions in which degenerative changes in the central nervous system have taken place may be included alcoholic melancholia, pseudo-paralysis, and pseudo-tabes. Epilepsy and periodic inebriety, however, require treatment of especially long duration.

CAFFEINIC DELIRIUM: FAISANS.—(*Soc. Med. des Hop. de Paris, May 5, 1893.*) CAFFEINE CONTRA-INDICATED IN ALCOHOLISM: DR. CZARKOWSKI.—(*Vrath, 1893.*)—Observations of the neuropathic patients suffering from pneumonia, who were treated with caffeine, has shown to Dr. Faisans that an intense cerebral excitement with delirium and hallucinations commenced immediately after the first injection of the drug, and continued as long as it was used. The affection lasted twenty-four hours after the injection had been discontinued. The patients developed suicidal tendencies, and the author suggests as a necessary precaution

a close observation of the action of caffeine, especially when it is administered to nervous or alcoholic patients.

Dr. Czarkowski considers alcoholism a counter-indication to the use of caffeine. In one case, a patient afflicted with mitral insufficiency and œdema, manifested mental agitation and exhilaration after having ingested 2 grammes [$\frac{1}{2}$ dr.] of caffeine citrate in the course of 24 hours. When the effect of the caffeine ceased the patient became sad and did not retain any recollection of his state of agitation.

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

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

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

W. N.

ABNORMAL MAN, ESSAYS ON EDUCATION AND CRIME AND RELATED SUBJECTS, WITH A DIGEST OF LITERATURE AND BIBLIOGRAPHY. By DR. A. McDONALD, Specialist to Bureau of Education. Government Printing Office, Washington, D. C., 1893.

This large work has a special interest to all students of inebriety for the most complete bibliography ever published of papers on alcoholism, drunkenness, inebriety, dipsomania, intemperance, moderate drinking, etc.

Over three thousand titles of books, essays, and lectures on these topics from all languages are grouped.

Here one will find the evidence that has been disputed by "Anglomaniacs," that American contributions to this subject are in advance of all others. An equally voluminous

bibliography of books and essays on morphinism, the opium habit, chloralism, ether, hashish, and cocaine mania are given, about four hundred titles in all, the larger part of which are German and English authorities.

A similar grouping of titles of papers, reports, and books on crime, suicide, pauperism, idiocy, and other abnormalities are presented. The first seven chapters of this work are devoted to a review of the scientific literature of these topics, giving a fair summary of the latest statements and studies of this field. The author has rendered great service to the literature of abnormal man, and won the gratitude of every student of these topics. Such works as these are indispensable for every library, and are permanent additions to the literature, and mark distinct eras in the advance of knowledge in these subjects. No author should be without a copy of this work, which can be obtained through his representative.

SLEEP AND DREAMS ; A SCIENTIFIC POPULAR DISSERTATION. From the German of DR. FRIEDRICH SCHOLZ, Director of the Bremen Insane Asylum. By H. M. JEWETT. Also, THE ANALOGY OF INSANITY TO SLEEP AND DREAMS. By MILO A. JEWETT, M.D., Assistant Superintendent of Danvers (Mass.) Lunatic Hospital. Bound in one volume. Cloth, 148 pp., 75 cents. New York, London, and Toronto: Funk & Wagnalls Company.

This is a book easy to read and not difficult to digest. It is written for popular use. While it makes no large demands upon the knowledge of the laity, it will not be an unwelcome contribution to the science of the mind. Sleep, its Cause and its Phenomena, Dreams, Sleeplessness and its Prevention, and the Analogy of Insanity to Sleep and Dreams, are the subjects treated. It is indeed easy to follow the author, as he tells us in the introduction :

“ You need not fear that I shall conduct you along the dizzy heights of speculation or into the abyss of metaphysics. No ; we will remain on the well-made road, and the ascent will not be difficult. And we will not confine our-

selves to enjoying the beautiful view, but, like the energetic collector who fills his box with useful fruits, we will bring home some things from our excursion — some good lessons which shall have the merit so highly esteemed nowadays, of being 'practical,' good, sensible receipts for household use!"

MINERAL SPRINGS AND HEALTH RESORTS OF CALIFORNIA. A PRIZE ESSAY. By WINSLOW ANDERSON, M.D., ETC. San Francisco, Cal.: Bancroft Company, Publishers.

This volume contains a description and chemical analysis of every mineral spring in California, together with an analysis of the waters of all the leading mineral springs of this country and Europe. This is supplemented by sketches and pictures of the famous springs of California, and a chapter on baths and the value of mineral waters in diseases. It will be apparent that this is a most valuable contribution not only to medicine, but to the geography of the Pacific slope. To invalids and medical travelers this brings most valuable information that is almost indispensable. The author has won a debt of gratitude from science which cannot be repaid. And with great pleasure we commend this volume.

A CHAPTER ON CHOLERA FOR LAY READERS: HISTORY, SYMPTOMS, PREVENTION, AND TREATMENT OF THE DISEASE. By WALTER VOUGHT, Ph.B., M.D., Medical Director and Physician-in-Charge of the Fire Island Quarantine Station, Port of New York; Fellow of the New York Academy of Medicine, etc. Illustrated with Colored Plates and Wood-Engravings. In one small 12mo volume, 110 pages. Price, 75 cents net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

In a hundred pages or more, are concentrated an excellent summary of the latest facts concerning the nature and treatment of cholera. Such works are of great value in giving the busy physician a clear general idea, and enabling

him to correctly diagnose and treat the sporadic cases that may appear.

A NEW ILLUSTRATED DICTIONARY OF MEDICINE, BIOLOGY, AND COLLATERAL SCIENCES.

Dr George M. Gould, already well known as the editor of two small Medical Dictionaries, has now about ready an unabridged, exhaustive work of the same class, upon which he and a corps of able assistants have been uninterruptedly engaged for several years.

The pronunciation, etymology, definition, illustration, and logical groupings of each word are given. There has never been such a gathering of new words from the living literature of the day. It is especially rich in tabular matter, a method of presentation that focuses, as it were, a whole subject so as to be understood at a glance.

D. O. Haynes & Co., of Detroit, Mich., have compiled a very useful little work called the Era Key of the United States Pharmacopœia.

Dr. F. B. Mattison, the well-known Medical Director of the Brooklyn Home for Habitues, has recently issued five valuable monographs, that can be had by writing him at his Home in Brooklyn, N. Y.

The *Homiletic Review*, published by Funk & Wagnalls of New York city, increases in interest and value each month. Very few journals bring more suggestive thought to the scholar of religious truth than this.

We always take great pleasure in calling attention to the *Popular Science Monthly*, by D. Appleton & Co., New York city. It is literally a *monthly bulletin* of the best thought and conclusions by the best authorities and students of science. It has become as essential to have this journal as the daily paper, for every thinking man who would keep up with the times.

Editorial.

PSYCHIC INEBRIETY.

This name describes a class of cases where the drink impulse is preceded by elaborate preparations to intensify and conceal it. As illustrations, (a) an irregular inebriate will arrange his business weeks in advance, and deny that he has any intentions to drink. Then invite low company to meet him at some distant hotel, and start away on alleged important work, then suddenly disappear and be traced with difficulty. After a few days he will return and explain his absence as due to unforeseen events. He will display great cunning and tact to conceal his paroxysm. This case represents a class of persons who are known in an obscure way to drink at intervals; whose strange, unexpected disappearances are never explained clearly. The methods of concealing these events show excellent judgment and careful study, but the explanation is often weak and childish. His former clear reasoning seems followed by confused and contradictory statements. Often these cases deny stoutly all implication of drinking, and appear greatly distressed at the suspicion of their friends. The drink impulse appears to begin a long time before it breaks out, and the mind, recognizing the impossibility of resistance, is directed to prepare and conceal it. The mental acuteness and exultation manifest before the act passes away in the paroxysm, and weakness and degrees of imbecility follow.

(c) Illustrates another class. Persons who are known to be excessive drinkers at unknown intervals will suddenly, at the most unfortunate time, become intoxicated. These attacks are associated with a degree of reasoning and motive that is startling. Recently an important officer of a large manufacturing company was required to appear before a

board of directors and explain certain financial operations. He appeared wildly intoxicated, and made the affairs appear at the very worst; then offered to buy out all frightened stockholders, while in reality he was very poor.

Such cases often appear to become intoxicated for the purpose of creating sympathy and getting aid from the benevolent. In times of revivals these cases will appear and sign pledges, become converted, then pose as needy objects of sympathy. Whenever an opportunity occurs to secure some special advantage they will avail themselves of it and display a degree of dishonesty that is startling.

In a certain case, an inebriate clergyman, who had been deposed for attacks of drinking, went to a strange city under an assumed name. With unusual adroitness he began a temperance revival, lecturing twice a day and visiting personally business men, urging their sympathy and interest. In a few weeks a wave of popular enthusiasm followed, which he made to turn for his personal interest, and finally became a defaulter and disappeared. Later he was placed in an insane asylum, and soon after was discharged as cured. It appeared that in this case a state of morbid exaltation preceded the drink paroxysm, during which he used spirits very sparingly. At this time his mind was in a state of mental erethism, and every effort was concentrated to make money, which was put away and covered up. He was a dangerous swindler without any restraint except to conceal his motives. After a time he would disappear to some place where he could drink to stupor. From this he would recover in a week or more with much prostration, or become delirious and be taken to an insane asylum. These attacks had a uniform beginning, history, and progress. Other cases are noted in which the preliminary period is marked by concealed drinking and unusual changes of character, immoral conduct with extreme dishonesty and selfishness and low cunning. This finally ends in extreme drunkenness from which recovery follows. These attacks resemble epilepsy in many ways and are due to central causes, in which the use of alcohol is only a symptom.

Another form is marked by the sudden overwhelming drink impulse that fills the mind with intense desire for the narcotism of alcohol. This is associated with moral insanity and acute mental activity, that might be called reasoning mania. This period may last some weeks and is followed by profound stupor from spirits and recovery.

The same delirious states follow and are associated with the use of spirits. The drink stupor is followed by a subsidence of all these symptoms, and a long period of rest. This season may be one of prostration and invalidism at first, then recovery, later at irregular or stated intervals a return of a similar paroxysm.

These cases are enigmas, but studied as forms of epilepsy are clear. The strange conduct and stranger motives, and reasoning manias limited and marked by alcoholic causes, are not explainable from any moral theories. The term psychic inebriety or psychic epilepsy with symptoms of inebriety best describes many of these symptoms.

THE TERM DISEASE OF INEBRIETY.

This name is applied to persons who use spirits to excess, and who are intoxicated, and show marks of poisoning in both mind and body. It is correctly used to designate all persons who take spirits continuously or at intervals, marked by mental changes of motive, thought, and conduct. So far no researches have been able to point out paths of moderation in the use of spirits, or to prove that within certain limits its use as a beverage was safe, but beyond this full of danger. On the contrary, all scientific study indicates that the use of alcohol in any quantity is uncertain in its effects, and always more or less dangerous. In many instances these effects of alcohol are unnoticed, and may be concealed for a long time; in others the organism is markedly injured from the beginning of its use. The moderate use of spirits may be followed by more profound degenera-

tion, although covered up, than in cases where it was taken at intervals in great excess. In the former case sudden death from slight causes, acute inflammations changing into chronic conditions, with marked susceptibility to disease, are unmistakable evidence of this fact.

The term inebriety not only describes a class of cases in which the use of spirits is a common and prominent symptom, but implies a certain central brain degeneration, either caused directly by spirits, or brought into activity by it. Inebriety, like the term insanity, has the same general significance. Both indicate abnormal acts and conduct. In one it is associated with the use of spirits; in the other it is attributed to certain more or less distinct causes; and in both there are many forms and classes. The divisions and degrees of insanity, after half a century of study, are still in great doubt. No classification of inebriety can be made at present, because of the uncertain data to start from. To dispute the accuracy of the term inebriety as a disease, because the causes are unknown, and be content to ascribe it to moral states, is a sad confession of ignorance. To say inebriety is a vice at first, meaning by the term vice not only changed character and conduct, but a lower plane of living, in which duty and obligation are unrecognized, is a clear statement of disease.

A line of conduct at variance with all principles of right and wrong, duty to self and others, is the strongest evidence of degeneration and disease. Many forms of insanity are preceded by distinct changes of character and vicious conduct, using the term in its broadest meaning. To call such cases vice at first and later disease would be obviously absurd. Of all other drugs known, alcohol acts most prominently on the higher brain centers. The ethical centers which regulate and form character are the first to suffer from the use of spirits. Degeneration here may be manifest in an alcoholic impulse, which is further intensified by all use of spirits. Hence an early period of moderate use of spirits, associated with or without changed conduct, is a

natural history of the progressive degenerative disease of inebriety. The statement that inebriety is first a vice — meaning by this a state of willful and controllable immoral conduct — then later a disease — meaning a developed progressive degeneration — is assuming a degree of knowledge of causes and conditions of the brain that does not exist. In reality, it is one of those reckless statements that means exactly the opposite of what is intended. The so-called *vice* stage of every case of inebriety will be found, from careful study, to be unmistakable degeneration and disease.

Inebriety is a psychopathic disease, and no theories which assume a degree of health up to a certain border line and disease beyond this are of any value. We have persistently urged the full recognition of inebriety as an organized progressive degeneration. This is the point from which all accurate studies must begin. All half vice and half disease theories means faith cures and hospitals, pledges and specifics, drugs and punishment as means of cure and treatment. The term *inebriety* must be recognized in the same way insanity is, and be used to designate a disease, in which the use of narcotic drugs is a symptom.

THE SAME OLD STORY.

John Jones, an educated and successful physician, was injured in a railroad accident, and was a nervous invalid, using spirits continuously, and to excess at intervals. He came from a neurotic family, and had used spirits occasionally from early life. From the time of the accident he became more and more addicted to the use of spirits. Finally he came under my care, suffering from delusions, insomnia, and general prostration. He recovered slowly, and retained ideas of persecution, believing his brother (who brought him to the asylum) wished to destroy his practice and reputation. He was impatient of restraint after the first month, and was intriguing and bitterly slanderous.

After three months' treatment he went away restored, and resumed practice. The next year he relapsed, and became impulsive and reckless in his use of spirits, and was intoxicated all the time. He lost all pride of character, and associated with the lowest people. The Gold Cure Specific attracted his attention, and after three weeks' treatment, he became the most enthusiastic believer in its merits. Later he was in charge of a branch asylum, then he became a lecturer, and wrote papers advocating the value of this secret specific in the most positive manner, posing as an example, and confirming his assertions by statistics that were at least startling. Asylums for inebriates, who did not use Gold Cure Specifics, were severely condemned, and this JOURNAL was regarded as unworthy of notice. In some medical societies he obtained a hearing and made some converts, and was considered authority of great weight. Finally he disappeared, and was found in Ward's Island, N. Y., where he had been sent for drunkenness for thirty days. At the expiration of this sentence he drank to great excess and was found dead in a barn, probably from cerebral hemorrhage.

NATIONAL COMMISSION ON INEBRIETY.

The *Philadelphia Medical and Surgical Reporter*, in a recent editorial, urges the need of a national commission to inquire into the causes and cure of inebriety.

For several years bills to create a board of inquiry into the uses and abuses of alcohol have been presented to Congress and voted down. Sometimes they have passed one house and been defeated in the other. Then they have been buried up in the committees. The spirit interests have bitterly opposed all inquiry into the alcoholic traffic, giving as one reason that such an inquiry would be partisan, and in the hands of fanatics. In England, three different parliamentary committees at different times have made extensive

inquiries into abuses of alcohol, cure of inebriates, and intemperance, and volumes of testimony have been issued that comprise the most authoritative facts known. Before these committees all classes of partisans have appeared, and a free discussion allowed; and all the testimony and conclusions of the committee have been published in the Blue Book, open and accessible to any one. *The Reporter* very justly asks: "Why not have a commission of able scientific gentlemen who will search out and set in order the real facts and the relation of causes and effects?" This information is accessible, and from the absence of it we have all sorts of quack methods, quack laws, and the most conflicting reports and theories.

Inebriety has become a national topic and demands recognition and study before national and governmental measures of cure and relief can be instituted. Congress should appoint a committee to formulate a series of questions that would bring out the fact on the prevalence and causes of inebriety and the relation of alcohol, and means of prevention and relief. This committee should call witnesses from all parts of the country and examine them orally. From such testimony would come authoritative facts that would be a basis for future legislation and accurate public sentiment.

THE fact is not recognized that much of the present confusion in courts of law concerning medical testimony arises from the ignorance of judges. From this has grown up a system of rulings in which all medical testimony is reduced to arbitrary dogmatic statements that are false in fact and implication. The attempt to determine motives for crime, and the capacity or incapacity of the will to govern, and the varied questions that are included in the term sanity and insanity, arise solely from misconceptions of the brain and mind.

The medical profession when in court have vainly tried to bring the facts of science down to the arbitrary critical

test of judges only to fail, and become involved in absurd conclusions.

In the very common cases that involve the question of the drinking of the prisoner before or during the commission of the crime, the dogmatism of the law and the strange interpretation of the judges make the case confusion worse confounded.

The medical witness is in error who attempts to bring the facts to correspond with some rulings of judges, or statements of law that are false as a statement of fact.

He should state only general principles and leave the application to others.

Where only a partial truth is known and that as the clearest fact of the present, the law in its application cannot be limited to any statement that is dogmatic and positive. No physician can truly assert any fact that is not open to correction or change. All statements must be based on this, and it is for the judge to apply the principle. The medical expert is merely a witness stating the probable facts based on his conception of the circumstances.

THE Tyson Gold "Cure" for drunkards has been exploded in Melbourne by the proceedings instituted against the secretary of the Tyson Sanatorium Company for a breach of the Sale of Poisons Act, in having sold drugs which were poisonous under the act without the "poison" label, as required in such cases, being attached. Among the witnesses examined was Cuthbert R. Beckett, government analyst, who said that he received the bottles under seal, and, on analysis, found that one contained chiefly nux vomica, in which strychnine was the active principle. The medicine contained also another alkaloid — brucine. There was 1.1 per cent. of the mixed poisons in the medicine, and a tablespoonful in one dose would kill an adult. Ultimately, a fine of £3 and costs was inflicted, and since then the ten-guinea fees for the "cure" have declined considerably.

Clinical Notes and Comments.

PSYCHOLOGICAL PHASES OF INEBRIETY.

The physiological phases of inebriety — the flushed face, the sparkling or dulled eye, the thick tongue, the unsteady gait — are always not only very evident, but also sufficiently explicable according to well-known physical laws. The direct effect of alcohol, like that of other strong stimulants, upon the physical parts of the human system is fairly well known from constant study and long experience. The hot, dry skin and flushed face are the result of fires just as real as those that burn on our hearthstones; the thick tongue is from a deadening drug just as evidently as when produced by hellebore.

There are some psychological phases of inebriety, however, which, while fully as interesting, are far more mysterious. Perhaps if our mental workshop were as thoroughly understood as our physical being, some of the mystery might disappear. But the progress we have made in physiology has by no means been equaled by our progress in psychological research. We have never yet been able to take knife or scalpel and separate the imagination from the judgment. The time is doubtless far distant when we can open the skull and take stitches in a defective memory, or bind up a fractured fancy. Hence, perhaps, it is because of our limited knowledge of psychological phenomena, generally, that the mental freaks from alcoholic indulgence are so little understood.

The most striking of all the different phases of drunkenness is the complete change of character in the individual which takes place frequently without any apparent reason, and subject to no known or recognizable rule. One who is an upright or circumspect business man may be changed by

a drink or two of whisky into an example of calculating dishonesty, while another, his counterpart in every respect, may be converted by the same strange fluid into an extravagant spendthrift. A dignified and reserved gentleman will become cheek-by-jowl with every mouthing stranger, while his neighbor, a jovial companionable fellow, with the same liquor, stands upon a dignity that is painful. The tender-hearted become cold and calculating, while the cruel become kind to sentimentality. The same person may, indeed, at one time be jolly and at another time sad; now wild, now gentle, angry or kind, silly or wise, laughing or weeping, and throughout all no rule seems to apply. Then again, the mind and the body in the same individual are affected to very different degrees. With one the nerves, muscles, and senses are active and alert, while the mind is a blank; with another the legs and arms are useless, while the mind is vigorous and clear, as has been noted in distinguished speakers who could sit and talk eloquently for hours when too drunk to stand.

All this is as difficult to explain, and, in fact, as difficult to understand thoroughly, as the strange moral characteristics of the inebriate, — a phase which may be called *moral strabismus*. One who is ordinarily the soul of honor may become for the time a thief; a person of the most austere virtue may become grossly licentious, and though purest in thought, grow ribald in speech. One who is ordinarily frank to bluntness will — remarkable as it may seem — stoop to the most contemptible and cowardly lies. And this disposition to tell deliberate and wholly unnecessary falsehoods is characteristic of nearly all those who drink to excess, and is one of the inexplicable psychological phases of inebriety.

Another interesting feature of the subject is the different expressions and changeableness among the mental faculties. At times there are certain faculties which seem deadened completely, while others are phenomenally active. The judgment may sleep while the imagination is rampant and the fancy runs riot. The memory is guilty of the queerest

freaks of all. At times the simplest and most recent events are hidden away in its labyrinths and defy all search; then again, the most out-of-the-way facts, hidden for years in the "lumber-room" of old recollections, spring out into the light and are as clear and bright as if born last night. Moreover, the memory, which is clouded on one subject now, may be as clear as a bell on it to-morrow. Even the names of his closest friends—sometimes his own—may be entirely forgotten by an inebriate. Then again, these changes are different at different times, seemingly affected by changes of health, or of diet, or environment. The story is an old one of the two chums reeling home in the early morning and holding a maudlin argument as to whether the heavenly luminary they saw was the sun or the moon, and agreeing to leave the decision to the first passer-by. The seriousness with which the tipsy umpire gave, and they accepted, the excuse that he couldn't say because he was "(hic) a stranger in the city," illustrates one of the interesting phases of inebriety and shows a mental, as one of the foregoing illustrations does a moral, strabismus.

And these freaks of the judgment are duplicated daily in ways that are made familiar by the humorous periodicals. There are, however, few traits more abnormally developed by frequent libations than the musical desires and capabilities, and a fondness for expressing them. If a man really has any fondness for music, or knowledge of the divine art, it will become manifest in proportion to the number of his potations, though, perhaps in geometrical ratio. He sings as long as he can remember words and music, and hums at random when his memory and knowledge desert him. The strange desire for "concord of sweet sounds," which sometimes prove just the opposite, not only attacks those who know something of the art, but also overcomes those who cannot distinguish the "Fisher's Hornpipe" from "Old Hundred." Perhaps this is only another exemplification of the inexplicable mixture of wisdom and folly, of the miracle which makes a double of one's self, which presents two

moons to the vision, two voices to the hearing, and forms two distinct personalities that argue, explain, upbraid, and defend with strangely mingled intelligence and imbecility.

These phenomena are practically inexplicable except upon hypotheses that cannot be proved and whose chief recommendation is that they cannot be disproved.

There is one phase of inebriety, however, of which we know something and can imagine more, because it touches more upon the physical side of man, and this is what may be called the lachrymal phase. The weeping inebriate is common. Whether fear or pity, anger or affection, grief or joy, pulls upon his heart-strings, he weeps and weeps, and then weeps again. An analysis of the tears of drunkards must be, to some extent, an analysis of tears in general, but is none the less interesting on that account. In fact, did space permit, many interesting facts and illustrations could be given of the causes and sources of tears. They are due sometimes to exclusively physical causes; sometimes they are simply the natural outlet of emotional tension. The little briny drops of fluid which flow "from the gateway of the soul" are composed of the same elements, whether they come as pearls from the fountain of divine sympathy, or as glistening protests against the intrusion of some foreign physical substance. A cinder from a locomotive and the broken heart of a mother give rise to the same changes in the vascular terminals of the tear gland and induce the same sort of saline secretion. The lachrymal glands, we are told, lie between the nerve center and the mucous surface of the eyeball, and tears afford a good illustration of the way in which nerve fibers are capable of conveying to a secreting organ existing impulses from either side of a gland lying in their course.

But, attractive as is the physical side of the subject, we have not that now under discussion. The phase which interests us at present is the question of the internal nervous vibrations causing the flow of tears. It is difficult to give a rational or lucid explanation of how a writer of fiction or an

actor on the stage can call forth a flood of tears; how, then, shall we attempt an analysis of the weeping which follows intoxication? Of course the "internal nervous vibration" which induces the weeping of the inebriate is wholly emotional, but so is that of the susceptible reader of sentimental fiction. The susceptible reader, however, has his emotions worked upon in a way that can be partly understood even by those who are not themselves thus affected. But with the inebriate it is different. A fit of weeping will overtake him from no assignable cause. If questioned, he cannot himself give any reason, and usually will not even attempt it. It is a phenomenon due to a condition which cannot be classed as wholly mental, and certainly not as wholly physical. The weeping is unquestionably due to a change of the "vascular terminals" of the tear-secreting gland; but is this change the result of mental vagaries which develop into emotional extravagances? Is it, on the other hand, due simply to the physical action of alcohol on the lachrymal gland? If it were the latter alone, the effect, while not necessarily the same, would be very similar in all cases, just as blood flows from a cut finger in all cases. And yet there is evidence that the cause of the phenomenon is not wholly mental in the fact that the subject may be able to restrain his tears while sober, even when under the stress of the most intense grief.

It is probable that the psychological phases of inebriety are explicable upon the same class of hypotheses that is relied on to explain other questions in the domain of psychology. They are, perhaps, the effects of actions not altogether mental nor altogether physical; and they will probably be for some years to come within the boundaries of that shadowy and little-known land between mind and matter, touching and partaking of both and yet properly considered as neither.

The toper may say in paraphrase of Burns:

O wad some power the giftie gie us
To drink and not to get "inebrious,"

but so long as he continues to put an enemy into his mouth

to steal away his brains he will continue to cut his fantastic pranks before a laughing or pitying world. The curiosities of intoxication furnish food for thought in many directions, but in none does the field appear to be more fertile for speculation than in the shadowy land mentioned, between the domain of physiology and the realms of psychology.

HARRY W. COCKERILL.

ALCOHOL in some cases produces intense depression of brain activities. The heart's action is lowered, and a sense of constriction and feebleness comes on. This may become frontal headache. Champagne not unfrequently depresses both nerve and muscle functions, and is avoided. This effect of spirits is not noticed except in a few cases, but it occurs in all, only in a varying degree.

INEBRIETY has become so extensive a subject that no one can study it exhaustively. Each person has different views of it, according to his tastes and opportunities. One considers it from a speculative point of view, or from a practical, physiological, racial, individual, social, legal, pathological, or other standpoint. Each one feels that his studies are exhaustive or complete until he ascends and enlarges his field of vision; then he feels the incompleteness of his views.

It has been discovered that bacteria organisms are essential to give flavor and quality to the taste of tobacco. The leaves of the tobacco plant before being manufactured into cigars undergo certain fermentative changes. These changes are purely chemical, and can be produced by cultures of some kinds of bacteria with others on the leaf of the plant, and give taste and aroma to the tobacco. Poor tobacco may be inoculated with the bacteria of the Havana tobacco and fermentative changes induced so as to change

the quality and give it a rich flavor. How far these bacteria changes may or may not be poisonous is not clear. These new discoveries suggest possibilities that are startling.

THE OLD FAMILIAR STORY.

The daily press tells us of the death of General Gresser, the prefect of the St. Petersburg police, at the hands of the "Vitaline cure." This cure was used by one Gatchowsky, a Russian quack, who affirmed that he procured its composition from a Chinese scientist. He pushed it as a cure for tuberculosis, gout, and debility, and gained for it the confidence of the Russians generally. He claimed that the cure had miraculous qualities, being a veritable fountain of youth. His unbounded confidence and some seeming good results gave it immense popularity. Generals, ministers, state officials mingled with the poor in his rooms. From the rich Gatchowsky took enormous fees, and from the poor weekly installments.

He used his cure subcutaneously in some cases and internally in others, *a la* gold cure. It was in vain that chemists analyzed the remedy and found it composed of borax and glycerine, almost without effect for good or ill: the people knew better than chemists and doctors the value of the cure because they were not swayed by jealousy. But when the deaths of distinguished persons followed the administration of the remedy, the bubble burst and the quack fled. On searching his rooms bank books were found showing heavy bank accounts and a considerable amount of cash, hastily thrown into a box to facilitate flight.

Such experiences as these in one portion of the earth or another are so common as to scarcely merit attention. In America the gold cure is having its run. The deaths which follow its administration, its numerous failures, its brazen effrontery, all are daily paraded before the public gaze. If this were to disappear, some other thing would take its place.

Medical history of this sort has been constantly repeated from the earliest times, and doubtless will continue in its recurring cycles.— *American Lancet*.

ALCOHOLIC PREDISPOSITION.

The following are extracts from Dr. Wilson's excellent work on "Drunkennes," to be had in this country from Scribner & Co. of New York city :

"It is well known that every human constitution has an inborn bias toward some form of ill-health. The technical name of this proclivity toward a special disease is the diathesis. Thus we speak of a gouty or of a consumptive diathesis, and it is equally proper to say that predispositions to a certain form of nervous disease constitute the alcoholic diathesis. In other words, there are some brains so constituted as to react to alcohol in an unusual degree. Luckily, there are generally well marked peculiarities which characterize the individuals possessed of brains so predisposed. In the first place, there is frequently an unusual love of alcoholic intoxication, and, indeed, of all forms of excitement. Such people have an unusually strong desire for cerebral stimulation, for some pleasurable outlet for their ill-regulated energy, and an unusual impatience at uneventful routine. Associated with these traits there is frequently a clearly defined capacity for intense feeling and for deep absorption in the interest of the moment. Obviously these characteristics are only of importance to the student of alcoholic etiology when they are coupled with a deficiency of the other qualities which act as a check upon the tendency to alcoholic enjoyment.

"The second sign of alcoholic predisposition is a palate which appreciates the first taste of alcoholic liquor. To the normal child spirituous drinks are distasteful, and, in many men also, a taste even for good wine requires education. There are, on the other hand, children who take to alcohol from the first, perhaps when it is medically prescribed ; and

ne appearance of such a phenomenon should always suggest care and watchfulness. The third characteristic of the kind of brain in question is a liability to be affected by small doses of the stimulant. Such a susceptibility is normal in children and women who are of a comparatively delicate, nervous organization ; but there are some children in whom this peculiarity is more distinctly marked, and who continue to manifest it even in adult life. The term small dose is always, of course, relative, and it is only when the idiosyncrasy just referred to is unusually pronounced that it is of pathological significance. The next sign of alcoholic diathesis is one of much more importance, though it is frequently overlooked." Dr. Wilson here refers to the habitual or frequent exhibition of that mode of nervous action which is called explosive or fulminating. "This quality predisposes men to spasmodic and impetuous conduct, inappropriate to the circumstances out of which their actions arise. In the matter of drinking it is frequently manifested. Men are often observed to indulge suddenly and impulsively in a bout of drunkenness, without any warning, either to themselves or their friends, without any appreciable occasion for it, without any conscious desire to be intoxicated, and with an unprecedented disregard of consequences. In some unaccountable way the idea is suggested to their mind, and it is followed out without much question — very much in the same blind fashion that a man acts upon an instinct. Such paroxysmal conduct is apt to be periodic in its recurrence, and demonstrates the relationship between such constitutions and those liable to epilepsy and impulsive insanity." Dr. Wilson points out one more indication of a constitutional proclivity to alcoholicism. "We should be," he says, "on our guard when we note an unusual order in the development of the symptoms of intoxication. Leaving out of account the minor discrepancies dependent on the personal equation, all observers are aware that the ordinary development of intoxication is of a compound order, and includes motor, as well as mental, symptoms. The normal conse-

quence of continued indulgence in alcoholic stimulants is that a man should become 'drunk and incapable,' harmless, and helpless. In some men, however, it may be a long time before intoxication goes far enough to make them incapable. They tend rather to be 'drunk and disorderly,' excited, outrageous, and violent ; in other cases intoxication may not for some time go deeper than the emotional state, leaving the drunkard quarrelsome, affectionate, or lachrymose ; or it may only lead to the trance state, or to continued stupidity and apathy. Such unrelated symptoms — that is to say, a conspicuous impairment of the mental function, conjoined with relative integrity of the motor level — distinctly contraindicate the free use of alcohol. To these signs of predisposition to alcoholism may be added defective inhibition, or, in other words, the disclosure of an extreme difficulty in keeping within physiological limits in the use of stimulants.

"Fortunately, a very large number of men are physically incapable of continued excess. Normally, with alcohol, as with other things, excess creates a strong feeling of repulsion. In some cases the general discomfort attending intoxication is extreme ; sometimes the slightest excess produces violent sickness ; very often the day following a liberal indulgence brings with it something like loathing for the stimulant. In any case, considerations, either altruistic or of an enlightened egoism, effectually control alcoholic desire in the minds of well-constituted men. But in individuals afflicted with the alcoholic diathesis self-control is apt to be notably defective ; so that, to borrow a figure from equitation, not only are the horses wild, but the driver is incapable.

"We now come to the question : In what brains does alcoholic predisposition arise?" Dr. Wilson enumerates seven classes of persons who exhibit an abnormal susceptibility to the destructive effects of alcohol. We shall only allude to two of the cases, namely, that in which inebriety is due to alcoholic inheritance, and that in which it is ascribable to the altered relations of the nervous system incidental to the

reproductive crises. As regards the heredity of drunkenness, the author submits "that this requires some reconsideration, under the fresh light thrown on the subject by Weissmann's theory. We have been in the habit of believing that every new function or mechanism acquired by a human organism produced some definite change in the reproductive elements, whereby, to a certain extent, the acquisition was passed on to the offspring. According to Weissmann, the elementary mechanism of reproduction is all but independent of environment and uninfluenced by use and disuse, by acquired character, or, in short, by any of the changes initiated during the life of the individual. Acquired conditions, therefore, morbid or otherwise, cannot be transmitted to posterity. The peculiar nervous organization favorable to the acquisition of a particular character is all that can be transmitted; the force of circumstances acting on the individual existence does the rest. But, although we may accept this theory, we cannot reject certain observed facts. It is still notoriously true that drunkenness often seems to run in families, as other habits and vices do. It is not the facts, but the ordinary explanation of them, that Weissmann disputes. If his doctrines be correct, drunkenness in the parent can make no difference in the moral character of the offspring through the direct influence of organic inheritance. But indirectly the offspring may be affected through its surroundings." Dr. Wilson is convinced that, when the confusion of criticism has cleared away, and we take possession of what is true in Weissmann's theory of heredity, it will be admitted that we have hitherto egregiously failed to estimate the real importance of the environmental factor in development. "Given a child of an unstable nervous system, which he has inherited from an alcoholic parent, it only requires surroundings which do not effectually provide against temptations to drinking in order to develop the vicious potentiality. The influence of parental personality is much the most important environmental factor in moulding character, not only because bad family arrangements and habits give

sanction and opportunity to the indulgence of vicious propensities in the children, but because the whole bearing and habits of mind of the parent unconsciously furnish just the kind of moral environment calculated to foster in the child the very tendencies requiring to be checked. Thus it comes to pass that environment perpetuates vicious taints which used to be regarded as inherited."

The author finds it necessary to say something about the effect of certain crises in the life history of men and women on the development of drunkenness. There are, of course, several reproductive crises. The first occurs when the function of reproduction is making its appearance; next, there is the period of evolution—that is to say, the period of adolescence, when character is rapidly changing, and permanent habits are being formed; this extends to the age of about twenty-five. Then, in women, there are certain periods at which important organic developments occur, as, for example, the period of pregnancy and the lactational periods. Lastly comes the climacteric, which marks in both sexes the end of adult life, and ushers in the second non-reproductive stage of existence. To call them crises is by no means to exaggerate the importance of these periods. Never are they unimportant, and in some cases the effects on the constitution are momentous, both physiologically and ethically. At any or all of these seasons there frequently occur changes in bodily and mental functions, which, at the time, appear unaccountable.

"The reproductive function is so essential to the race, so deeply organized in the human constitution, so intimately related to all the other functions, that the outstanding epochs in its development and decadence may entirely unhinge the normal balance of the nervous organization, and profoundly alter the relations of the various functions. Without keeping these facts clearly in view, one would necessarily fail to appreciate the full meaning of certain changes in character which arise at the crises specified, particularly in persons of an unstable organization. Now, at these crises, the strain

thrown on the nervous system often impairs the normal inhibition so as to exaggerate alcoholic tendencies and weaken self-control." The author tells us that he knew a woman who became wildly drunken with each pregnancy that he observed, and he saw her pass through several. "The nursing period also is, in this respect, fatal to some women, partly because their weakness seems to call for the use of stimulants, and sometimes because they are advised to act on the delusion that alcohol improves the nourishment of the child. Similarly, recurring outbursts of intemperance in women may often be found to bear a direct relation to periodic functional changes, and it is pronounced a culpable negligence that fails to provide against such a contingency. Not infrequently patients who have exceeded in youth, but have abstained through the greater part of adult life, break down under the climacteric. But of all these crises adolescence is the most important. Some of the closest students of the subject believe that more true dipsomaniacs develop the habit of excessive drinking and acquire a keen craving for it between the ages of eighteen and twenty-five than at any other period."

The author holds, in common with nearly all authorities on the subject, that no one should indulge in alcoholic beverages before the age of twenty-five, and that it is wise to postpone their use as long as possible. He denounces as fallacious the belief that the sudden renunciation of alcoholic stimulants by a victim of alcoholism is dangerous, and that it is apt to bring on grave nervous disorders. "There are but a few cases in which a real danger exists, and that is usually a risk of heart trouble, which may be ignored by all but the physician. The supposition that an occasional indulgence helps to brace the nerves and strengthen self-control in a patient who is recovering from a fit of drinking is a mistake which has often proved disastrous. Great emphasis is likewise laid on the importance of diet in the treatment of drunkenness. Very commonly, alcoholic patients have a poor appetite, especially in the morning; and, if abstinence

from food be persisted in, the lowering of vitality tells seriously against the patient. A great many attacks of grave disorders would be prevented if this distaste for food could be overcome, and that can often be achieved by care. Another point deserving of attention is the need for much sleep. Without it, recuperation is incomplete and self-control precarious; but if the patient sleeps well, the chances in favor of recovery are enormously increased.

“We come lastly to the moral means adapted for the development of self-control. The problem is how to reconstruct the character of the patient, whose mode of living has stripped him of the very qualities which are most potent in the evolution of a moral life. In his case unselfish interest is at its ebb; the power of attention and perseverance is slight; of surplus energy he has none. But, though it be true that alcoholic dissipation impairs the basis of much that is good in a man, it is also true that nearly all men, under care and proper direction, are capable of developing a new line of life when the old has lost its vigor. It has been put on record again and again that, when cerebral disease or accident has destroyed the basis of certain functions, new areas of nervous mechanism have taken upon themselves the functions of the lost parts, and have acquired the requisite proficiency in the performance of them. Some analogous process of re-education is what may be aimed at, and can be frequently attained in the case of the victim of alcoholism. It only remains for us to consider how new motives can best be suggested to his mind. To the question — What is to be the patient's relation to the habit which he is endeavoring to overcome? — the answer is peremptory: He must abstain. Are we wise, however, in bringing the temptation frequently before his mind, if even to try and strengthen him against it? Assuredly not. The drunkard's experience confirms that of the nursery — that to forbid indulgence is to suggest it. The unanimous opinion of physicians of the mind is that, generally speaking, the way to cure a delusion is not to contradict it, and the way to correct an evil

propensity is not to malign it, not laugh at it, but, so far as is practicable, simply ignore it. It may be necessary for the patient's own peace of mind that he should sign a pledge; as a rule, short pledges are to be preferred, and it is of value to the patient that some one else should sign it with him who is not a total abstainer proper, and yet who can keep his drinking within proper limits. On the other hand, the author of this book is convinced that the periodic meetings to denounce drinking, which are solely of the character of a negation, do as much harm as good; and that, above all, it is hurtful to make an important occasion out of every relapse, and thereby to lessen the patient's self-respect, and waste his energy in fruitless remorse.

RULES FOR THE ADMINISTRATION OF COCAINE.—Dr. Magitot, in the *Repertorie de Pharmacie*, formulates the following rules which should govern the employment of cocaine as an anæsthetic :

(1) The dose of cocaine injected should be appropriate to the extent of the surface desired to render insensitive. It should not exceed in any case one grain to one and three-quarter grains. Each dose should be restricted in large surfaces.

(2) Cocaine should never be employed in cases of heart disease, in chronic affections of the respiratory apparatus, or in nervous subjects; and this exclusion applies also to other anæsthetics.

(3) Cocaine should be injected into the interior and not under the derm of the mucous membrane of the skin. This is the intradermic method of reclus, which should be substituted for the hypodermic method. By this means the introduction of a substance into the vein is avoided, and the risk of accidents minimized.

(4) The injections should always be practised upon the subject in a recumbent position, and he should only be

raised when the operation is to be performed upon the head and mouth, and then only after anæsthesia is complete.

(5) The cocaine should be absolutely pure, since, as pointed out by Laborde, its mixture with other alkalies forms highly poisonous compounds.

(6) Cocaine should be injected in divided doses, with a few minutes' interval. This method of "fractional injection" renders it possible to guard against the production of sudden symptoms of poisoning.

DYSPNŒA AFTER TEA-DRINKING.—Mr. Jonathan Hutchinson, in the January issue of the *Archives of Surgery*, describes a case of alarming attacks of dyspnœa that were probably due to tea-drinking. The patient was a rather delicate man, of nervous temperament, and there was a suspicion of gouty heredity. The attacks occurred after breakfast, at which he drank tea freely, the meal being brought to him while he was yet in bed. During the attacks he had a corpse-like pallor, and seemed quite unable to take a respiration, on account of a pain like that of angina pectoris caused by the effort. The pain was referred to the epigastrium and lower part of the chest, rather than to the shoulder. Inspiration was accompanied with the greatest pain. The pulse was feeble during the time of the attack, and the patient could speak only in a whisper. The duration of the attacks was about an hour. An injection of morphine terminated the seizure quite promptly on two or more occasions. A careful thoracic examination, made by Dr. Gowers, resulted for the most part negatively. At any rate, no organic affection was discovered that could explain the difficulty. The man was not a user of tobacco, but would imbibe tea freely, and this was sometimes followed by flatulence and a feeling of distension of the stomach. An over-indulgence in tea, especially with little or no food taken at the same time, will in some persons produce a sense of constriction behind the sternum, with some feeling of dyspnœa. In the case of a medical man who par-

took of tea of unaccustomed strength, and without eating any food, a distressing attack of dyspnoea occurred which lasted over thirty minutes. The recurrence of somewhat similar attacks having followed other indiscretions of tea-drinking on subsequent occasions, the mind of that physician became strongly impressed with the agency of strong tea in causing such attacks ; so much so that for a long time he never ventured to drink tea except in his own home, where he knew its strength and quality. Mr. Hutchinson states that the painful attacks of the patient first above referred to bring to mind very distinctly those from which John Hunter suffered, and which he himself so graphically described.—*New York Medical Journal.*

TRAUMATISM IN INEBRIETY.

According to Bevan-Lewis, there is a history of traumatism in more than 18 per cent. of all the cases of alcoholic insanity. We may well question the causative relation of the injury in some of these cases. When the insanity has the special characteristics of the traumatic variety we can at least infer that the injury acted as a predisponent to the mental disorder ; and when in a person, previously temperate, alcoholic excess develops soon after an injury, and the alcoholic excess produces the special symptoms which have been described as characteristic of traumatic cases, we are justified in attributing at least the alcoholism to the traumatism.

In a large number of cases the influence of the traumatism is indirect. It either acts as a predisposing cause, intensifying the influence of various excitants, or the effects follow the injury only after the lapse of weeks, months, or years. Change of character, moral perversion, irritability, or a tendency to alcoholic excess may be the only evidences of this predisposition until existing causes develop an acute attack. In other cases there is a gradual evolution of one symptom after another, until a condition of marked mental

disturbance is developed. Homicidal tendencies, extreme suspicion, fits of maniacal exaltation or fury are frequent. A strange and unaccountable feature in some cases is the development of a craving for alcohol. There is developed also not infrequently a marked intolerance of alcohol. The ingestion of a small quantity sometimes develops homicidal tendencies, when they do not exist at other times.

From a psychological standpoint, the great similarity in the mental disturbances following epilepsy, alcoholism, and traumatism is of great interest. There is the same combination of motor and psychic phenomena in each, and the same impulsive and explosive tendencies. Cranial injuries occurring in so large a number of cases of alcoholism (nearly 20 per cent.) also indicates the close relation which subsists between the two. The prominence of traumatism in the recurrent types also gives evidence of the same unstable type of cell in traumatic cases that is found in epilepsy and alcoholism. — *From Dr. Richardson, in Lancet and Clinic, in Cincinnati.*

TREATMENT OF CHRONIC INEBRIETY IN SWITZERLAND.— The powers which the communes of several cantons like that of Berne possess and exercise in the case of habitual inebriates, in order to safeguard the general interests of the community, are considerable. If the communal authorities have sufficient grounds to satisfy them that any member of the commune is dissipating his property and means of livelihood in such a manner as to render it probable that he or his family will eventually become chargeable on the communal funds, they can interfere administratively by placing him and his property under guardianship, and, in the case of an habitual drunkard, can put him into an asylum for inebriates.

— *British Medical Journal.*

ACCORDING to statistics in France, for 1891, every inhabitant consumed over thirty pounds of tobacco yearly.

CHLORIDE of ammonium in dram doses, with four ounces of water, will quickly break up the stupor of intoxication. In some it is followed by intense disgust for spirits.

DR. WIELOBYSKI recently died at London, one hundred years and eight months old. His centennial was celebrated last January by the Society for the Study and Cure of Inebriety, of which he was a member.

HERACLITUS, a Grecian philosopher, asserted that an inebriate differed from others in having a moist soul, that was unstable and unreasoning, and could be easily influenced. Such persons died early and were under the influence of bad spirits.

DR. BAER OF BERLIN says fully fifty per cent. of all criminals who come under his care are inebriates. Three-fourths are crimes against the person, and only one-fourth against property. A large proportion of these alcoholized criminals show marked signs of physical degeneration.

THE confusion of our present literature concerning inebriety is the simple want of accurate knowledge. We still cling to absurd theories of what inebriety is and try to make our conceptions fit such views, and faintly believe they are accurate. We want independent research beyond all theories.

DR. WILLIAMS of the American Deaf and Dumb Asylum, at Hartford, Conn., reports that of five hundred and ninety marriages of former pupils there has sprung eight hundred and eleven children, of whom one hundred and four, or thirteen per cent., were congenitally deaf. Nearly one-half of the marriages were without issue.

THE stimulating action which alcohol appears to exert is literally a paralytic one. The belief that alcohol gives new strength and energy after fatigue has set in, is in effect simply the paralysis of this sensation, not the removal of this condition. It is like closing down the safety-valve so that the warning of the overheated boiler may be covered up. In all cases alcohol always destroys the feeling of fatigue.

SULFONAL AND HEMATOPORPHYRIN.

The fact is reported by Schæffer (*Therap. Monat.*, February, 1893), that non-ferrous hematin was found in the urine of a patient who had taken six ounces of sulfonal in nine months. But the writer is unable to say whether the cerebral manifestations shown at the time were due to hematoporphyrin or sulfonal. Goldstein (*Deut. Med. Woch.*, October 27, 1893), says, however, "There are a number of observations which show that hematoporphyrin cannot be produced intentionally in human beings and animals by a long use of sulfonal." Various authors have reported the presence of this substance where no sulfonal had been used, while Garrod reports fourteen cases of chorea and arthritis in which it was found, the cause of its presence being unknown. Goldstein inclines to the belief that sulfonal can only develop hematoporphyrin in those rare instances in which there has been a previous tendency to its formation. The author continues to administer sulfonal, as before, and speaks highly of the excellent results he obtains from it. At the same time he believes it to be a good plan when giving a prolonged sulfonal treatment to discontinue its use at times, for intervals of two or three days. He states that by this proceeding all danger of toxic effects from sulfonal would be prevented, since such results could only be had through a possible accumulation. As the effects of sulfonal continue for some days after suspension, this method is easily adopted.

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

The American Medical Temperance Association, through the kindness of J. H. Kellogg, M.D., of Battle Creek, Mich., has decided to extend the offer of the following prizes for the year 1894:

1st. One hundred dollars for the best essay "*On the Physiological Action of Alcohol, based on Original Research and Experiment.*"

2d. One hundred dollars for the best essay "*On the Non-Alcoholic Treatment of Disease.*"

These essays must be sent to the Secretary of the Committee, Dr. Crothers, Hartford, Conn., on or before April 1, 1894. They should be in type writing, with the author's name in a sealed envelope, with motto to distinguish it. The report of the committee will be announced at the annual meeting at San Francisco, Cal., May 16, 1894, and the successful essays read.

These essays will be the property of the Association and will be published at the discretion of the committee. All essays are to be purely scientific, and without restrictions as to length, and not limited to physicians of this country.

Address all inquiries to T. D. Crothers, M.D., secretary of committee, Hartford, Conn.

MALT EXTRACT.

Extract of malt is no longer an official preparation — at least it will very soon not be, as it is one of the dismissed articles from the Seventh Decennial Revision of the U. S. Pharmacopœia. Why this is "thusly," when it is an article of so much therapeutic value and so largely used, it is not within our province to say. It looks to us as if the revising committee were either perfectly satisfied with the quality of the present commercial supplies, or that they despaired of describing or defining the product in such a way as to permit of easily-applied tests for limitation and verification of the standard by the ordinary druggist. If the former supposition be the correct one, we surmise that Parke, Davis & Co.'s

Extract of Malt was one of the brands on the market that they found to respond to every test, both as to diastatic strength and palatability.

There are extracts of malt which will scarcely effect the conversion of starch, but these we need scarcely say are worthless in the treatment of carbohydrate indigestion, although they may in palatability be perfectly acceptable. It is almost out of place to speak here of the many uses to which a good extract of malt may be put, but probably the most frequent occasion is in handling cases of ovarian troubles, with the very common indigestion accompanying, that of the starchy foods in particular. Extract of Malt (P., D. & Co.) will prove itself an efficient agent wherever the natural fluids are showing themselves to be unable to accomplish starch conversion, and its present high standard of activity in this direction may be depended upon even after the official guardianship of the Pharmacopœia is dissolved.

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THE QUARTERLY JOURNAL

INEBRIETY.

*Published under the Auspices of The American Association
for the Study and Cure of Inebriates.*

T. D. CROTHERS, M. D., Editor.
Hartford, Conn.

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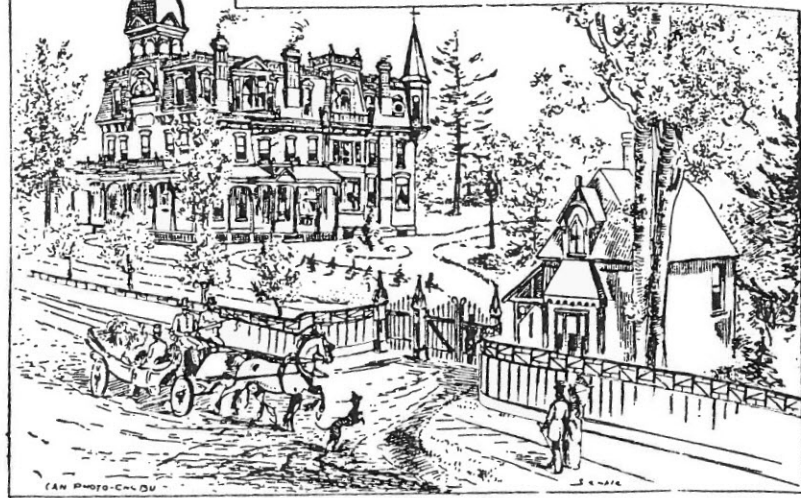
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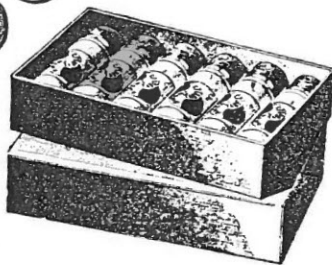
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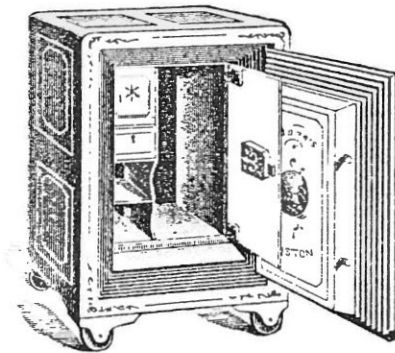
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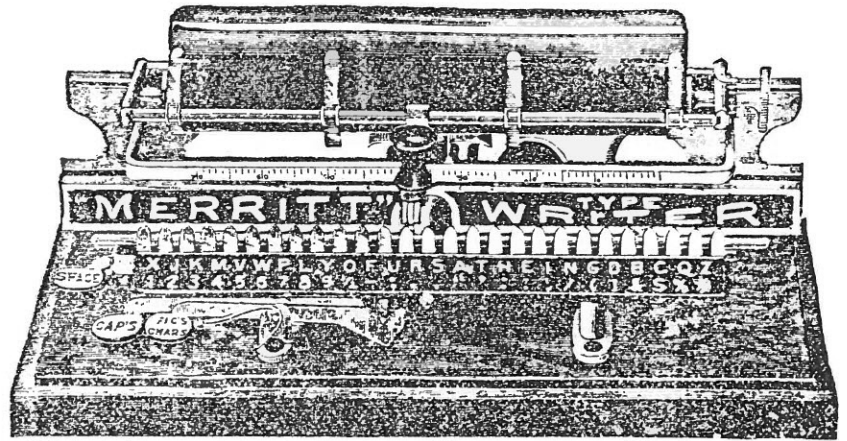
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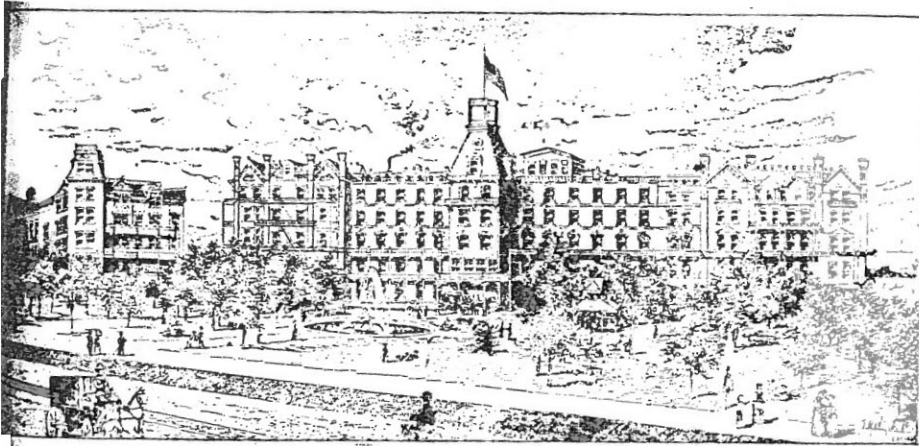
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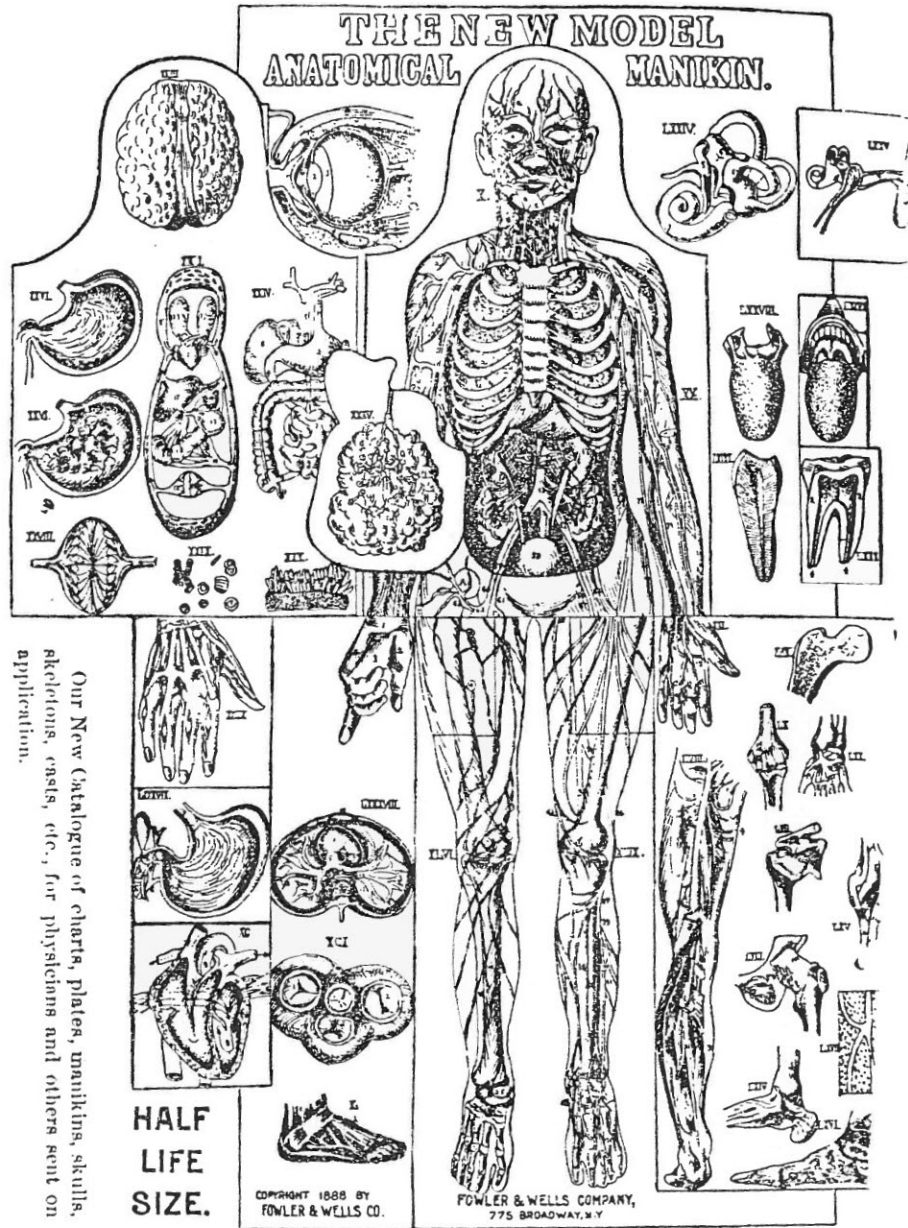
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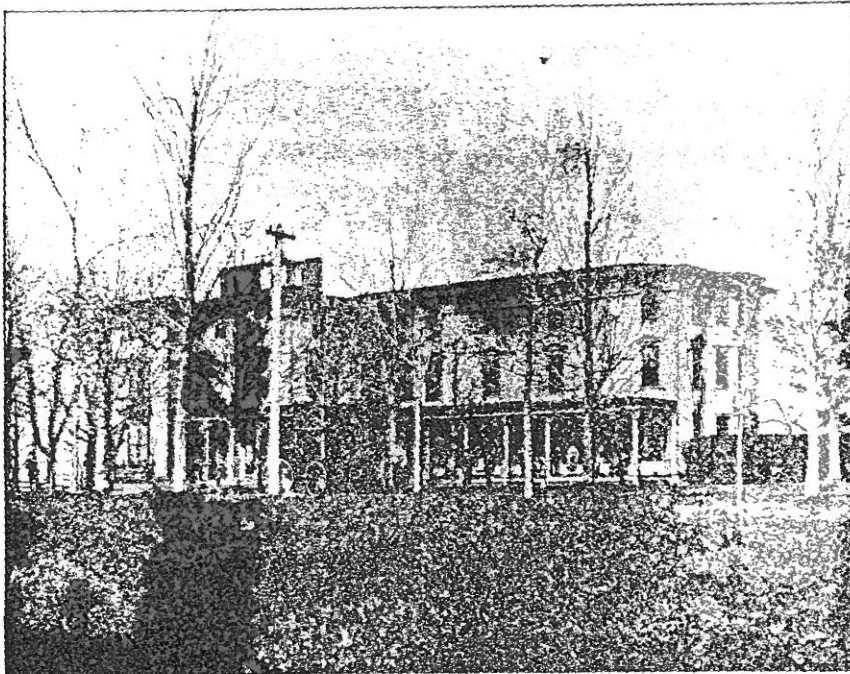
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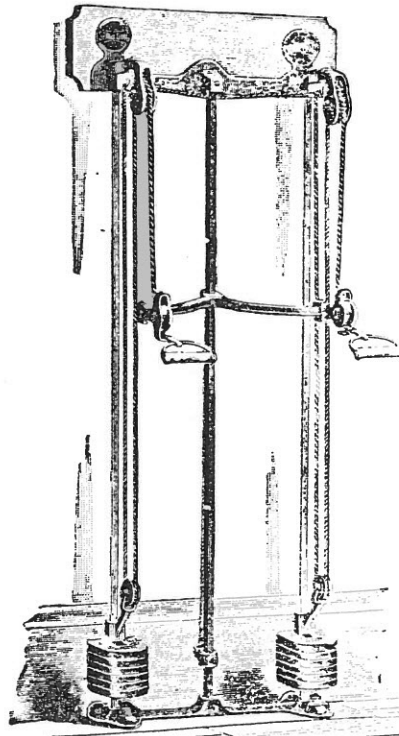
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will supply this link, as it furnishes the digestive function with the ferments which it lacks, combined in exactly the same proportions in which they exist in the normal human economy. The operative cause is thus abolished, and the disorder is relieved.

We advance this reasoning as a rational explanation of the action of Lactopeptine. There may be other reasons to account for its beneficial action, but these we leave to physicians, who are better informed on such matters.

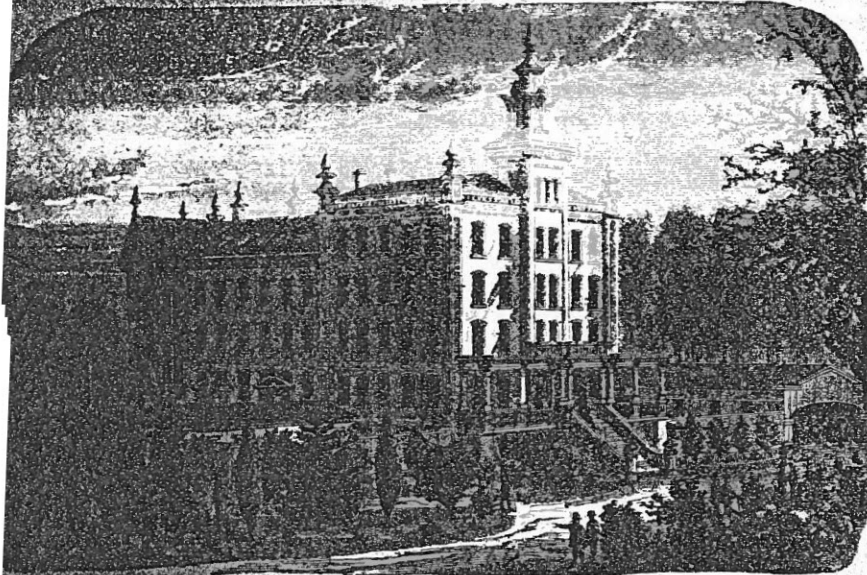
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YONKERS, N. Y.

The Inebriate's Home, Fort Hamilton, N. Y.

INCORPORATED 1866



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