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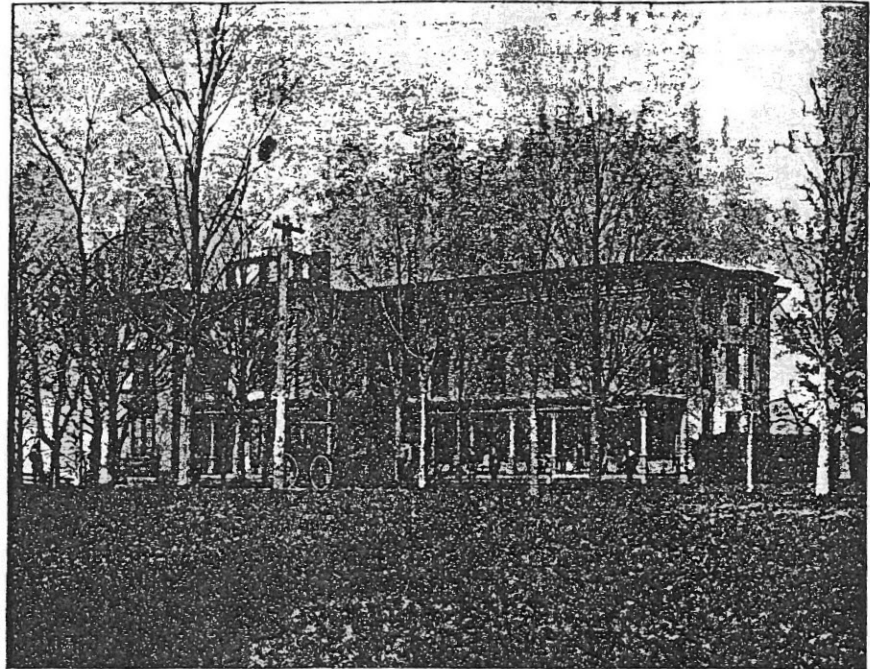
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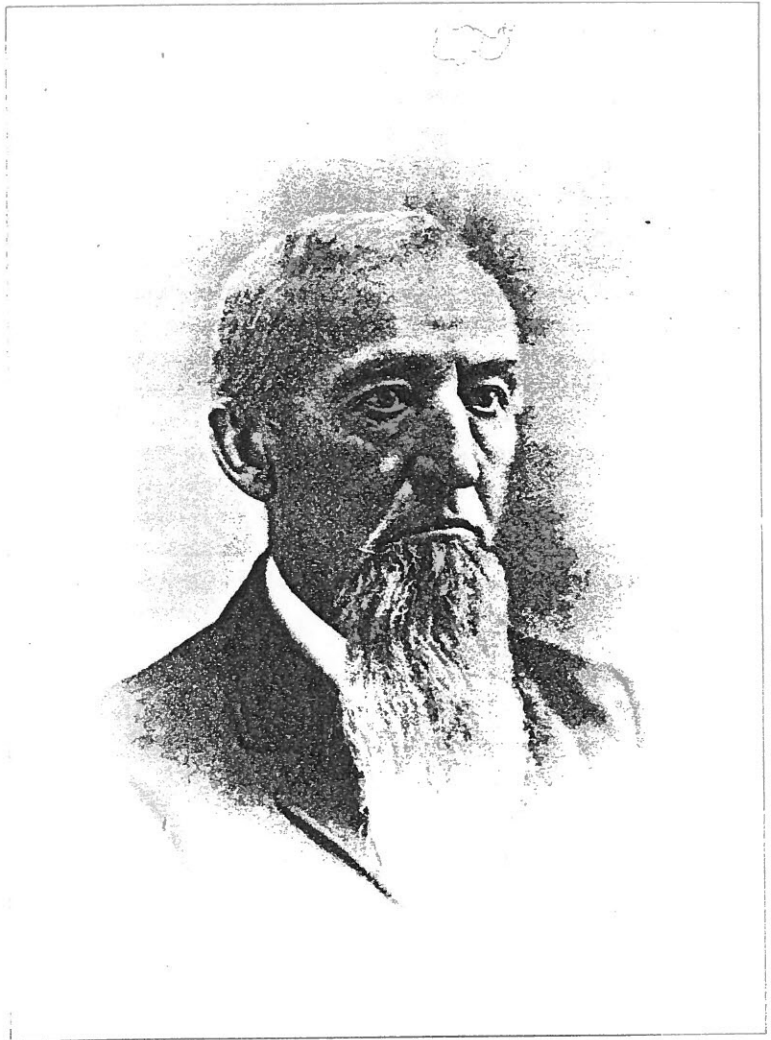
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LEGAL RECOGNITION OF DISEASED INEBRIATE
CONDITIONS AS A VALID PLEA.—ILLUS-
TRATED BY RECENT CASES. * †

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

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

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

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

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

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

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

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

IN CIVIL LAW.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

IN CRIMINAL JURISPRUDENCE: INCITING TO CRIME.

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

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

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

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

By the advice of his counsel the panel pleaded guilty.

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

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

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

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

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

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

CHARGE OF MURDER.

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

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

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

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

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

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

8 *Legal Recognition of Diseased Inebriate Conditions.*

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

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

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

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

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

THE ALCOHOLIC QUESTION FROM A MEDICAL
POINT OF VIEW.*

BY PROF. A. STRUMPELL,

Professor of Nervous and Mental Diseases of Leipsic University.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

But alcohol exerts its essential and most significant

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

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

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

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

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

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

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

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

NITRATE OF STRYCHNINE IN ALCOHOLISM.*

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

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

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

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

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

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

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

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

Gave a purgative and bromide of potassium.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SOME LEGAL RELATIONS OF INEBRIETY AND
ERRORS OF TREATMENT.

BY DR. JOHN G. REED, CINCINNATI, OHIO.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

INEBRIETY FROM A MEDICAL STANDPOINT.

BY E. F. ARNOLD, M.D., BROOKLYN, NEW YORK.

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

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

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

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

Inebriates may be divided into three general classes.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PROMISED EFFECTUAL BRITISH LEGISLATION
FOR INEBRIATES.

BY NORMAN KERR, M.D., F.L.S.,

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

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

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

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