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OF
INEBRIETY.

PUBLISHED UNDER THE AUSPICES OF THE AMERICAN ASSO-
CIATION FOR THE STUDY AND CURE OF INEBRIATES.

T. D. GROTHERS, M.D., Editor,
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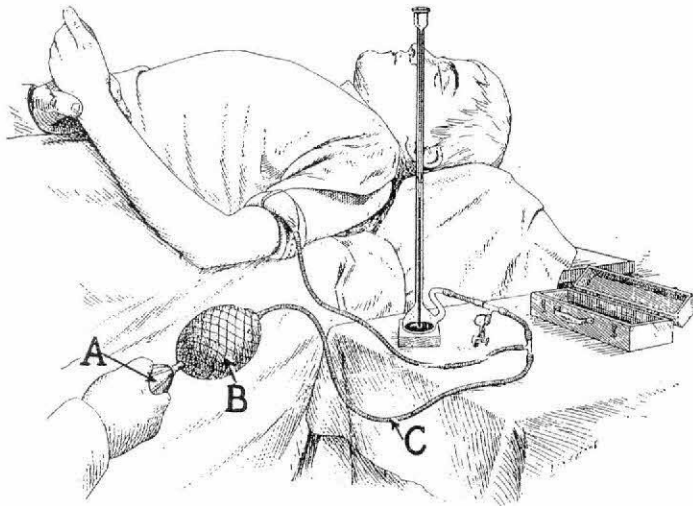
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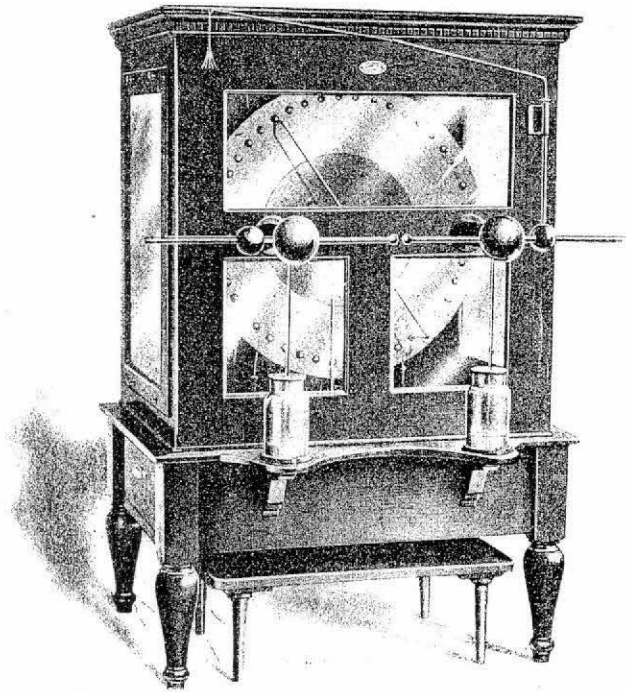
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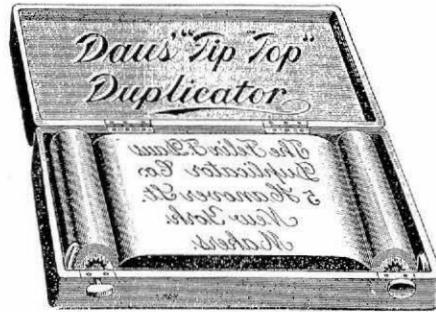
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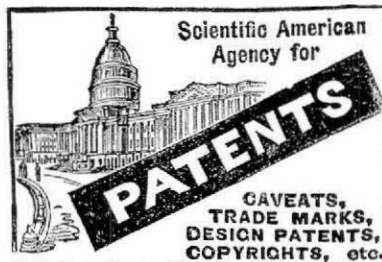
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This Journal will not be responsible for the opinions of essayists or contributors, unless indorsed by the Association.

THE STUDY OF INEBRIETY: A RETROSPECT AND
A FORECAST.

BY HARRY CAMPBELL, M.D., F.R.C.P.

President of the English Society for the Study of Inebriety, of London, England.

It has been the custom of this society since its foundation for the president to give an address in the early part of the year, and in accordance with that custom I propose to say a few words this afternoon concerning its work — past and future.

I have recently spent some time in studying its "Transactions," and have found much valuable material in them. Since the formation of the society in 1884, something like a hundred papers have been read at our meetings. One of the first was from the distinguished man of science W. B. Carpenter. His main thesis was that alcohol inebriety, as distinguished from deliberate and willful drunkenness, is a physical disease, depending, like insanity, upon peculiarity of organization. The same view is repeatedly met with in subsequent communications, and it was persistently urged by our founder

and late president, Dr. Norman Kerr. The importance of this position is evident, for once grant that inebriety is a disease, over which the victim has little or no control, and it follows that the inebriate, like the lunatic, needs to be protected, not only for his own but for the public good. We may, I think, congratulate ourselves that it is in no small degree due to the labors of our society that this fact is beginning to be realized and acted upon by the legislature.

A large part of our work in the past has pertained to the medico-legal aspects of inebriety, and, among other points, the Habitual Drunkards Act of 1879 has come in for a good deal of criticism. The chief complaint against it seems to have been that it failed to provide for the laboring, pauper, and criminal classes, our country in this respect being far behind America, where, for a long time past, provision has been made for the care and cure of inebriates.

In 1895 Dr. Norman Kerr raised the important question whether the law for alcoholics should not apply to other inebriates, and he contended for the appointment of commissioners of inebriety, as of lunacy.

A perusal of our "Transactions" cannot fail to impress the reader with the enormous amount of evil resulting from alcohol inebriety. Thus, according to Dr. Crothers, to whom we are indebted for several valuable papers, thirty-three per cent. of the deaths in the United States are due to it, while it is much the most potent cause of crime in that country; the loss in productive force arising out of inebriety he says is beyond computation. Then, in regard to our own country, Mr. Tudor Trevor tells us that seventy per cent. of our paupers, costing the nation ten millions sterling annually, and nine-tenths of our jail prisoners, are the result of alcoholic inebriety.

Of the prisoners in Clerkenwell prison, seventy-five per cent., so the Rev. Mr. Horsley informs us, come there through drink, and of 300 cases of attempted suicide 172 were attrib-

uted to the same cause. It is a curious fact (referred to by Dr. Pitcairn) that repeated convictions for drunkenness are much more frequent among women than men. He could only recall ten or twelve male inebriates whose convictions had exceeded a score, while with women it was "once a drunkard always a drunkard." One woman had been convicted over 600 times for drunkenness.

Such facts as these, ladies and gentlemen, show us the magnitude of the drink question, and the importance of the work before us.

One of the most valuable among our papers was communicated by my predecessor in this chair, Dr. Wynn Westcott. It is entitled "Alcoholic Poisoning in London, and Heart Disease as its Fatal Result." Therein it is shown that alcohol is beyond question not only the most potent cause of crime in this city, but also of suicide and sudden death. Among the deaths due to syncope from heart disease Dr. Westcott found evidence of alcoholic intemperance in more than a third, thus showing that this latter is a potent cause of fatty heart, a fact which had not been recognized until the publication of his paper.

Later a paper on the therapeutics of alcohol was communicated by Dr. Drysdale, wherein he expressed doubt as to the wisdom of giving alcohol in disease. Dr. Drysdale points out how fashion has fluctuated in this respect. Thus the drink bill for St. Bartholomew's Hospital, which in 1852 was £406, rose in 1862 to £1,446, and in 1882 had fallen to £953, and he quotes Dr. T. Claye Shaw to the effect that in Banstead Asylum the high rate of recovery among the inmates was coincident with the abstinence from beer as an ordinary article of diet. He also refers to the fact that Sir Henry Thompson, Sir Victor Horsley, and Mr. Pearce Gould find alcohol useless in most surgical cases. In an interesting paper Dr. Arthur Langhurst drew attention to the fact that the consumption of alcohol in the workhouses of England

and Wales had within twenty years diminished by 60 per cent.

That the physician may do harm by the indiscriminate employment of alcohol in disease was insisted on by the late Dr. George Harley in a valuable communication, in which he referred to a case of profound coma occurring in typhoid fever, which proved to be nothing more nor less than alcoholic intoxication caused by excessive administration of brandy.

Another subject which has excited considerable interest in our society is the influence on the offspring of inebriety in the parents. Dr. Carpenter and others have taken it for granted that drunkenness in the parents must necessarily induce an innate tendency to drunkenness in the offspring subsequently born to them, a conclusion which rests on the assumption that acquired characters tend to be inherited. Galton and Weismann, however, have taught us to doubt this, and consequently the question is a much more difficult one than appears at the first glance; so much so, indeed, that the committee appointed by the council to investigate it were not able to come to a unanimous conclusion. Previous to the appointment of this committee, Dr. Morton and the Rev. A. K. Cherrit had contributed interesting papers on the inheritability of acquired characters, but no member of our society has been more interested in the question than Dr. Archdall Reid. He has stoutly contended that there is no tittle of evidence in favor of their inheritability. He has moreover taken up a very decided position in regard to the best means of rendering a community sober, holding that this cannot effectually be done by keeping alcohol out of people's way. He has urged that those nations are the most sober which have had the longest acquaintance with alcohol, continued elimination through successive generations of those individuals who, alcoholically considered, are unfit, having in their case effected a gradual racial adaptation to the alco-

holic environment. He urges, in short, that we should seek to adapt the community to this specific environment rather than endeavor to modify the environment to suit the community, and that only in this way can the innate tendency to drunkenness be diminished. Dr. Reid does not suggest, however, that the congenital inebriate should be encouraged to drink himself to death, but rather that he should racially eliminate himself by abstaining from matrimony. Views such as these open upon a wide field indeed, in which the influence of our members directly or indirectly should make itself felt with increasing force as society becomes more enlightened; for we must remember that it is only through us, who may claim to speak as experts, that anything can come with authority and therefore with conviction to the open minded but sadly puzzled lay inquirer.

And here I must end my brief reference to our work in the past and proceed to outline some of the work that lies before us.

First let me point out that though the primary object of our society is the study and cure of alcoholic inebriety all forms of inebriety come within range of our investigation. The term inebriety is derived from the Latin *ebriare*, to get drunk, *in-ebriare* signifying to get very drunk. In our language the term has come to signify inordinate indulgence in any narcotic, or indeed in any drug which acts powerfully on the nervous system, such as alcohol, ether, chloral, chloroform, opium, hashish, cocaine, sulphonal, trional, phenacetin, tobacco, tea, and coffee.

First as to tea and coffee. Although these beverages are regarded, and rightly so, as counter attractions to alcohol, yet we must not forget that even they are capable of doing much harm, as every observant physician must know. Nor is this surprising when we reflect that caffeine, the active principle of both tea and coffee, is what is known among chemists as an alkaloid, a vegetable waste product. Caffeine is, in

fact, an excrementitious substance allied to the waste products of animal organisms — urea, uric acid, creatin, xanthin, and the like.

Such being the case, it furnishes no energy to the organism. It plays the part of a waste product, pure and simple, and is eliminated as such by the kidneys. The abundant drinking of tea must, therefore, greatly increase the work of these organs, and if continued from early childhood throughout life must, one would fancy, predispose them to disease. Caffeine has, moreover, a decided action on the heart and vascular system, lengthening the period of systole and shortening that of diastole while it raises the blood pressure, and we may well ask whether it is wise thus systematically to disturb a rhythm which has been established for long æons. Now, seeing that most acute diseases, such as pneumonia, when fatal, kill through heart failure, it does not seem improbable that those who have for years saturated their tissues with tea stand less chance of recovery than those who have not done so. Caffeine again has a powerful action on the nervous system. Thus, in frogs, it produces convulsions, and it is well known to be a powerful stimulant, but, as with other stimulants, the period of stimulation is apt to be followed by a period of reaction.

Bearing in mind these properties of caffeine it is obvious the subject of tea and coffee drinking claims our serious study. The question may well be raised whether it is wise to administer to children daily and as a matter of routine what is in effect a powerful drug. The poor especially are apt to drench their children with tea, and this is, if I mistake not, responsible for a great deal of nervousness among them. Such, I know, is the opinion of Mr. Kenneth Campbell, who has long studied this question.

There are other questions regarding tea and coffee drinking worthy of our attention. One would like to know, for instance, how far China tea differs in its physiological action

from Indian tea, whether it is a fact or a mere impression that the former is less injurious than the latter. We must want more accurate knowledge than we at present possess of the precise physiological effects of the different varieties of Indian and China teas; how far, e. g., the cheaper varieties differ in their action from the more expensive. Again we need information on the subject of tea adulteration — as to how far the cheap article sold to the poor consists of pure tea and how far of something else. Then, as regards coffee, one would like to know why it is so difficult to get a good cup of coffee in this country and so easy in certain parts of the continent. It is no exaggeration to say that among our poorer classes the taste of pure coffee is unknown. By throwing light on these questions we may render material service to the community. In short, now that tea and coffee have become national beverages we should do our utmost to see that the community is provided with these articles in the pure state and that people are taught how to provide strong counter attractions to alcohol and wean the alcohol inebriate from the error of his ways.

This is a subject which just now especially claims our attention, and papers on it will be cordially welcomed. Over and over again I have seen (as what physician has not?) the nervous system shattered by excessive smoking. We want to know, among other things, what effect the enormous amount of cigarette smoking which prevails today among the boyhood of England is having upon the race and how far women, also, are likely to suffer from the same practice.

A question not unsuitable for discussion is whether there should be legislative interference with smoking in early youth. I hear this question is likely to come before Parliament soon. If it can be shown that the practice is injurious to the race, I have no hesitation in saying that it should be made illegal. I have little sympathy with the widely prevalent fear of interfering in the slightest degree with individual

liberty, and I am convinced that it will vanish as we get socially more enlightened. By all means let the individual have all the liberty he craves to do what is good, but do not let him have a free hand, above all before he arrives "at years of discretion," to injure himself and thus indirectly to injure the state.

We have still a good deal to learn in regard to tobacco smoking. I am often questioned on the comparative effects of cigar, pipe, and cigarette smoking, and I do not find it easy to give satisfactory answers. Then again we need more accurate information than we possess as to the comparative effects of the different kinds of tobacco, and to what extent and in what manner they are adulterated. In my experience Egyptian and Turkish cigarettes are much more injurious than American. We are also in need of further information regarding the symptoms of chronic tobacco poisoning and the best means of treating the condition and of getting the tobacco inebriate to curtail or altogether to stop his smoking.

In the study of drug inebriety (opium, chloral, cocaine, and the like) we have another field for useful work. Drug habits are on the increase, especially among the women of the leisure classes. What are the conditions which lead up to these drug habits? How are we to recognize the habits and how treat them. These are practical questions concerning which we need precise information. Our society will do well to keep a vigilant eye in this direction. New soporific and anodyne preparations are continually being put upon the market and new drug habits continually acquired. We must be on the alert for these leper spots, and do what we can to prevent their spread. By drawing attention in a paper read before this society to the practice of ether drinking prevailing in the north of Ireland, Mr. Ernest Hart did much to check it.

I come now to the most prevalent of all forms of inebriety, that for which King Alcohol is responsible. This, of course,

offers the largest field for our energies. Let me briefly indicate some of the work that lies before us in it.

The subject of the adulteration of alcoholic drinks is in crying need of attention. We are beginning to see that the injurious effects of such drinks are in large measure due to substances other than ethyl alcohol. Quite recently Dr. Hale White expressed the opinion that the so-called gin-drinkers' liver cannot be ascribed to alcohol, pure and simple, and that the condition is referable wholly or in part to substances taken with alcohol. We want to know what these substances are and what are their effects upon the organism. We now know that alcoholic neuritis may be largely due to arsenic. The recent epidemic of arsenic poisoning from beer drinking in Manchester has awakened interest in this direction, and we are indebted to our secretary, Dr. Kelynack, for a valuable communication on this very subject. It has long been known that "four ale" is often impregnated with lead. I have myself seen many cases of lead poisoning and gout which had been caused by the drinking of this beverage.

The therapeutic value of alcohol is another subject which will still have to engage our attention. Medical opinion continues in a state of unstable equilibrium in regard to this question and it is for us to help to arrive at the truth in the matter.

And still also do the legal aspects of inebriety in its various forms demand our study. Our society being largely composed of medical men we may justly claim to be in the position to give expert advice in this matter, and it should be our aim in the future as it has been in the past to secure just and beneficial legislation for dealing with it. In this we shall look for help from those of our associates who belong to the legal profession.

All over the civilized world earnest scientific men, and among them some of the acutest intellects of our time, are patiently and painfully laboring to fight disease, and the re-

sults of their labors are freely published and given to the world at large. Only thus can any real therapeutic advance be made. Is it reasonable to suppose that a small number of isolated non-medical men, ignorant of the mere rudiments of the medical sciences, working independently and in secret, are capable of discovering remedies more potent to cure disease than this army of choice and educated intellects, working jointly and in the light of day, and seeking their reward not in great financial advancement but in the knowledge of good work done? Such an assumption is scarcely less childish than the nonsense which goes under the name of Christian Science. To allow now, in the twentieth century, this indiscriminate trading in secret remedies is to push the idea of individual liberty to lengths which can only be characterized as absurd, and at the same time to permit a wanton injury to be inflicted on the health of the community. I look forward to the day when the advertising not only of secret remedies, but of remedies of any kind, in the lay papers shall be prohibited.

I have by no means even now indicated all the work that lies before us, but I have said enough, I hope, to convince you that it is a wide, a pressing, and by no means an easy task to which we are committed by our membership here. But we are not going to be deterred by its magnitude or difficulty. We shall go forward and we mean to succeed. One thing is certain, if we fail it will not be through lack of enthusiasm. Within the last few weeks our society has increased in numbers by upwards of 100 members and associates, to each and all of whom I now tender on behalf of the Council a cordial welcome.

At the last annual meeting of the British Medical Association over a hundred physicians sat down to the famous medical breakfast, which the Temperance League serves up every year. A most interesting discussion of the dangers of alcohol followed, and no one had any fear of being thought extreme or irregular for his pronounced views on this subject.

SEA VOYAGES IN THE TREATMENT OF
INEBRIETY.

BY MARTYN WESTCOTT, L.R.C.P., M.R.C.S., London.*

I suppose there are few medical men who do not regard habitual drunkenness as a disease, as a morbid condition analogous to insanity or other neurosis. Chronic inebriety is rarely of long duration without becoming complicated by organic diseases of the heart, liver, or kidneys. Still there are numerous drunkards met with in general practice, who, though drunken, are suffering from disorders of function only and not as yet from demonstrable organic disease of any kind. In most conditions of chronic debility and ill health when we have done our best for a long period to get at the root of the mischief and to relieve symptoms we feel that what is probably wanted more than what we can do is a complete change of air, of scene, of occupation, and of society.

With a view to affording our patients all these desirable things we are sometimes in the habit of prescribing a sea voyage. At first sight it would appear, especially to those who have never been to sea, that a voyage is the very thing to recommend. Where is one more likely than on board ship to get the purest of air, complete rest, and the most thorough change of scene and society? I cannot boast of a very long experience of life at sea, and if I venture to read these brief notes before this learned society I do so only because I claim to have tried to make the best of my opportunities of observation, and because I have come to form a decided opinion

* Paper read before the Society for the Study of Inebriety.

about the suitability of sea voyages as remedies for drunkenness. From the point of view of treatment I would divide all inebriate patients into two classes. There are those drunkards who may be regarded as irretrievably lost, those who not only cannot by any effort desist from drinking to excess but who have also already developed organic disease, demonstrable and obvious to every doctor, and there are those who are morally and mentally deteriorating through alcohol — not so case-hardened as to be incapable of feeling remorse and shame and a strong desire to escape from their favorite vice, and not suffering, so far, from the results of fibroid disease of any of their organs. I suppose that there is no really scientific hard and fast distinction between the two classes. Still in deciding upon treatment that is the scheme I should have in mind.

With regard to the first class there is very little to be said, I venture to think, in reference to sea voyages. These patients are sufferers from fatty heart, fatty or cirrhotic liver, or kidney disease, as well as being alcoholic. Not only are they disinclined to mend their drinking habits — not only are they all but incapable of exercising self-control and self-denial — but they are physically run down and debilitated, and therefore need nursing and supervision. There is no hope of really curing these patients anywhere, and no one can suppose that sea voyaging will prevent the occurrence at last of the dropsies of kidney and liver disease. Now life on board ship under the most favorable circumstances is not all comfort and rest, and the nursing, the dieting, and the quietude so essential for such invalids can very seldom be obtained. Few cases of advanced disease of any type seem to me to be fit for sea life even at its best. I discussed the reason for this fully in my article on sea voyages in the first volume of the *Physician and Surgeon*, 1900.

Patients of the second class are patients of a different type. They may be subdivided into two groups, the habitual

drunkards, and the dipsomaniacs, who indulge only in periodical bouts. The former are those who suffer from functional dyspepsia in addition to signs of nervous breakdown. A few months or even years spent in the healthy atmosphere of a home for inebriates, where discipline and dieting are carried out under medical supervision, will do a great deal towards restoring the drunkard's self-respect and strengthening his good resolutions. Then, therefore, resuming business, he may undertake a sea voyage. Everyone seems to agree that the first essential in the treatment of inebriety is absolute deprivation of every kind of alcohol. Now, the ideal sea voyage for these patients is one taken in a sailing ship, which is commissioned on teetotal principles, with a teetotal captain and crew, and which touches at scarcely a single port en route. I do not think such a vessel can be found, sailing from England, though a few invalid sailing ships do leave America every spring and complete a lengthy tour without ever having had a drop of alcohol on board, except in the bottles of the doctor's surgery, at least, so I am informed.

On board the passenger ships of small shipping companies there are generally but few passengers, time hangs heavily, and even with a teetotal companion on board it is well nigh impossible to avoid social drinks in the smoking room. It is possible to ask the ship's doctor to give orders that the steward shall be forbidden to supply the patient with any alcoholic drink. So long as the resolution to remain abstinent is strong the patient may, perhaps, resist temptation in spite of chaff and bad example. But once the craving becomes too strong he begins to procure drink in underhand ways. I have seen instances of this many a time, and have found brandy bottles in cabins beneath the bunk mattresses. On one occasion, returning from Durban to Cape Town, I had a drunkard on board in my charge and for the general safety had confined him to his cabin and forbidden him alco-

hol altogether. Some men on board said in my hearing that they thought it a shame to deprive the poor fellow of his liquor in such a climate, and while I was at dinner they went up on the boat deck and lowered a bottle of whisky by a string to the porthole of the patient's cabin. Even if there are no alcoholic drinks to be had on board, at nearly every port there are bumboats from which crew or passengers can obtain contraband spirits, or the "wine of the country." Knowing what I do of ship life I should always hesitate before recommending a sea voyage, even for drunkards reputed cured. On large steam hotels, such as those of the Union Castle line, there is, no doubt, a better chance of success. The patient being a woman or a man who will submit to control, if there be a thoroughly capable nurse or companion with him, and if the supply of alcohol to the patient be strictly prohibited by the ship's doctor, there is no reason why a great deal of benefit should not be received. Of course a strict and continuous surveillance must be exercised, both on board and during the jaunts ashore, at various foreign ports. No reformed drunkard should be trusted on a sea voyage alone. There is no doubt whatever that the idleness and monotony of the life and the saltness and moisture of the air do tend to produce thirstiness. I should not consider a sea voyage in the light of a remedy where dipsomaniacs are concerned. There are many people who can remain temperate enough inland, especially on high ground, but who become intemperate at once on reaching the seaside. There would seem to be something in the climatic and atmospheric conditions of the sea level which tends to produce a thirst or a feeling which suggests the need of stimulants. I have no theory in explanation, though I could give instances in point, and should be glad if anyone could give me a physiological reason for the peculiarity.

Dipsomaniacs are people who from time to time experience the drink impulse, with its accompanying uneasiness

and distress. The outbreak may be every day, every week, or every month, or may be dependent on opportunity, or a special set of circumstances. The dipsomaniac, though he hates himself in his weakness, is nevertheless generally on the lookout for an excuse to drink. On board ship the excuses are easily found, because there is no work to occupy the mind. The farewell to his friends, and the stoppage at a foreign port where there is "wine of the country" to be had at a nominal price, are excuses good enough. In my experience it is very usual, indeed, for people to drink a good deal just before the ship reaches the home port, and this is no doubt because they are in a disturbed, excitable state, expecting reunion with their friends, a return to the "old country," and a feeling that they ought to do something unusual. The dipsomaniac has a period of nervous irritability, depression, and percordial distress. This warning may be very short indeed, or may last for days. If alcohol can be withheld by main force then the attack may pass off, and may not occur again for a long time. My contention is that these periodic attacks are likely to be more frequent on board ship than ashore. Therefore if a dipsomaniac really wants to be cured I would discourage him from embarking on a sea voyage.

On the other hand, if any drunkard be really reformed and so sure of himself as to be proud of being a total abstainer there is no doubt that he will derive considerable benefit in his general health from the fresh outdoor life and change of surroundings characteristic of a sea voyage.

There are, of course, other forms of inebriety than that due to alcoholic liquors in excess. Victims of the various drug habits are just as greatly to be pitied. In the case of those addicted to morphine, I should say that no more unsuitable prescription could be given than that of a long sea voyage. There is too much leisure for the sufferer to think about his sensations, and on board ship if a man prefer to be

reserved and solitary he is not likely to be interfered with. Dr. Kerr taught that in the cure of the morphine habit the dose injected should be steadily diminished daily until the drug is withheld altogether. At the same time nervous tone and inhibitory power need to be strengthened by massage, hypnotism, systematic overfeeding, and electricity. Every kind of intoxicant beverage is forbidden. A system of treatment like this cannot be satisfactorily carried out on board ship.

I have not been fortunate enough to meet with anyone strongly addicted to the cocaine habit. It is more often met with in the United States, I believe, and is extremely difficult to cure, because cocaine is probably the most agreeable and alluring of all narcotics, and pathological results develop early. In the reports of the American Society for the Study of Inebriety a method of treatment for cocainism is given which could not be carried out at all on a passenger ship, as far as I can see. In all such cases, to quote from the reports, "the physician should be prepared for a sudden fatal termination at any time." It would be a serious matter to send such a case far away from home.

Railroads throughout the country are waging war against the use of intoxicating liquors and tobacco by employees who are engaged in operating the lines. The fiat has gone forth generally that employees who drink or frequent places where liquors are sold are not safe to intrust with the lives of patrons or with the valuable property transported by the railroads. The rules which have recently been inaugurated against the use of tobacco are not so stringent as those against liquor, but generally they proscribe tobacco while on duty and when about stations. As for the cigarette, the order against it is almost as severe as that against whisky. The rule is being strictly enforced.

THE PROBLEM OF THE WELL-TO-DO INEBRIATE.

BY CHARLES L. DANA, M.D., of New York City.

[The following appeared in the pages of the New York Medical Journal, as an editorial, from the pen of a most distinguished neurologist, Prof. Charles L. Dana;]

It very often happens that physicians have brought to them young men and women who are victims of the drink or drug habit. These persons not rarely have most attractive personal and social qualities and good mental endowments. The men are often brilliant socially, effective and successful in their business, and may be fine, popular, lovable fellows in almost every way. Sometimes they are the only sons and have been the pet and pride and perhaps spoiled darlings of their homes. And yet, with everything to live for, with every possible moral inducement to live temperately, they go off on periodical debauches. These become more and more frequent until they alienate their friends, lose their position in business, and become the bane and sorrow of their families.

In order to help them after all moral inducements have failed, they are sent to a "cure," or they are sent abroad, or put on a sailing vessel for a trip around the world; but, after a longer or shorter period of sobriety, they return to their habits. Then they are sent, perhaps, to inebriate homes or to sanitariums, and, as a last resort, they may be committed as insane to licensed institutions. In spite of all these measures the condition continues. They become more and more besotted, and finally become demented or die from some intercurrent delirium tremens or accident, or in some form of paralysis.

Nothing is more sure than that the present measures for relief and rescue of this class are inadequate in the majority of cases.

Now, some of these victims of the alcohol habit are so degenerate and so morally depraved and so intellectually feeble that they are not worth curing. They cannot even be treated with any hope or satisfaction. But there is a certain percentage who can be cured or enormously helped, and there is another percentage for whom cure is possible and should be tried at least because humanity and the family demand it. It has been stated that there is at present no really effective or adequate way of saving this class. This statement is based on the fact that over and over again physicians have brought to them patients who have tried all the known measures for relief, and these measures, when analyzed, are the following:

1. The victim, we will say now simply of the alcohol habit, can be sent to a cure. These cures vary in manner, honesty, and the efficiency with which they are conducted, but their principle is the same. They help some who really desire to get well and cure some of this same class, but I feel sure that medical experience is that in the great majority of cases the patients relapse and nothing but temporary relief is obtained. I may add that there were, a short time ago, a multitude of these cures doing business in various parts of this country, and some with branches in Europe. These cures all make the same claims and practically employ the same kind of methods. The drug habit and the alcohol habit are conditions or tendencies and not due to any disease which can be counteracted by antitoxines or vaccination or any specific.

2. The patient, if he is very violent from the effects of his indulgence, can be committed by a magistrate for sixty days to an inebriate asylum or a Christian Home. Here he receives some treatment and becomes cleared up, but the respite is only temporary.

3. The friends can institute a civil proceeding and have the patient adjudged incapable of managing his own affairs and have his property put in the hands of a committee, and this committee can take charge of his money and, to some extent, of his person; but this method, of course, does not help to relieve the condition.

4. If the patient is very bad and gives evidence of mental disturbance he can be committed as an insane person to a hospital for mental diseases. Here he gets rested and relieved of his acute symptoms, and when his mind is cleared up he demands his freedom and it is given him.

5. He can be persuaded to sign a voluntary commitment for a hundred days to an institution for the treatment of mental disorders.

6. He can be, perhaps, taken to a neighboring state, like Connecticut, and there can be committed as an inebriate for a period of one to three years. This is, theoretically, a satisfactory proceeding, but practically, if the patient is a resident of a neighboring state, he cannot easily be got into another, and furthermore there are no sanitariums for habitual inebriates in Connecticut where satisfactory and prolonged measures of treatment can be secured. Thus it turns out that cures are inefficient and temporary, sanitariums are inadequate and either they cannot hold the patient long enough, or, if they do hold him, he gets liquor while there; furthermore, the proper care, the mental and educational restorative influences that should be applied to such patients, are not applied in such institutions and cannot be in any ordinary institution.

For the relief of the habit of drink, or if we wish to call it the disease of dipsomania, two things are absolutely necessary. One, that the patient be kept from opportunities of indulgence for a period of one to three years, and this is without any qualification or modification whatever. Next, that during this period he be under restraint. The time must

be employed in increasing the healthfulness and vigor of the body and in entertaining and instructing the mind, and promoting by every possible means the strength of will and capacity for initiative and interest in the actual doing of things, all of which expressions mean, more or less, the same thing.

Many forms of the drink habit are explosive in character and in condition express themselves very much as a chronic nervous or mental disorder, having periodical outbursts like that, for example, of epilepsy. If one takes a case of epilepsy and treats it for one year and during that time there is no convulsive attack we feel no assurance at all that the disease is cured. If we can control the seizures for two years we feel considerable confidence, and if we can control the disease for three years the patient is, in the vast majority of cases, practically well. This is the same with the drink disease and the drug habit. By means of isolation, education, and the employment of those measures for stimulating and developing the mind which are employed in the colonies for epileptics extraordinary success is achieved, so we can believe that by similar methods very much better and greater results can be obtained for the alcoholic.

In order to carry out a scheme for the relief of this class two lines of endeavor must be attempted: First, the securing of legislation which will enable us to commit an inebriate for a period of from one to three years; and, second, the establishment of a colony where these persons can be isolated and kept from the use of liquor, and at the same time can be subjected to all the stimulating influences of which mention has been made.

With regard to the enactment of a law it is seen that possibly the present form for commitment of the insane, by which the person has to be examined by two qualified and registered physicians, and their findings sworn to and approved by a judge, can be used. In this form the language

need only be changed so as to read "victim of dipsomania," or a similar expression, and the commitment will have to read for a definite period of one, two, or three years. It has been maintained that it will be unconstitutional to enact such a law, because we have no right to restrain a person whose mind is unimpaired. If, however, upon the certificate of properly qualified physicians it is decided that the person is suffering from a disease which is injurious to himself and to the public welfare it seems that it might be allowed. At any rate such a law has been passed in the state of Connecticut and in other countries. The enactment of such a law is certainly the *sine qua non* to the success of any method of treatment for helping habitual inebriety, and if our legislators deny us the right to do this no attempt to go further need be made. It seems unlikely that when the matter is presented in all its bearings there will be any hesitation about it. The chronic inebriate is a person really suffering from a mental disease, just like the chronic maniac, and one which incapacitates him from supporting himself, makes him liable to be an injury to the community and a burden upon the state, as well as a source of present danger. If the state has the right to isolate lepers, smallpox patients and even, it is maintained, those with scarlet fever, it seems to have a right to isolate the habitual inebriate, it being understood that such isolation or commitment would never be done except under the fullest precautions.

As regards the second point, that of providing a suitable place where such patients can be treated, the problem is difficult. We would particularly insist upon the importance of not only establishing such a place as would be one of restraint, but on having it under the very best medical and executive management and on making it attractive as a place to live in. It should be a place where work can be done, where study can be pursued, where amusements of all kinds can be followed. It must be a place the establishment of which would eventually entail the expenditure of large sums of money;

but it does not seem likely that this would be wanting. Over and over again there occur cases in the experience of physicians, in this city at least, where young men, through their dissipation and inebriate habits, waste sums of money large enough to run a small place in itself, and there are many families who would be willing to spend almost any amount to secure the cure and reformation of their children.

It is not intended at first that this should be a colony for the poor or even indigent, because it will cost a large sum of money to operate it and because it seems to us that the children of the well-to-do are particularly unfortunate when they suffer from the drink disease. The rich son of a rich family can, if he has the drink habit, do infinitely more harm, produce more unhappiness, waste a great deal more money, and, through his influence, do more moral evil than the poor inebriate. Besides, it seems probable that alcohol takes a much severer hold upon the well-to-do class and produces more striking types of inebriety with moral deterioration than one sees in the lower walks of life. At any rate the object is, first of all, to start an ideal institution, which, if successful, will serve as a model for relieving persons in every walk of life. It is not believed that the state can do this effectively, nor is it distinctly the function of the state to help this class. The watchfulness and care which will be required to carry on such an institution will demand a qualified guardianship which is not likely to be provided for by the officers of the state, however free they may be from politics. — *Medical Record*.

Dr. Lydston's work on Diseases of Society, from which we had some extended extracts in the last issue of this JOURNAL, will soon be published, and will contain some very startling views and studies of sociology from a medical and a psychological point of view. The author has had exceptional opportunities for travel and study, and is a keen critical observer, as well as a broad thinker; hence this work will be welcomed by a host of friends and persons who have enjoyed his previous writings.

THE CARE AND AFTERCARE OF INEBRIATES.*

BY HEYWOOD SMITH, M.A., M.D., London, Eng.

To us who are studying the various phases of inebriety the question of the care and aftercare of its victims ought not to prove either out of place or uninteresting.

In considering the question of lunacy as we ordinarily understand it, the care and aftercare of the persons whose condition falls under this category are of the greatest importance when considering the possibility of a cure and its method. The environment of a lunatic is deemed to be of the utmost importance, as it may be that it is through this channel that a cure may be effected and the poor damaged intellect, the offspring of a diseased brain, may be coaxed back to its normal throne, when that throne has had time to recover from its overturned state and has, by an improved environment, gone through a process of auto-reparation.

If this is the state of matters as regards lunatics in general, of whom but a small proportion are expected to return to the circle of their friends or take up again the battle of life, how much larger a hope may we not extend to these other lunatics whose self-induced paroxysms work out their inane rage and leave the patient with a lucid interval, wherein he may consider whether the game is worth the candle, whether the passing exhilaration and ecstasy may not be purchased too dearly by the dead flat of the resulting reaction, and whether the warping of his judgment, the gradual blunting of

* Read before the British Society for the Study of Inebriates, in London, England.

his intellectual powers, the loss of time and of his breadwinning capacity, and the consequent ruin and wrecking of a formerly happy and peaceful home, are not too much to pay for an hour or two of oblivion ushered in by maudlin obscurity or blind pugnacity.

In the case of ordinary lunatics but a small proportion may be expected to be ultimately cured; whereas, if proper means are employed (and we are not wholly assured as to what means are the best — whether entirely cutting off the cause or whether some yet to be discovered short cut may be available) it is, at all events, within the range of our possible hope that in the dim future, partly by legislation wisely devised, partly by wider instruction and more determined action on the part of the medical profession, a large proportion of these chronic suicides may be cured and returned to their families and society, as brands saved from the burning.

Now, as far as our present knowledge extends, the cutting off of the source of the mischief is the most potent means we have for the rescue and reformation of the habitual drunkard; for the drink crave masters a man by its overwhelming force, and though it may be latent for certain periods and these, curiously, in men as well as women seem recurrent in a sort of cycle, yet, given the opportunity of access to the poison, be the temptation ever so slight, the enfeebled will of the sufferer seems powerless to resist it. And, whereas the first step towards inebriety may be distinctly a moral delinquency, engendered by the wicked or thoughtless action of a so-called friend, or a sort of auto-temptation brought about by pain or distress of mind through whatever circumstances, yet, after a time, more or less in various individuals, the habit degenerates, or, shall I say, rises into a veritable disease; a disease primarily of the mind reacting on the brain, bringing in its train a true disease of the whole body, opening the way for the inroad of a variety of other maladies, and rendering the enfeebled system less and less able to resist the

attacks of other diseases, which, when once admitted into so fertile a soil, run rampant as vicious weeds and choke to the death the flickering spark of a debased vitality.

Next to cutting off the cause of inebriety we should seek for some method of cure, if such exists within the range of medicine or hygienic discipline.

Inasmuch, then, as we have assumed — and I think from years of observation that we are warranted in so doing — that in inebriety we have to deal with a real disease, we must consider how best we can treat it with the least antagonism on the part of the patient and the surest prospect of the cure being permanent.

In the consideration of the treatment as meted out to men and women we are confronted with the difficult question as to which can best be spared from the household — whether the breadwinner or the one on whom devolves the care of the children, and here we must anticipate a great reform. The government of the future must step in if any real advance is to be made in combating this terrible curse, and the state will have to provide the mother with the means to live during the treatment of the husband, and on the other hand provide some way of taking care of the children during the treatment of the wife.

The method of dealing with inebriates at present is by sending them to retreats either voluntarily or involuntarily. They are sent to such retreats involuntarily when they are taken up more than three times in one year for being criminally drunk and are thereby stigmatized as criminals. What we further need is the power to relegate to safe guardianship the poor inebriate patient who, though outwardly not having contravened any law, is nevertheless, as a lunatic, dangerous to his or herself or family, and demands our utmost pity, and calls for our immediate assistance.

Inebriates can also become inmates of retreats voluntarily if they can be persuaded of the hopelessness of their malady

and the probability of their being restored to health of mind and body.

But inasmuch as inebriety in the majority of cases is spasmodic and intermittent and the poor sufferer, self-deceived, does not relinquish the hope in his sober moments of being able to shake off the possessing demon, he is with the greatest difficulty persuaded that his disease is not of such an irreparable nature but that he can overcome it in time.

This being the case we must, as medical men, impress on the unwilling public that inebriety is a real disease and consequently call the places where such disease is treated inebriety hospitals, and so remove the idea that attaches to the misunderstood name of retreat.

Now, in the case of the inebriate, let us consider the conditions that should obtain in a typical inebriate hospital.

(1) The locality should be in a healthy situation, removed from a town; preferably on a height.

(2) It should be comparatively isolated from surroundings that might in themselves lead inmates to crave for liberty.

(3) It should, above all things, be far from the neighborhood of a public house or brewery.

(4) The grounds should be large enough to allow of ample exercise in the open air without the temptation to stray beyond them, and these should be surrounded by a wall or other fence so as to render the supervision and restraint by the attendants or nurses the more easy.

(5) Employment (not merely recreation) should be provided for each case both indoors and out, some trade or work that would occupy a considerable portion of each day.

(6) The head of the hospital should be a medical man, and he and his wife and family should of necessity all be abstainers.

(7) All the servants, nurses, etc., must also be abstainers, honest, and above all suspicion of being bribed.

(8) The patients should not be allowed to walk outside the grounds on any account without an attendant.

(9) Besides the regular employment referred to above there should be time and opportunity for wholesome recreation, both indoors and out, and lectures should be given from time to time on the virulence of alcohol as a poison and the senselessness of allowing its fascination to dominate the will and judgment.

(10) The duration of the treatment should extend over one or two years at least.

(11) The diet should be as far as possible semi-vegetarian, with the allowance of milk, eggs, cheese, and butter.

(12) In such hospitals investigation might be made of medicines that may be introduced, having for their object the lessening of the drink crave, as *e. g.*, Tacquaru, etc.

And now I will add a few words as to the aftercare of inebriates.

It is not advisable to dismiss inebriate patients suddenly from the restraint of the hospital such as I have been describing straight to their former surroundings without some method of testing their powers of resisting the temptation to indulge in drink. For this purpose small houses should be provided or abstaining families might be found who would be willing to receive such patients and be responsible for their good behavior.

(1) It should not be a rule to send patients out of the hospitals just in the order of their admission, but in the order of their improvement and having regard to their character and conduct while in the hospitals.

(2) These homes should be in pleasant surroundings with opportunities for exercise and employment.

(3) The patients might then be trusted to walk out unattended. They might be trusted with money, but it should be distinctly understood that the least infringement of rules of one instance of drink being procured would render them liable to be sent back to the hospital.

(4) The diet should still be mainly vegetarian. With regard to the question of so-called temperance drinks it would be a good plan to offer a prize for the introduction of a good and palatable drink. It should be slightly acid, the flavor should not be mawkish nor too pronounced, and should, of course, be free from the least trace of alcohol. Lemonade is good but too expensive for ordinary use; besides it must be something that can be supplied readily and cheap, as many would not take the trouble to prepare such. After all there is nothing better than water.

Lastly, let us get rid of the idea that you cannot make people sober by Act of Parliament. We may not be able to do so all at once, but by all means let us keep pegging away and do all we can. Let us refuse to return members to Parliament who are connected in any way with the drink habit. Let the churches refuse to appoint as office bearers any such, and above all "let us not be weary in well doing," but let us persevere and take advantage of every opportunity till the thin edge of the wedge is driven home and the nation is lifted up by such a lever out of its apathy and degradation, remembering that "Righteousness exalteth a nation, but sin is a reproach to any people."

The great encyclopedia of temperance reform now being prepared by the New Voice Company of Chicago promises to be one of the most important events in the study of alcohol of the present time. A record of all the efforts, both moral and legal, as well as medical and social, to reach and understand this evil will make it a phenomenal work. Already much of the matter has been gathered, and it is the expectation that the books will be issued in the summer or fall of 1904. All students of this subject will welcome this attempt to give a complete history of a movement which began ages ago, but has only in modern times become vitalized and incorporated into the evolutionary march of the ages.

ALCOHOL AS A THERAPEUTIC AGENT.*

BY J. S. CAIN, M.D., of Nashville.

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In treating this subject the term alcohol will be construed to mean all compounds, drinks, or beverages containing more or less of this agent.

The demoralizing, degrading, impoverishing, disease-producing features of this the world's greatest curse will not be argued in this paper, except in so far as the estimate placed upon it by the profession as a therapeutic agent has and will continue to exert a restraining influence upon salutary and healthful legislation for its control and abatement; but my object will be to show, if it possesses or deserves a place in the therapeutic armamentarium, that the place is so small and insignificant, and so easily supplied by other, better, and less objectionable agents, as to render its entire exclusion from the field of therapy a matter rather to be desired than dreaded. I will endeavor to discuss the merits of this agent without possessing a shadow of the bias, or, if you please, the fanaticism of the temperance reformer or reformed, or the organizer for political or other purposes, giving my convictions with regard to its employment in the practice of medicine and surgery, embracing many years of thoughtful investigation and examination; and I will say, that every year of this study and research has more and more convinced me of

* Read at regular meeting of the Nashville Academy of Medicine, July 7, 1903.

its gigantic evil and utter uselessness as employed by the average practitioner.

Others have been studying along this line for the last decade or two, and it is to their investigations more than my own that I am indebted for my pronounced convictions upon this subject.

I will submit a postulate with regard to employing this agent as a therapeutic means, which I will endeavor to establish by argument and reference to unquestioned authorities. If I shall succeed in establishing this proposition to even a limited extent, I will feel that my efforts have not been in vain.

I believe that the tendency of this agent employed in the human economy, in small or large quantities (harmful usually in proportion to amount consumed), is to impair health and to lower vital resistance to disease or injuries. I believe that its indiscriminate employment under the duress of public opinion and the misconception of its properties by the profession in diseases and injuries in which, by its effect in lowering vital resistance, and in antagonizing nature's healthful and conservative methods of repair, and by its employment in critical conditions to the exclusion of other and really appropriate agents, the world is indebted for more mortality than to any of the great epidemics which now and then afflict the human family.

As the medical world emerged from the darkness and superstition of its early ages and slowly moved upon the plane of rational and thoughtful investigation, it necessarily brought with it many of the most glaring fallacies of the past ages; these almost necessarily become incorporated into the ideas of the treatment of disease, hence the early theories of the treatment of disease were the creatures of priestcraft and superstition which have survived the ages and still exist; many have yielded to the advance of rational and demonstrable science, others have not, and especially those which have

a holding upon the passions, cupidity, and appetites of the human family, these have not, and probably will never disappear, under any system of law or coercion, while man is in the flesh. Every nation and people has its fallacies and superstitions, some wrought into so-called religious creeds; every one has its narcotizing, exciting, and exhilarating agents, such as opium, tobacco, hashish, cocaine, and others. That of most universal employment in enlightened nations is that Lethean resulting from the fermentation of the saccharine principle in vegetables, plants, and fruits, which is ethyl alcohol in its myriad forms. This has been a favorite exhilarant and sorrow drowner since long before the edict was promulgated, "Wine is a mocker and strong drink is raging, and whosoever is deceived thereby is not wise." In consideration of its strong appeal to the appetites and passions of the human family, it was naturally crowned King Cure-all of disease, and has held the scepter and ruled the empire through the ages, and although the fight against its demoralizing and ruinous effects has been fierce and bitter, still it has maintained a strong hold upon the public and even professional world; however, investigation has been prosecuted of late, and many of the best thinkers and reasoners of the profession are seeing and appreciating the folly of employing an article which does not possess a single physiological property to establish its claims as a curative agent.

While medical men do not appreciate the fact generally, I am convinced that the tyrant public opinion, and popular demand, has more to do with its employment than professional faith in its medicinal efficacy. It is agreeable to the average taker, and nothing pleases him more than a prescription of some alcohol compound; its effects are exhilarating and anæsthetic, producing a temporary sense of comfort and relief; popular unprofessional opinion has declared it a great strengthener and builder, and the physician who decries its virtues and uses some really valuable agent in its stead is in

danger of abuse and loss of business; others fall into the fashionable rut and use it because it seems a matter of course. I would urge members of the profession not to be so influenced, but think and reason, and only employ it after careful consideration. If half a dozen gentlemen speak in its defense upon this occasion — and I am sure there are many more who look upon it as a sovereign remedy — there will probably be about as many different reasons urged in its defense, each having his own theory as to its effects and decrying the theories of others, and none being able to render a rational or even self-satisfying reason for the faith which is in him. One will use it because he considers it an energizer, stimulant, and toner to the vital powers under the depressing influences of disease.

Another because he considers it a food and conservator of vital energies.

Another because he thinks that it arrests tissue waste and vital spoliation.

Another because it tones up the heart and circulation, and prevents chill and blood stasis.

Another because it is a general anæsthetic and antipyretic, lowering blood tension.

Another because he thinks that it aids digestion and supports flagging energies under pathological spoliation.

Another because it is an antiseptic, neutralizing toxins in the blood, and curing reptile venom — snake bite.

Several others because they are rather fond of the article when fixed up, themselves; have always seemed to flourish upon it, and regard it as a good thing, and expect to continue to employ it in their practice. These are ever ready to point to one or more hale octogenarians who have drunk it all their lives. That is no argument. Many people in battle pass unscathed through a hail of death, where it would seem that an English sparrow could not survive; still this does not prove that there was no danger, neither that very many were not killed where one so escaped.

Alcohol is a toxine and poison to all organic life, from the moment it accumulates in the fermenting fluid, where it is evolved by the chemical processes brought about by fermentative germs; it destroys the life of its producers, the germs, and destroys or impairs the vital principle of all organized life with which it is brought in contact. Early in its nascent state it exhibits another of its peculiarities in its brigand-like craving for oxygen; unless distilled out of the fermenting liquid at once, it attracts oxygen from the air and becomes acetic acid or wine vinegar. This chemical craving for oxygen and water, if it had no other objectionable characteristic, would unfit it for therapeutic use.

I will review some of its well-known physiological effects and see if these will harmonize with the healing virtues claimed for it:

It is a local irritant, inflaming skin and mucous membrane when brought in contact with them; it coagulates all albuminoid substances, whether matters which have been ingested as diet or the normal albuminoids in the skin and mucous membrane in the stomach or other cavity, unless greatly diluted; it produces active inflammation of the gastric tissues, in which event it arrests absorption until such time as it has despoiled the blood and tissues of sufficient water to dilute it to the absorption point. When taken into the stomach diluted below the point of active coagulation, it is very rapidly absorbed, hence the quicker intoxication from dilute than from very strong drinks. It has, however, a strong affinity for water, and will absorb it from the atmosphere, tissues, or blood; this is one of the most objectionable characteristics as a therapeutic or physiologic agent. It possesses the faculty of passing without change directly into the blood current and of being distributed with almost lightning speed throughout the system, but especially to the brain and liver.

Its effect in the blood is to so change the hemoglobin as to prevent it from absorbing oxygen; hence under its influence the red corpuscles cease to transmit oxygen to the tissues, combustion is in consequence impaired, and the temperature drops down under its use from the lack of heat production; this is particularly observed as a diagnostic sign, where it has been taken to narcotic inebriety, the temperature often falling three or four degrees; thus interfering with normal combustion in the tissues, it leaves nature's fuel, glycogen and fat, unconsumed, with a tendency to diabetes from retained saccharines, autogenetic infection from general retention of waste products; but the most notable and mistaken effect is the unappropriated and unconsumed fats, which are infiltrated in the tissues, producing the obesity and mistaken vigor of those who "look upon the wine when it is red," or other intoxicants.

Another evil effect in its employment in therapy is its arrest of normal tissue oxygenation and the prevention of that combustion which is essential to consume the waste material resulting from destructive metabolism, and in certain diseases, like typhoid fever, characterized by rapid molecular disintegration, causing the retention of waste material in the system until often those who would otherwise have recovered from the fever die of retained waste or of septic poisoning.

It is anæsthetic, destroying sensibility, as all ethers do. Perhaps this depends upon its well-known properties; all are acquainted with the narcotism of drunkenness. It is an intoxicant, as most probably all narcotics are in the stage preceding narcotism. It is an exhilarant in the same sense, producing a sense of ease and indifference as well as carelessness towards self and others. It possesses two other properties which are misleading and deceptive in character. It is an excitant to inhibitory force, while it is a paralyzer of vaso-motor nerve influence; under its early effect preceding

the stage of narcotic sedation, it excites the heart and causes it to bound violently but feebly; the paralysis of the peripheral blood vessels causes the blood to rush to the surface, the direction of least resistance, producing a flush upon the skin, and especially upon the face. The warm blood coming rapidly to the surface creates a glow and sense of comfort to the peripheral, sensorial nerves, resulting in a temporary feeling and appearance of well-being. Soon this excess of blood in the cooling area of the body becomes lowered in temperature and transmits its lack of caloric to the central supply, and gradually the whole blood volume cools down into a state of apyretic collapse. By its destruction of the harmonious correlation of nerve cells in the impairment of muscular function and brain cerebation, it impairs both from the smallest appreciable amount, increasing with its consumption to the drunken stagger of muscular ataxia and maniacal raving.

I will review some of the virtues claimed for the agent and tell why I do not think that they are well founded. It is claimed by some that it is a stimulant, active and quick in effect, consequently to be administered in cases of collapse and shock from concussion and narcotism, lowered vitality, feeble heart, respiratory inertia, and all similar conditions. I claim that it is not a true stimulant in any sense, its apparent stimulating effects being delusive rather than real, but on the contrary is a paralyzer. A stimulant is an agent which arouses and maintains functional activity in a physiological way; this does not; all of its manifestations are pathological. The apparent violent impulse of the heart, the increased superficial circulation, which exists for a time, as before stated, are the results of paralysis; the heart beats violently but feebly, it is the spasmodic action of an enfeebled and overtaxed organ under a cruel and irrational spur. The sphygmographic tracing of such a heart shows in its sharp and abrupt action its feebleness in comparison with the round,

gradually ascending and descending tracings of a strong heart, or even a feeble heart rationally toned by nux vomica, belladonna, or any truly physiological heart stimulant.

It also imparts a sense of vigor to the muscles, and under its primary impulse the sufferer is deluded into a sense of strength and vigor. This too is deceptive, and, as has often been demonstrated in the effort to buoy up under its influence to withstand exertion and cold, the fact has always been unquestionably apparent that the individual who does not use it triumphs over the one who employs it.

Its exhilarating and intoxicating effects upon the brain are also referred to as an evidence of its toning and invigorating power over brain cerebation; it is claimed that it promotes mental activity, stimulates the formulation of ideas and accelerates utterance. That it usually does the latter is an everyday observation — maniacs are proverbially voluble; but that it is a stimulant to physiological activity is another delusion — ideas evolved under alcoholic excitation are never physiological or rational. From the loquacity resulting from the smallest quantity of the agent to the paretic, thick-tongued, maniacal ravings of the inebriate is but one descending scale of insane, incoördinate raving. But it is claimed that some of the most brilliant orators and cogent reasoners were never at their best until about half inebriated. Some of the most gifted orators have seemed to warrant this assertion, but in point of fact these men prepared and elaborated their speeches in their sober and rational moments and stowed them away in memory. The influence of the intoxicant provoked and possibly emphasized their delivery. Many of this class were very great and good men, and I would not individualize by mentioning names, but I have had the opportunity, on several occasions, to listen to this class, immediately after the delivery under such circumstances of brilliant productions, when thoughts were cerebrated as uttered, and I have never heard more silly twaddle from any other drunken man.

The next claim is that it is a food; just how its use so results the claimants differ. There is nothing, as before stated, in distilled alcohol, strictly a narcotic, anæsthetic, and antipyretic, which can possibly furnish any form of tissue-builder to the human economy. The most rational claim along this line is that it prevents tissue waste, and is, therefore, a conservator of vital forces and useful in spoliative conditions. But for one thing, which has been before stated, this would be very rational. It prevents tissue waste by cutting off the supply of oxygen and interfering with necessary metabolism. An unvarying proposition may be laid down, that free oxygenation of blood and tissues is essential to physiological perfection, and that repair from disease or traumatism cannot favorably occur without its aid; therefore, while this agent conserves tissue waste, it is at the expense and defeat of nature's recuperative forces. Some fermented wines and beers possess a minimum amount of food material, which can be more easily and cheaply supplied without the deteriorating alcohol entanglement.

That it is a tonic in any sense is at variance with its other and well-established characteristics. That distilled alcohol can under any conditions be a tonic, I can scarcely conceive that any one would claim, but the great claim is based upon the tonic properties of wines and malt alcoholics — ales, porters, etc. Doubtless unfermented grape juice, such as was probably used by the Christians for sacred purposes before it was converted early into a mocker by fermentation, possesses the alimentary properties of the grape, but fermentation consumes and destroys all this in the manufacture of alcohol except the potash which it sidetracks upon the rim of the cask. The wines known as sweet wines are from the juices which possess so much saccharine properties that the fermentative germs cannot consume all before being destroyed by their own alcoholic product; a small amount of the saccharine and nutritive properties of the grape is retained in

combination with 8 per cent. to 20 per cent. Dry or sour wines possess nothing but the alcoholic properties, all grape principles having been consumed in fermentation. Malt liquors possess a small amount of malt, hops, and other bitter extracts, which are largely consumed as a supposed tonic and nutrient, but for the real purpose of obtaining the drunkard-manufacturing 10 per cent. to 20 per cent. of alcohol which they contain.

That it is a general anæsthetic, and I will add antipyretic, reducing sensibility and lowering blood tension, is its strongest claim to therapeutic usefulness. In certain restless cases, with sufficient vital energy and dynamic force to recover anyway, in spite of treatment, it becomes a satisfying, soothing anæsthetic, with no other curative power and with a strong fear of creating an appetite for the agent which will far outweigh all possible, and by no means essential, good accomplished by it; so its anæsthetic properties are of no good; its analgesic and antipyretic can be better subserved by other and less harmful agents.

That it aids digestion in much diluted form is another of its claimed virtues; this is based alone upon its irritating properties, and the theory is that it stimulates the peptic glands to functional activity, and then, I suppose, being an antagonist to peptic products, hastens to get out of the way by rapid absorption; this is a fanciful theory, and is only another pretext for prescribing alcoholics for convalescents. The experiments of Drs. Chittenden, Kellogg, and others have shown that any quantity or form of alcohol neutralizes the solvent secretions of the stomach, and are contraindicated as an aid to digestion. Other irritants, if needed for this purpose, like the peppers, gingers, and aromatics, can be employed harmlessly and combined with hydrochloric acid and pepsin, the normal and needed elements in enfeebled digestion.

Its antiseptic and toxine antidotal powers was the last stronghold to yield in my favor of its employment. From

its capacity for rapidly entering the blood and the confidence of Dr. Jacobi and others as to its indispensable usefulness in diphtheria and kindred diseases, I thought that it might act as an antidotal poison in the blood of persons suffering with these diseases, but the observations of late years have dissipated that fallacy. No one seems to do honor to it along that line. Experiments have established the fact that hygienic and dietetic measures will save infinitely more cases of these diseases without than with this agent.

The last ditch of my faith was reached when Professors S. Weir Mitchell and E. T. Reichart, in researches on serpent poison, make the notable statement: "Despite the popular creed it is now pretty sure that men have been killed by the alcohols given to relieve them from the effects of snake bite, and it is a matter of record that men dead drunk with whisky, and then bitten, have died of the bite." This leaves neither safety nor incentive for our medical brethren to go fishing any more.

What have been the results of experiments along the line which I have indicated? In 1873, the first experiment was made with the Temperance Hospital of London, and under the enforced exclusion of alcohol the mortality rate was reduced to 6 per cent., much lower than any other hospital of London.

The Frances Willard Hospital of Chicago and the Battle Creek Sanitarium, with many others, have fully demonstrated the same facts in this country. The Kane Summit Hospital may be mentioned as an especially temperance-enforced institution. Within its walls have been treated all manner of diseases and injuries with less death rate than in any of the surrounding hospitals. The surgeon in charge says: "Let me cite my experience in surgery for the last three years in proof of the uselessness of alcohol and the benefit of abstinence from its administration. During that time I have performed more than one thousand operations, a large por-

tion upon cases of railroad injuries, one hundred for appendicitis, and in none of these was alcohol administered in any form either before, during, or after operations. I defy any one who still adheres to the administration of alcohol to show as good results; equally gratifying results have been obtained with my medical cases, and I fail to understand how any observing and thinking physician can still cling to so prejudicial a drug as alcohol when he has within his reach a multitude of valuable, exact, and reliable methods for combating, governing, and controlling disease."

In addition to this testimony, we have the corroborating and confirming experience of Kassowitz, Woodhead, Davis, Madden, Woodbury, Egbert, Lesser, general of Red Cross in Cuban war, and a host of others.

In conclusion I will mention a few of the conditions in which alcohol is extensively used by the profession, in my judgment, to the great detriment of the poor unfortunates upon whom it is used. In cases of protracted disease, like typhoid and other continued fevers, dysentery, pneumonia, enteritis, and all of this class of diseases which are frequently protracted, and the contest between the recuperative powers of nature and the pathological agent seems so equally matched that the smallest influence is sufficient to turn the scale one way or the other — here, instead of sustaining and conserving the powers of nature, it is the custom of many physicians to persistently administer this agent hour by hour and day by day, loading the blood further with waste material, and depriving the tissues of the necessary oxygen supply, as above explained, and unless such cases are beyond the reach of homicidal medication, they finally succumb to treatment alone.

Another frequent mistake in the administration of this agent is in cases of shock from accident or surgical necessity; in the great majority of these cases a little time only is essential to resuscitation and a little non-meddlesome letting alone

would be sufficient; there exists so much reserved vital force that the alcohol so administered, while unnecessary and doing no good, can do no fatal harm, except that the rallying of such cases is accepted as the result of the remedy used.

On the other hand, a severe shock, narcotism, or heart inertia occurs, where the chances for life hang upon doing the proper thing at the right time; to pour a lot of this paralyzing anæsthetic, or, in absence of ability to swallow, to inject it into the blood, is simply to blot out the little chance left for life; such cases are reported by these gentlemen as seen when beyond the powers of resuscitation by the best directed efforts of the profession, while in point of fact the hypodermic use of strychnia, digitalis, or nitro-glycerine, with the employment of normal salt solution, or in many instances masterly inaction would have saved the life of the sufferer.

Therefore, these premises duly considered, I believe that in the scientific light of the present era alcohol should be classed amongst the anæsthetics and poisons, having a very limited usefulness when so *carefully* employed; but owing to its delusive, habit-begetting and uncertain therapy that the human family would be benefited by the substitution of other agents of its class, and its entire exclusion from the field of remedial agents. — *Southern Medical Practitioner.*

A MUNICIPAL DRINK-CURE INSTITUTION.

On October 1 the city of Dresden opened the first governmental institution for the cure of drunkenness on the continent. Patients must be examined as to their sanity and be diagnosed as curable, and must voluntarily submit to a regimen of healthy living, such as farm work. They will have good moral surroundings and must pay 45 cents a day. Patients may stop three years in the institution.

THE BOUNDARY LINE BETWEEN CHRONIC
ALCOHOLISM AND ALCOHOLIC INSANITY.

BY ARTHUR W. DUNNING, M.D.

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There is a nice distinction and a very important one to be drawn between the inebriate, or common drunkard, and the victims of various forms of alcoholic insanity. An effort to point out and emphasize this distinction is the purpose of this paper.

The general practitioner is called upon not infrequently to determine whether in a given case there is an element of insanity or simply willfulness to do the wrong thing, regardless of consequences. This is not always an easy matter, and unfortunately the tendency is to overlook the early indications of mental unbalance in the sweeping classifications of common drunkenness. This is unfortunate from the therapeutic standpoint, because often the time when the best results from treatment might be obtained is allowed to slip by. Moreover the medico-legal question involved at this point is one of vast importance. Either the question of legal restraint for curative purposes or that of the legality of business transactions and the control and saving of property makes it necessary that the medical attendant be exceedingly careful and painstaking in his observations. How frequently we see the spectacle of a man who has borne an excellent reputation and accumulated property gradually losing self-control through excessive drink. His property slips away through unbusinesslike deals, domestic trouble develops, and

his health is undermined. When called upon by the probate court to examine such a man as to his sanity great care must be exercised to avoid the error of attributing to drunkenness the symptoms, which, if carefully studied, point with certainty to mental unbalance. Unfortunately in this state the inebriate department of our hospitals for insane has been abolished and as a result the tendency is for all alcoholic cases to be rejected by the probate court as ineligible, whereas some of them are justly eligible as cases of true sanity.

Wherein, then, lie some of the distinctive features which, if carefully looked to, will enable us to avoid falling into this error? First, a bad heritage, the well-marked neurotic family taint, the instability of organism that marks the degenerate is strong, predisposing, and presumptive evidence when present. It must be borne in mind also that in this type of individual mental unbalance may be caused by a surprisingly small amount of stimulation as compared with the normal individual. In like manner an injury to the head may establish a brain condition that is exceedingly intolerant to stimulation.

Then the little changes in character and disposition, the lapse of memory, and general disinterestedness in his usual affairs of life, the progressive mental weakening, with consequent deterioration of the final ethical and intellectual attainments, all go to show that dementia is beginning and that we are dealing unquestionably with an insanity. The periodic type of the drink habit is but an epiphenomenon of a phase of periodic alienation, and should be positively designated as insanity.

Alcohol is, next to heredity, the most common single cause of insanity. To be sure in some cases the drink habit may be, as Savage says, "one of the earliest symptoms rather than the cause of the insanity." Nevertheless great care must be exercised that because of the drink habit the insanity be not overlooked. The psychoses do not rise from acute

alcoholism, but develop from and follow upon the chronic type, and the continued excessive use of the poison for a long period of time.

The physical disorder of alcoholism is quite characteristic. There is a weakening of the memory and the will, a perversion of ethical sense, moral depravity, a tendency to excessive anger and periods of depression. The depression or melancholia of alcoholic type is characterized by sudden and profound onset, short periods of duration and complete remission.

Some years ago the writer was called upon to examine in the probate court a man whose habits of intemperance were well known to both examiners and the judge. The wife of the patient had been induced to request his commitment to the state hospital because of marked changes in his disposition which caused her to fear him. This we did not realize as fully as she did, and as his was thought to be a simple case of inebriety he was discharged from court. Within a few days, however, in a period of extreme mental depression, he ran a knife through his own heart. Careful inquiry of his wife and other intimates then revealed the fact that many of the little changes in character and disposition narrated above had existed for some time, and had this been apparent at the examination, the melancholia recognized, and the patient been placed under proper restraint, the tragic suicide might have been averted and possibly a cure effected.

The condition which Berkley describes as alcoholic persecutory insanity is one of the most important, because the most dangerous type we have to deal with. The onset is usually rather abrupt and its distinguishing feature is the wide range of illusions and hallucinations, innumerable and changeable, coupled with suspicions of persecutions. It is strikingly like paranoia, but is less definitely limited to the single idea. It is sometimes called pseudo-paranoia. Another phase of the mental disorder of the alcoholic is a pecul-

iar loss of the sense of time and place. This it seems to the writer is most apt to occur in the class of cases which are associated with multiple neuritis. In a case recently under observation this feature was so marked that it was impossible to impress upon the man's mind the day of the week or month, or the hour of the day, to a degree that he would retain it more than a very few minutes, although he was so bright otherwise that a stranger might converse with him for some time without discovering anything abnormal. He showed other traits at times, however, which rendered the diagnosis of alcohol insanity absolute. These are inordinate anger and jealousy coupled with illusions and hallucinations. There were some physical signs which made the case appear strikingly like general paresis, but there again the history alone marked the difference. The chronic alcoholism was followed by multiple neuritis; the latter accounts for the loss of the deep reflexes, the amnesia, and the illusions which were so suggestive of the graver disorder, general paresis. This case affords, it seems to me, a very excellent example of what Berkley describes as psuedo-paresis, the chief characteristic of which is that it develops from chronic alcoholism and is, in a measure at least, and under proper conditions, curable.

In the type of dipsomania or periodic drinking, when mental decay is just beginning to be noticeable, I have noted one feature which seems to me to be worthy of mention, that is, that when under absolute control and with the entire withdrawal of all alcoholic stimulants there will yet appear periodically a condition so closely resembling alcoholic intoxication as to cause one almost to doubt both his patient and nurse when they stoutly affirm that he has had no alcoholic drink. The face becomes flushed, the eyes suffused, the lips and tongue parched and the mental state chaotic, while the individual disposition as to temper, jealousy, etc., are markedly altered. The condition is so marked withal and is in itself so

significant that surely there can be no doubt when it occurs that a man requires complete restraint and control for a prolonged period, nor should there be any difficulty in procuring over him legal restraint on the ground of insanity.

In the foregoing, then, I have suggested some of the indications of insanity developing from chronic alcoholism.

On the other hand the simple chronic alcoholic exhibits no marked change in disposition, is not absent-minded in the same degree, and he knows very well the results of alcoholic debauch. The law justly holds him responsible for his acts when intoxicated, and he must bear the consequences of bad business deals made while in that condition.

The points, then, which I wish to emphasize are:

First. The early recognition of insanity of this type is very important, but often exceedingly difficult.

Second. It commonly rests with the general practitioner to make this diagnosis either in the home or as an examiner in lunacy in the probate court. The true nature of the case is frequently overlooked because of a lack of appreciation on the part of the physician of the significance of the diagnostic points suggested above.

Third. As a profession we should make more careful study of chronic alcoholism and be able to distinguish with certainty between the sane and the insane alcoholic.

Fourth. The state makes no provision for the care of the inebriate, and partly because of this fact there is a tendency to dismiss all alcoholic cases as ineligible to state care. This should be corrected and by a firm and united stand upon the part of the profession the state should be induced to provide for the prolonged restraint and control of that class of periodic insanity known as dipsomania, as well as for all other types of alcoholic insanity.

Fifth. Knowledge carries conviction, and when once we are convinced that a man is insane as a result of the excessive use of alcohol we should stand by our conviction regardless

of the attempts of a shrewd lawyer to influence us against our conviction and in spite of the popular idea that common drunkenness accounts for all the erratic doings of all the victims of the drink habit. — *St. Paul Medical Journal.*

In a discussion on Dr. Reed's paper on alcohol, Dr. Stewart said it was a matter of common observation among practical physicians that a very large proportion of inebriates had been the children of neurotic parents. In 44 per cent. of those treated at Dr. Stewart's private asylum, one of the parents or grandparents had taken alcohol to excess. In a large number of the remainder there was a history of either epilepsy or insanity or tuberculosis. The inebriate, as distinguished from the drunkard, almost invariably suffered from deficient memory. Hence the common saying that all inebriates were liars.

Dr. Marr of Woodilee Asylum, in Scotland, in his last report says: While victims of alcoholism are a source of misery and degradation to others, it must be remembered they were often the source of the production of insanity in others. Men and women, worried by the spendthrift habits of the alcoholic and constant association with misery, despair, and starvation were unable to bear these additional burdens to the wear and tear of daily life, and lose their mental balance. The idiot, the epileptic, the mentally weak and unstable, are all legacies to his country of the victim of alcoholism.

The psychological section of the British Medical Association at the annual meeting in June discussed the subject of alcohol in its relation to mental disease. A number of very eminent authorities expressed emphatic views on this subject, and it was evident that an immense advance had taken place in the last year concerning the dangers of alcohol. We hope in the next number to give a summary of some of the conclusions offered. A good report of it will be found in the *British Medical Journal* of October 3, 1903.

CONCERNING THE COMMITMENT OF INEBRI-
ATES.

The following very suggestive editorial appears in the St. Paul Medical Journal, edited by Dr. Burnside Foster.

The duty of the state to take care of those who are mentally irresponsible has been fulfilled in a large measure. We have good insane hospitals which are well conducted. It matters not what the cause of the insanity may be; if the patient demonstrates that he is insane by evidence that is apparent to the lay mind as well as to the professional he can be committed to the state's care, but for those inebriates who manifest few of the gross signs of insanity yet who are as mentally irresponsible as the others, and who by reason of degeneracy are unable to care for themselves and their property, no provision is made. It is practically impossible to commit to a hospital a confirmed inebriate. Not until there is little hope of restoring a sound mentality and until the property of the patient has been spent in reckless and insane dissipation does the state permit intervention on the part of the relatives and friends.

That certain forms of inebriety are the result of degeneration of the mind is as well settled as that inebriety may cause insanity. Whether alcohol stands in the relation of cause or effect does not much matter, from the practical standpoint. Neither the public nor the legislature seems to have grasped the idea that whether mental irresponsibility causes or results from alcoholic indulgences it is the duty of the state to care for the unfortunate individual at a time when the disease may be cured or the degeneration of the mind from alcoholic

indulgence may be prevented. In a very sensible article by Dunning on another page of this issue the relation of insanity to inebriety is considered and these difficulties shown. The facts are of common knowledge, but the determination of the point where the one condition merges into the other is difficult for the average person to arrive at. To medical men there is little difficulty and if there were some legal remedy which could be applied the insane inebriate and the inebriate insane would be properly and scientifically cared for, instead of being left as at present to run their ways until hopeless alcoholic dementia terminates the tragedy.

None of these cases can be properly treated without control and under the present laws this can not be exercised. The pleadings of friends, the solicitations of the family, are powerless to arouse a will which is diseased. The law only can deprive a man of his freedom of action so grossly abused by the inebriate. The necessity of control was recognized by a law which some years ago rendered it possible to commit alcoholic patients to Rochester, where a special department was assigned for their treatment. By the repeal of this law we have taken a long step backwards. While there may be justice in the contention that an insane hospital is not the proper place to care for inebriates, it seems that some other provision could have been made for them without sacrificing the principle that inebriety has a pathological basis.

There is a crying need for some place to which these unfortunate people can be legally committed as well as for the legal machinery to commit them. Legal restraint is the *sine qua non* of successful treatment. The patient has lost his will power, his finer sensibilities have become blunted, he no longer recognizes the duty to his family, and has no longer the mental capacity to properly manage his affairs. No influence can reach him and the tragic situation goes on without interruption until the man is practically in the gutter, his property wasted, and his family deprived of the neces-

saries of life. Then the law steps in and by punishment endeavors to awaken the powerless will and to restore the lost sense of propriety. It is too late, because dementia has already begun.

If the person is brought before the probate court and sent to an insane asylum the superintendent cannot detain him beyond the period when active signs of insanity have ceased, and the threat of an application for a *habeas corpus* is usually sufficient to return a mentally sick man to his former environment and to a renewal of dissipation.

A law which would permit the commitment of an inebriate for a term of six months and, at the discretion of the superintendent for another six months, would place in the hands of friends and relatives the means of bringing back to mental health scores of men who, in their normal condition, are bright, active, and successful in their vocations, and whose capacity for good in public and family life is beyond computation. Not only would such a law permit the commitment of inebriates to the state hospital, but it would lead to the establishment of private sanatoria in which, without the unmerited stigma which attaches to public institutions, men who could afford it would receive scientific and effective treatment. The want of such a law is keenly felt. There are few physicians who do not come in contact with bright men who could be restored to health and usefulness by such means and who are now compelled to await onset of dementia before appealing to the law to deprive them of the liberty which they abuse.

NATURE'S IMMUNIZATION OF THE RACE
AGAINST ALCOHOLISM—A REVIEW AND
CRITICISM OF DR. G. ARCHDALL REID'S
WORK ON ALCOHOLISM.*

BY WINFIELD S. HALL, Ph.D., M.D.,

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INTRODUCTORY.

After a careful consideration of the field over which our researches extend, your president has considered it wise to choose for his annual address not a summary of the work done during the past in the whole field, but rather a more detailed and minute presentation and discussion of the most important single work that has appeared during the last year, namely, *Alcoholism: a Study in Heredity*, by G. Archdall Reid, of England, author of *The Present Evolution of Man*, *A Theory of Acquired Immunity*, and other works, published in America by William Wood & Co., 1902.

This work created widespread interest, in England particularly, and was very generally reviewed by medical and other scientific journals, both in England and America. This rather widespread interest may be attributed not less to the inherent value of the work than to the general recognition of the author as a profound student of race development, along the particular lines of his chosen field of research, namely, *immunization to disease as a result of the influence of recognized factors of evolution*.

* President's Address, read before the American Medical Temperance Association, May 7, 1903, New Orleans, La.

The reviews of the book, brief and imperfect as such reviews uniformly are, were caught up by popular journals and called forth numerous editorials by men who were not prepared to discuss the arguments on their merits, and who therefore were betrayed into many misinterpretations of the author's meaning. We have seen in the recent past how eagerly the friends of alcohol catch at every straw that can possibly be used to float their gradually sinking propaganda. As in that case so in this. These men caught up the somewhat distorted interpretation of Dr. Reid's work and presented them as a strong plea for leaving the whole question of the regulation of the drink traffic to the slow operation of natural law, without legal, moral, or social interference.

This popular reception of Dr. Reid's book, — a reception which unquestionably annoyed Dr. Reid no less than it surprised his friends, — makes it important that some one who has understood and appreciated Dr. Reid's presentation of this important subject should review the book and interpret it in popular terms and in the spirit in which it was written by its author.

Feeling that many years spent in the study and investigation of biological problems fits me to assume this important rôle, I have decided to take this occasion to make public my criticism of Dr. Reid's theory of the immunization cure of the drink evil.

Chapters I and II of Dr. Reid's work are devoted to a brief presentation of the evolution theory and of the principal factors that have been at work to determine the development of species and of new forms of plant and animal life. The author gives a detailed account of the two great schools of biology and of their respective theories regarding the factors of evolution. Darwinism, with its *natural selection* factor, and Lemarckism, with its all-important factor of *use and dis-use*, are followed by post-Darwinism and neo-Lemarckism. It is unnecessary for us in this brief review to go into any of

the details of these chapters further than to remind you that post-Darwinism, as championed by Professor Weissmann of Germany, accepts one factor and one alone as efficient in the development of all living forms, and that factor is *natural selection*.

Reduced to its simplest and briefest terms, natural selection signifies that variation from the hereditary type is almost exclusively "*fortuitous*," or a matter of *chance* so far as human knowledge is concerned: that these fortuitous variations are selected by nature in the following way: Those animals whose variation fits them better for the struggle for existence will survive, while those whose variations make them less fitted will become exterminated in their struggle for existence. This theory of the post-Darwinians gives no place for the transmission of acquired characters.

Neo-Lamarckism, on the other hand, in the early stages of its development by biologists, gave far too great a prominence to the transmission of acquired characters. They believed that the variations of offspring from their parents were determined by the functional activities of the parents, and that chance played a small part in the variations of one generation from the preceding.

It will be seen in this case, as in most other controversies which have made a part of human history, that the two parties to the controversy were both wrong. A failure to define terms led to many misunderstandings and misapprehensions. The truth lay between the two positions. If I were to venture a criticism upon Dr. Reid's presentation it would be that he has accepted as final the position which Professor Weissmann held a few years ago, and has failed to take a proper cognizance of the fact that within the last four or five years the Darwinian school and the Lamarckian school have receded from extreme positions and have accepted principles which have been discovered and formulated in the later and more profound researches into nature's secrets — principles

which occupy a median position between the earlier extremes. Thus history repeats itself. The two parties to the controversy, under the influence of such epoch-making researches as those of the botanist De Vries, have gradually converged towards a safe middle ground that probably represents the truth as near as man is able to reach it with his present methods of study. Darwinism left no opportunity for volition on the part of higher animals. It was a fatalistic theory and all higher animals, man included, were the blind and impotent creatures of natural laws which carried them relentlessly, not whither they would go, but toward a goal from which there was no turning.

Lamarckism, on the other hand, left all to volition and was therefore absolutely untenable from a biological as well as from a sociological standpoint. The present accepted theory gives full play to natural selection of variations which arise, but accounts for these variations, not on a basis of chance but as a result, to a certain extent, of volition and function. Let us emphasize the far-reaching importance, from the standpoint of the sociologist particularly, of this factor of function and volition as determining the direction of variation, its rate and its extent. This removes from the development of man the fatalism. It opens before man two ways: a narrow, rugged, upward way to high planes of living and of thought, and a broad, easy, downward way to degeneration.

IMMUNITY FROM DISEASE.

In chapter III Dr. Reid discusses in a most scholarly manner the accepted theories of the bacteriological ætiology of disease. He divides the germ diseases into two general classes:

First. The strictly contagious, whose specific germs pass their whole life history within the human body and are passed from individual to individual by physical contact only. Of

these, the strictly contagious diseases, the venereal diseases may be taken as a type.

Second. The saprophytic diseases, of which malaria is an example. This class of germ may live and usually does live wholly independent of the human subject, and is thus found in particular localities, infecting those human subjects that come within its habitat. Between these two extremes of the strictly contagious and the malarial type, there is an intermediate class possessing some of the qualities of both: (A) Measles, tuberculosis, smallpox, influenza, whose germs are borne at least temporarily by earth or air and pass a stage outside of the human body. All of these diseases possess a strong element of contagion, but actual physical contact is not at all necessary for transmission. (B) Cholera, enteric fever, yellow fever, more nearly related to malaria in the character of the life history of the germs and in their method of transmission from individual to individual.

All of these germ diseases, from the strictly contagious to the saprophytic, possess this common characteristic — they produce in the individual or in the race the power or condition of *immunity*, which manifests itself in one or the other of two ways: First, an attack of a disease fortifies the subject against a subsequent attack of the same disease, as in the case of measles: or, second, its influence upon successive generations of the race is such as to fortify the individuals against attack by the disease, giving them in some mysterious way a greater resistance to its germs.

The law of immunity, briefly expressed by Dr. Reid, is: "It is most significant that every race is resistant to every deadly disease strictly in proportion to its past experience of it." Applying the law of natural selection to immunity the following statement may be made: (1) Men differ in their powers of resisting any given disease; (2) offspring tend to inherit their parents' powers of resistance; (3) disease is highly selective in its action; it eliminates the unfittest, leav-

ing the fittest to continue the race; thus we find natural selection in full swing. Many death-dealing diseases are so prevalent within their areas of distribution that no man escapes infection, unless he be immune; nor death, unless he be resistant.

The author's application of these principles must be apparent. Alcoholism is a disease which, left to run its course in early human history, exterminated large portions of the population in some of the early peoples. The author cites, as convincing proof of his position, the Jewish race, which is pictured at the opening of the Christian era as given over largely to the indulgence in old wine, which experience had taught them to keep in new and strong bottles. As the centuries passed the Jews became so abstinent in their habits that they are universally cited as an example of a temperate race.

The author cites several examples in the races of Southern Europe, given over in their barbaric and semi-civilized state to indescribable orgies of drink and debauchery to settle down later into a condition which may be accepted as moderate or even temperate in their use of alcoholic drinks, though not by any means abstinent.

Very rarely does one see a Jew under the influence of alcohol. The amount of drunkenness in Italy and Spain is far less than that in the countries of Northern Europe. This is cited as proof that these nations have become immunized, that is, that they have acquired a resistance, not to the ravages of alcohol—because a given quantity of alcohol has, upon an Italian, the same physiological effect that the same quantity would have upon a Swede or a Scotchman—but to a desire for alcohol, and for its special effect upon the nervous system. In short, the Jew is temperate because he does not crave alcohol. The Italian is temperate or moderate because he does not wish to indulge to the point of drunkenness.

The analogy, on the one hand, between *germ diseases* and the principle of immunity which protects the individual or

the race from complete extermination, and, on the other hand, alcoholism, and this gradually developing power to resist the temptation to use it in excess is a striking one, and one is inclined at first to accept the thesis of Dr. Reid as having been demonstrated.

Let us go back, however, and examine this analogy critically with respect to the following points: The principle of immunity incontrovertible and universally accepted by biologists, ætiologists, and sociologists applies (1) to disease, it applies (2) to contagious or infectious disease, it applies (3) to diseases which represent the reaction of the body to a living organism within that body, it applies (4) to diseases which run in the animal body a definite course of development, terminating, in the typical case, in a definite series of functional and structural disturbances.

If we test the thesis, by subjecting alcoholism to these various conditions, first, there appears to be at least a reasonable doubt that alcoholism is a disease in the same sense that tuberculosis and malaria are diseases. The psychical element in alcoholism, particularly the volition, plays an incomparably greater part than is observed in the contagious diseases. If alcoholism is a disease, in a strict sense of that term, it is a disease the progress of which one may terminate any time, though he may continue throughout life to suffer from the sequellæ of his indulgence.

Second. Alcoholism is certainly not a contagious disease nor is it an infectious disease. (3) Alcoholism is not a germ disease, though we may admit that alcohol is a toxin formed within the body of a living organism. The action which such toxins have when applied to living tissues is very different from the reaction of the living organism to the presence of living germs within the organism which give out into the living tissues and fluids, the toxins which result from their metabolic processes. That this analogy is an exceedingly remote one must be evident to every thoughtful reader,

when we apply to alcoholism these typical characteristics of the germ diseases.

But we must not do Dr. Reid the injustice to dismiss this important thesis as failing of demonstration until we have given this author ample opportunity to present it adequately and in its best light. Let us hear Dr. Reid further on the subject of immunity to disease: "It is to be noted that though one attack of certain diseases usually confers immunity on the individual yet, in such cases, the race never attains immunity. Each succeeding generation remains as susceptible as the preceding; thus Englishmen are as susceptible to infection by measles as are Polynesians, but since measles weeds out those who cannot recover from it (*i. e.*, those that cannot acquire immunity against it) the direction the evolution takes is toward an increase of the power of acquiring immunity; for that reason, though Englishmen are as susceptible to infection by measles as are Polynesians, they recover from it much more easily. The only diseases against which inborn immunity is or tends to be evolved are those against which the individual cannot acquire immunity — consumption, for example. When immunity against disease can be acquired by the individual then the power of acquiring it is evolved in the race by natural selection; when it cannot be acquired by the individual (when one attack weakens rather than strengthens) then inborn immunity is evolved in the race. In the one case the capacity *to recover from* infection is evolved, in the other the capacity *to resist* infection. In both cases the evolution proceeds wholly on lines of natural selection, not on lines of the transmission of acquirements."

We may accept this, as setting forth in a clear manner the fundamental principles of immunization to disease, as now understood by biologists and pathologists. In his chapter (IV) on the "Roots of Empire," Dr. Reid makes a most instructive presentation of "The part played by malaria and consumption in the natural and political history of man."

In this chapter the author applies his theory of immunity to the development of nations and governments in a scholarly way that no pathologist or anthropologist would hesitate to accept.

Summing up his discussion of immunity as applied to zymotic diseases. Dr. Reid says (chapter V, page 61): We have seen in the preceding pages that natural selection, the thing so often denied, actually does occur in the only case in which we are able to note its operations, for though we cannot tabulate the death rate of wild animals and plants, we are able to tabulate the death-rates of the races of man and to observe that under the influence of disease selection the physical nature of mankind is slowly altering towards a momentous conclusion. But zymotic disease is not the sole selective cause of human elimination. If we continue our study of selective death-rates, we shall find that a mental alteration in every way as momentous as the great physical change we have chronicled, is at work, slowly but mightily, moulding the destinies of the races of mankind.

Taking up the death-rate from alcohol (chapter VI), the author gives statistics from health reports and insurance companies which show the terrible ravages of alcoholism in England, closing the chapter with the words "Let us then endeavor to discover whether alcohol eliminates a particular type of individual. If it does, let us try to trace the course of the resulting evolution."

As to the causes of drunkenness (chapter VII), we may summarize briefly: "Men drink alcoholic solutions for three distinct reasons: first, to satisfy thirst; second, to gratify taste; third, to produce a direct effect upon the brain. Only the last reason is the cause of drunkenness, because those who drink to satisfy thirst drink moderately of dilute solutions, while those who drink to gratify taste drink also moderately of dilute solutions, usually wines, while those who drink for a certain drug effect seldom stop short of actual drunkenness. Men differ in their predisposition to inebriety.

As a rule men drink in proportion to their individual predispositions, self-control being a subordinate factor in the causation of sobriety. *Lack of temptation is the principle factor of sobriety* in a vast majority of sober people."

Regarding alcohol selection (chapter VIII) Dr. Reid says: "It is true that some men are able to tolerate much greater quantities of alcohol than others; nevertheless, even he whose tolerance is greatest is more injured by a large than by a small quantity. It follows that alcohol, year after year, eliminates from the race a great number of people so constituted that intoxication affords them keen delight, leaving the perpetuation of the race, in great measure, to those on whom intoxication confers little or no delight. Many 'potential drunkards'—as we may term those capable of enjoying the indulgence—escape, of course; they are saved by lack of opportunity or by strenuous and brave resistance to temptation, but among all the victims of alcoholism, there is probably not one who has not the alcohol 'diathesis'; for it is inconceivable that any would accept the penalties of deep indulgence, if deep indulgence were not delightful to him. Now since alcohol weeds out enormous quantities of people of the particular type, it is a stringent agent of selection—an agent of selection more stringent than any one disease. Many diseases have been the cause of great and manifest evolution. It follows that alcohol, which has been used by many races for thousands of years, should be the cause of an evolution at least as great as that which has been caused by any one disease."

In subsequent chapters, Dr. Reid brings forward a great mass of historical evidence to show that the result which one would expect on *a priori* grounds is what one actually finds in a study of the progress of human history: Dr. Reid concludes that, left to run its natural course, as it has among certain tribes of ignorant aborigines, the inherent desire for narcotics, finding its expression principally in alcoholism, would in time eliminate or exterminate a large proportion of

the race. Furthermore, the author has made it evident that that portion of the race, or of the particular nation undergoing the eliminating process, which would fall victims to alcoholism, would be the portion possessed of certain mental characteristics predisposing them to fall easy victims to the excessive use of alcohol, of tobacco, opium, or other narcotics.

On the other hand, those members of any particular nation, which undergoes this eliminating process, who resist a temptation to indulge in narcotics, represents strictly those who possess certain mental characteristics. They do not indulge because they are not tempted to do so.

What is the significance of this alcoholic selection of the race? If we accept Dr. Reid's theory what is the practical application of the theory to temperance reform?

The study of the past history of the race makes it evident that in the course of hundreds, perhaps thousands, of years of alcohol elimination the remaining members of the race subjected to this elimination will be temperate. Those who are interested in the manufacture and sale of alcoholic beverages interpret Dr. Reid's book to mean that the proper attitude to take regarding the drink question is to let nature take her course and eventually the evil will correct itself. But Dr. Reid offers a solution. He calls the reader's attention to the fact that by artificial selection man has been able to produce in plants and animals a very rapid evolution, in producing new forms and eliminating undesirable forms; producing as much change in a given species of plants or animals in fifty years as natural processes, left to themselves, would produce in fifty thousand years. Dr. Reid does not by any means propose to let nature take its slow and tedious course in this evolution. He proposes to invoke the strong arm of the law.

Dr. Reid shows that the reason the present laws have been so ineffective is because they are not in harmony with nature's laws. It will require no argument to convince medi-

cal men that any remedy which is to be effective must be in harmony with nature's laws. Artificial selection, as used by the breeders of new forms of plants and animals, is in harmony with nature's laws. Man steps in and guides the natural processes, so that every change makes for progress in a particular desired direction. We are all acquainted with the method of the breeder, and that he allows only those individuals who possess the required characters to procreate their kind. With this principle of artificial selection Dr. Reid proposes to make it unlawful for drunkards to bring children into the world. He admits the very great difficulty of administering such laws. He admits also that a very large portion of the population who favor severe measures to stop the drink evil would object to this particular method because it seems to interfere with individual freedom and with rights and privileges which are assumed to be inherent. The writer, though fully accepting Dr. Reid's theory of alcohol elimination, believes that methods may be devised by which this process of elimination can be very greatly hastened, methods which are in harmony with nature's laws and which would receive the hearty support of all those who favor legislation on the drink problem.

Dr. Reid says, in the appendix to his book (page 232): "The mind of man is a blank at birth, and it follows, since so much is acquired, that the disposition and character of every man must be almost entirely acquired, and not inborn, as is usually assumed. . . . Moreover we realize that a child reared by the brave or the cowardly, the active or slothful, the moral or the immoral, the patriotic or the non-patriotic, the devout or the skeptical, etc., will generally exhibit the trait of his educators, even if they be not his progenitors. In fact we realize, as regards man, that the mind of one generation imprints itself on the mind of the next not racially but educationally. This is the gist of the whole matter. Most drunkards begin to drink early in life, before marriage.

In so doing they make themselves less attractive and less likely to be accepted in marriage.

It therefore follows that the number of children by drunken fathers is far less in proportion to the number of men than the children by temperate fathers; furthermore, a very large portion of these children die early because of the conditions which reign in the home of the drunken man. Still greater is the death-rate of children born of a drunken mother.

The writer believes that something may be done to decrease the number of marriages and the number of children among the drinking portion of the population. This, however, is an exceedingly delicate and difficult subject to handle effectively and consistently through laws whose adoption and whose administration depend on popular votes and the exigencies of politics.

Allow me to suggest the following remedy as being in harmony with nature's laws of selection and far more likely to receive popular approbation than the stringent measure suggested by Dr. Reid.

It has been shown above and it is generally recognized among sociologists that the environment has much to do with the development of children — as much as heredity. This, of course, applies only to their mental characteristics, but we have seen that the tendency to use narcotics depends upon mental characteristics as well as physical ones. If we can control the education of children, we can exert greater influence upon the succeeding generation than can be exerted by any measures applied to the adults.

The writer suggests that children born into families where either or both parents are addicted to habitual drunkenness be removed from the influence of their family and reared by the state in homes superintended by most carefully selected matrons and educated from state funds. Of these children so educated by the state a far smaller proportion will become addicted to the use of alcohol than would be the case had they been left to grow up under the influence of inebriate parents.

THE TREATMENT OF INEBRIATES.

BY A. M. ROSEBURGH, M.D.,

Secretary Prisoners' Aid Association of Canada.

At the meeting of the Canadian Medical Association in 1898 a paper was read "On the Treatment of Inebriates." In this paper a plan was outlined for the economic treatment of indigent inebriates without the establishment of public inebriate hospitals. The question was referred to a special committee, and this committee at the meeting in 1899 reported in favor of the plan proposed. The scheme was subsequently submitted to the Premier and Provincial Secretary of Ontario, and at their request a bill was drafted in which the various features of the plan proposed were incorporated. The bill was drafted jointly by a committee of the Public Health Committee of the Ontario Medical Association and a committee of the Prisoners' Aid Association of Canada. It was submitted to the Premier during the session of 1901, but, from whatever cause, the bill has not as yet been brought before the legislature, although, so far as we know, no objections have been taken to any feature of the proposed bill. The members of the government freely admit the great need of scientific treatment being afforded to indigent inebriates and that the present method of sending inebriates to jail is neither deterrent nor reformatory, but nevertheless they unfortunately allow the matter to be deferred from year to year.

As the title of the proposed bill indicates, it is "An Act to Promote the Treatment of Pauper Inebriates by Municipali-

ties, Benevolent Societies, and Individuals." The principal features of the bill are as follows :

1. Placing all cases of drunkenness, except confirmed jail "rounders," experimentally on probation on suspended sentence, and under the supervision of a probation officer.
2. Imposing a fine and permitting the fine to be paid by instalments to the probation officer.
3. In cases in which inebriety has become a disease, the probation officer given authority to place the dipsomaniac for a few weeks' treatment in a cottage hospital or in an inebriate department in a general hospital.
4. The cost of treatment to be considered as a loan, to be repaid after treatment and while still on probation.
5. Cases of able-bodied inebriates not reformed or not reformable by these simple and inexpensive methods to be sentenced to prison on cumulative sentences.
6. Old and feeble confirmed inebriates to be provided for in county or city poorhouses.
7. A special per capita government grant made to hospitals to promote the treatment of dipsomaniacs.
8. A medical officer appointed by government to organize inebriate wards in general hospitals and special cottage hospitals for the treatment of dipsomaniacs in Ontario where such hospitals are necessary, to provide for and supervise medical treatment in said hospitals, and also to provide for home medical treatment for probationers in proper cases.
9. Three physicians of standing in the Province to be appointed as a committee of consultation to coöperate, without salary, with the medical officer.

Many years ago the Ontario government inaugurated a very wise policy with respect to the destitute poor of the Province. For the purpose of promoting the humane care of these unfortunates, a substantial bonus is given to each county in which a house of refuge is established. We desire the same principle introduced for the purpose of promoting the treatment of in-

digent inebriates. The government is not asked to establish a provincial institution, with the large expense involved in construction and maintenance; neither is the government asked to defray the principal expenses involved in the practical working of the bill. The government is simply asked to take such action as will stimulate municipalities and the benevolent public to undertake the treatment of the unfortunate class for whose benefit the bill is designed.

The bill, as drafted, has been endorsed by the Ontario Medical Association, The Toronto Medical Society, and a number of public bodies. It has also been endorsed by the Medical Press, including the *Quarterly Journal of Inebriety*. In the October number for 1902 of the latter journal, the editor speaks of this bill as follows: "We are confident that this bill will lead all the world as a new economic movement to diminish the misery and crime which associate and follow alcoholic drinking . . . its success is simply a question of the men to carry out its provisions."

At the meeting of the Ontario Medical Association held in June last, a representative committee was appointed to cooperate with other public bodies in promoting the adoption of this bill.

As the underlying principle of this bill has been endorsed by the Canadian Medical Association we trust the members may be able to see their way clear to aid the movement by taking action similar to that of the Ontario Medical Association, viz.: by appointing a representative committee of cooperation. Furthermore, we respectfully request that every member of the medical profession who is in a position to do so will kindly give the undertaking a helping hand.

Abstracts and Reviews.

ALCOHOL AND TUBERCULOSIS.

Extracts from a paper by Dr. Legrain of Paris at the Anti-alcohol Congress in Bremen, April, 1903.

Translated from "Miner" by B. E. HOCHERT.

It is a fact, nowadays disputed by nobody, that a certain relation exists between tuberculosis and alcoholism.

1. Alcohol in its action as a predisposing agent stands in the same relation to tuberculosis as to other contagious diseases. But the problem is here of greater importance, as tuberculosis is the disease that has the greatest predisposition for the human body and demands the greatest number of victims.

2. Alcohol makes a person more disposed for tuberculosis by its paralyzing and smothering effects on the protoplasm of the cells, making their power of resistance against the bacteria less. It prepares the soil for the tuberculosis by destroying all the works of defense of the organism, especially by affecting the nervous system, for which it is a powerful poison. It also produces organic troubles in the organ of nutrition and their works.

3. By producing innate weakness it makes a person predisposed for tuberculosis from its birth.

4. At last alcohol makes disease worse by continued influence on the already infected organism, thus hastening the development of the infection. It prevents the cure of the disease, which generally is possible.

5. Therefore it is absolutely wrong, although some Italian specialist [Marighiana] lately claims the opposite, to systematically treat tuberculosis patients with alcohol, showing a great ignorance of the human nature.

6. Alcohol makes the human being more predisposed to tuberculosis from the social side by removing from him every moral support, every other ideal, and by darkening the consciousness of his real wants. This brings the consequence that he neglects his body and it is this that brings the pauperism with all its well-known signs — small, overpopulated, unhealthy habitations, unwholesome food, and ignorance of the most simple rules for private and public hygiene. The inebriates do not know enough to eat, to dress, to live, or to get a habitation in harmony with the other wants of a human being.

7. Therefore, from a social standpoint, the bacteria are not the real cause of the disease, but all such conditions that are suitable to extend this field for the power of the bacteria and to bring the infection to its full effect — sickness; physical, moral, or financial pauperism, absence of proper sanitary conditions — all causes that come direct from the use of the alcohol when it has become a habit.

8. A logical consequence hereof is that the fight against the tuberculosis must precede the treatment of the tuberculosis patient, and that this fight in the first place must tend to remove the social causes for the disease, that is, to prevent those. By curing a few tuberculosis patients the tuberculosis does not disappear more than drunkenness would disappear by curing an inebriate.

9. That tuberculosis is contagious is a fact, but this has been greatly exaggerated. It is all right to cry out the

risk of infection, as the wholesale terror this will cause among the people, by and by, may induce them to change their way of living in accordance with the general rules for sanitary conditions, but the scientists themselves must never estimate the danger higher than that from other contagious or infectious diseases.

10. I do not at all hereby say that we should not treat the tuberculosis patients and give them all the help we can, but it is, in my opinion, as the importance of the subject demands, that we first of all must concentrate our works in trying to change the drinking habits, thus annihilate the alcoholism and terminate the cause of tuberculosis. It is entirely a mistake to think that only by prohibiting the abuse of spirits and by isolating the tuberculosis patients and by giving them an individual treatment one can cure the tuberculosis.

11. If, also, the sanatories are a great help for the tuberculosis patients, it is yet from a social side to proceed in a wrong way, if not at the same time means are provided to prevent the evil. The most important of those means is, without doubt, the fight against alcohol. To triumph over alcohol is almost as to triumph over the tuberculosis.

12. The efforts of the official authorities and of the private charity will be almost fruitless if they, as at present, concentrate their work on the tuberculosis alone.

13. The efforts of the states and the capital spent in the interest of society are used in the wrong directions as long as they are not to the same extent used in the fight against alcoholism. The sanitarium for tuberculosis patients demands one for the treatment of inebriates.

14. Coöperation with the work against the alcohol can do more against the tuberculosis than the sanatories. Those only give their attention to the sick, but neglect entirely to teach them how to live after they are cured, and in this we have one of the greatest causes of the spreading of the disease.

15. Both for the individual and the community most important treatment of the tuberculosis is to take the proper measures to prevent the evil. Of all such measures the most important is total abstinence from alcoholic beverages and to spread among the people the knowledge of the importance of total abstinence.

16. Therefore the fight against tuberculosis must necessarily be a fight against the alcohol. The physicians at the asylums for treatment of tuberculosis patients must consider it their duty to be teetotalers and to educate the sick to be teetotalers also.

17. Before everything, the now-existing hospitals and sanitariums for treatment of tuberculosis patients must also be a school that educates the patients by teaching the example of total abstinence. The treatment at such asylums must include a methodic, successful, and scientific education to a total abstinence life. Total abstinence is, under this double view of curing and educating, absolutely necessary.

THE TREATMENT OF INEBRIETY IN AUSTRALIA.

The committee appointed by the government of Victoria in December, 1901, to inquire into the subject of inebriety and the methods for its cure has furnished a report to the chief secretary. After detailing the work of investigation carried out by the committee the report closed with the following recommendations: "1. That provisions be made for the registration, under conditions fixed by the government, of all institutions for the treatment of inebriety. 2. That all such institutions must be placed under government supervision and inspection. 3. That a special place of confinement and treatment must be provided for criminal inebriates, where the offense may be directly traced to inebriety, or where the ground of detention is habitual drunkenness

itself. 4. That a government institution, under a board of control, be established in some locality suitable for isolation and classification and the opportunity for employment, to which inebriates can be sent voluntarily or compulsorily, in which different methods of treatment may be adopted. 5. That a bill be immediately introduced by the government determining the conditions under which inebriates can be dealt with on the lines of the New South Wales measure of September, 1900, and making provision for the foregoing recommendation." — *British Medical Journal*.

The late Dr. Kerr predicted that the time would come when the English society for the study of inebriety, of which he was president, would establish a special journal to record its work and keep its members in touch with the literature of the subject. After many years of the publication of the proceedings, this society has at last established a journal and materialized the prediction of Dr. Kerr. The first number, dated July, 1903, is a quarterly of nearly one hundred pages edited by Dr. Kelynack, the secretary of the society. It contains five original papers with a variety of very interesting notes and comments. The second number appeared in October and contains nine original papers, all by eminent men and all very practical and suggestive. The journal as a whole is a very attractive, excellent grouping of facts which, under the enthusiasm of its talented editor, will occupy a very prominent place in the near future. We extend our warmest greetings to both the journal and its editor, and feel sure that this is the beginning of a most influential and valuable periodical which will revolutionize public sentiment on inebriety not only in England but in Europe. It is a fact of great interest to this journal to feel that after twenty-seven years of existence another journal comes to share with us and help on the work in this new field. We publish in this issue two important papers from this journal,

and we hope in the future to make frequent extracts from its papers. The English society, together with ours, are the only organizations in the world that study the inebriate and his malady, primarily.

PHYSIOLOGICAL ASPECTS OF THE LIQUOR PROBLEM. Investigations made by and under the direction of W. O. Atwater, John S. Billings, H. P. Bowditch, H. R. Chittenden, and W. H. Welch, subcommittee of the committee of fifty to investigate the liquor problem. Houghton, Mifflin & Co., Riverside Press, Cambridge, Mass., 1903.

In 1903 a self-appointed committee was organized for the purpose of studying the alcoholic problem along more exact lines and above the levels of sentiment and prejudice. The membership, limited to fifty, was composed of presidents, professors of colleges, with clergymen, lawyers, physicians, and other prominent notable men. The distinct object of this committee was to make exhaustive and accurate studies of different phases of the alcoholic problem from a scientific, judicial, and conservative point of view, which would be authoritative and create a clearer public sentiment, also a better understanding of the alcoholic problem. The eminent character of the members of this committee and its broad plan of work attracted great attention and aroused high expectations of new and advanced studies in this subject. During a period of ten years three different reports in the form of volumes have been issued by this committee — one on the "Legislative Aspects of the Liquor Problem," another on its "Economic Aspects," and a third on "Substitutes for the Saloon." Each volume was welcomed and read with great eagerness, and profound disappointment to those who had expected new and broader studies in this field. Each author not only failed to grasp the facts

presented or even to lift the subject out from the levels of dogmatic controversy. Facts, theories, and conclusions were jumbled and mixed until they literally dwindled into a weak apology and defense of moderate drinking and the value of alcohol as a stimulant, together with a general condemnation of all present efforts to solve the problem.

Early in the history of this work, a subcommittee was appointed of eminent teachers and physicians to make an exhaustive study of the physiological and pathological aspects of the alcoholic problem. After a study and consideration of the subject extending over a period of ten years, this committee has issued their first report, in two large volumes containing nearly 700 pages and composed of nine different papers and studies of different phases of the subject. In a note these studies are called preliminary and contributory to further and more exhaustive research. The preface, after a historic review, condenses the results and conclusions of this committee, some of which are as follows: "That not more than 20 per cent. of the population of the United States are total abstainers and not more than five per cent. use alcohol to excess; among leading brain-workers 80 per cent. use alcohol occasionally or in moderation." Anstie's theory of what constitutes the moderate use of alcohol is endorsed as correct, and alcohol is asserted to have a certain food value and is a restorative in fatigue; also one of the greatest dangers today is affirmed to be the false teaching of the nature of alcohol in common schools, which is not only untrue but unscientific. The first article or report is a study of present instructions in public schools concerning the physiological action of alcohol. This occupies nearly a fourth of the space in the two books and is evidently considered to be the most important and leading topic; but, literally, it is simply a bitter personal condemnation of the present methods and books used in teaching the dangers of alcohol in common schools, and ends with the assertion that all these efforts are neither scientific, temperate, nor instructive. To

support this conclusion a mass of statements and opinions from authors, ancient, modern, dead, alive, good, bad, and indifferent, are grouped and arranged in a way to magnify everything supporting this view, and minimizing all the evidence to the contrary. Through it all there is a tone of assumptuous superiority and knowledge which will not admit a doubt of the accuracy of their judgment and conclusions. Of the eight papers which follow, two or three are excellent studies of facts and experiments concerning alcohol, both in spirit and scientific consideration.

Two papers are detailed experimental studies, with tables and conclusions so minute as to be of little value to any except laboratory workers. The other papers vary widely in scientific value both as to facts and their apparent conclusions, and all are more or less suggestive. Some of the conclusions from these papers are asserted with a positiveness that reflects on the intelligence of the writers. Thus, the alcoholic problem is said to be largely a moral one; total abstainers are called doubtful authorities in the matter of recording exact facts and giving opinions on them. Nothing is said to be worse than overstatement and exaggerated theories of the danger concerning the nature of alcohol. One author timidly asserts that in some instances of alcoholic excess, where it is periodical in character, there is evidently a disease of the central brain. Another author is sure that alcohol has a food value and is good in many ways, and should not be condemned if used in moderation. It is also declared to be a true stimulant and valuable aid to digestion. These and similar statements are often qualified to such an extent that the reader is bewildered, and the results of experiments are stated with ifs and qualifying words so numerous as to make the facts stated seem doubtful.

One is startled to find that nearly all the quotations from the literature of the subject is from French and German sources, and that nothing in this country is worthy of reference. These are some of the faults of this report which attract attention

particularly because of the assumptious standard set up by the committee. of superior knowledge, and great scientific candor, in the study of the subject. If the committee had entered the field on the ordinary level of cotemporaneous study these faults would not have attracted attention but would have passed as the current belief of the time incident to any disputed subject. On the other hand, while these volumes are contributions combined with the personal opinions and prejudices of the authors, they contain a grouping of many valuable facts and studies on the different aspects of the subject. The uncertainty and confusion of many of the conclusions exactly shows the present state of the subject and proves clearly that no one however learned or trained in other departments of literature and science is able to write dogmatically on this subject. Nevertheless, the committee have done good work, worthy of praise; but whenever they drop to the levels of partisan controversy and condemn all other efforts by equally honest workers they fail. This report is really a valuable contribution, not only in pointing out the complexity of the subject but in its statements of facts which will be very useful in all future studies. These volumes should go into the library of every student of the alcoholic question. The publisher is to be congratulated on presenting the matter in so attractive a form.

T. D. CROTHERS, M.D.

PHYSIOLOGICAL ASPECTS OF THE LIQUOR PROBLEM. Investigations made by and under the direction of W. O. Atwater, John S. Billings, H. P. Bowditch, R. H. Crittenden, and W. N. Welch, subcommittee of the committee of fifty to investigate the liquor problem.

This publication is in two volumes and is issued by the Riverside Press, Cambridge. The work, which was done under the general direction of the subcommittee, appears in nine dif-

ferent articles dealing with different phases on the whole problem, viz.: the influence of alcohol on digestion; the pathological effect of alcohol; the effect of alcohol on growth, development, and reproduction; the influence of alcohol on infection and immunity; the extent to which it is consumed in the body and its actions as a force, product, and food; relation between alcohol and insanity; relative prevalence of the use of alcoholic drinks by brain-workers; and, finally, a comparison of the opinions of the leading pathologists and physiologists with regard to the effect of alcohol drinks and the teachings of the text books now in use in the common schools of this country.

As a result of these investigations the committee have arrived at the following conclusions:

1. The effects of a moderate or occasional use of alcoholic drink upon man differ greatly in different individuals and depend on constitutional peculiarities, age, occupation, climate, etc. Most of them, especially the ultimate effects upon health, cannot be ascertained with much accuracy by experiments upon animals or upon a few men for short periods.

For the term "moderate" quantity the committee accepts the view as formulated by Anstie, viz.: the equivalent of one and one-half ounces of absolute alcohol per day, or about three ounces of whisky or half a bottle of claret or Rhine wine or four glasses of beer; it being understood that this is to be taken only at lunch or dinner and that the whisky is to be well diluted, so that anything in excess of these respective amounts or taken on an empty stomach between meals or at any other time than lunch or dinner would be "immoderate" drinking. We are glad to have this interpretation, or one accepted as such by the committee, of what may constitute a "moderation" in the use of alcoholic liquors.

We presume that the committee would also include in the term moderation the daily use at lunch or dinner, or both, the amounts already specified. The term "occasional" we suppose to mean the social glass, in moderation, now and then, at

weddings, or christenings, or social occasions, etc., the interval being marked by "total abstinence." We agree with the committee that the effects of the moderate or occasional use of alcoholic liquors differ greatly in different individuals, especially the ultimate effect upon the health, and this cannot be ascertained with much accuracy on men or animals for a short period of time.

We observe that the chronic alcoholic inebriate and the pathological effects of chronic alcoholism are the results of the continuous use of alcohol in moderation over a long-continued space of time, which eventually leads to excess; that the alcoholic inebriate graduates from the class of so-called "moderate drinkers" and that the "moderate use" of alcoholic liquors is the basis of this immoderate or excessive and intemperate use; that the moderate habit begets the excessive habit, and that the "moderate" drinker does not remain as such but gradually increases his potations until he indulges in excess and so becomes intemperate.

We pass over article two, as this simply refers to the fact that the committee accepts the conclusions of the several papers.

Article three divides drinkers of alcoholic liquors into several classes, including in their classifications those who do not use such beverages, viz.:—limiting their statistics to adult males—total abstainers, 20 per cent.; intemperate, 5 per cent.; occasional, 20 per cent.; regular (moderate), 25 per cent.

We think the statistics for intemperate too low: if we compare the police reports of cities the annual number of arrests of habitual drunkards would exceed that, and then we would have to take the habits in private life or statistics of sanitariums, hospitals, and almshouses.

Article four gives 80 per cent. as the ratio of leading brain-workers in the United States who use alcohol occasionally or habitually in moderation: such statistics on this part are of

little or no scientific value, but are of interest as showing that the use of such drink to stimulate mental effort "as a whole gives bad results." If the record of the brilliant men, writers and thinkers of the past century, could be recorded, it would be a sad history, and it is from this class alcohol seems to select its prominent victims, as the statistics of our sanitariums and asylums would readily demonstrate.

The committee points out the dangers of alcohol in its use by young persons, mainly because of the danger of its leading to excess, and recommends its safety limit to persons over 50 years and with the last meal of the day, towards night and on a full stomach. We agree as to the age limit, if alcohol must be used; and, if the suggestion of the committee could be legally carried out, every saloon-keeper in the United States would go out of business and the wholesale dealer would be seriously crippled.

Article five lays emphasis on the fact that the deleterious substance in all alcoholic liquors is the alcohol they contain. The popular notion that good wine and liquors are comparatively safe as compared with ordinary spirituous beverages is a popular fallacy. The hallucination that wine and beer are less injurious because they contain less alcohol is to a certain extent correct, but not when wine and beer are used to excess to get the effect induced by a less amount of whisky, brandy, or high proof wines, etc. The evil effect of some wines, as claret, on the digestion, is referred to also.

Article six. The question of alcohol as a food or poison is not positively asserted by the committee under all conditions. In moderate quantities, beer, wine, and diluted whisky are in a certain sense foods, but they are seldom used for food purposes, but mainly for their peculiar effect on the brain. In large quantities and for a few persons of peculiar temperament even in moderate quantities they are poisons. The last assertion is limited, and it is not that the injurious effects of alcohol affect only persons of a peculiar temperament or

that those persons are few in number. We wish it were so; we have no desire to exaggerate the evil and certainly not to minimize it, but the statistics of asylums and sanitariums which receive alcoholics readily prove the universality of the evil effects of alcohol, to which men of all classes and temperaments, in a greater or less degree, are subject. The food value, if it has any, is far exceeded by its qualities as a poison and as a substance dangerous to health and life.

Seven. The committee agree that alcohol taken just before or during physical or mental labor is depressing and more harmful; that it is useless as preventing infectious or contagious disease and lessens the power of the organism to resist the effects of the cause of such disease.

Eight. The report of Drs. Bowditch and Hodge fails to justify the conclusions that much of the methods and substances of the so-called scientific temperance in the public schools is unscientific and undesirable. In reference to this conclusion of the committee all we have to say is that the reports do not sustain them; but we are not supposed to accept the conclusions of Drs. Bowditch and Hodge as infallible and free from possible error, and hence cannot accept the wholesale denunciation by the committee of the present school institutions, although we agree that there is no system of teaching or any branch of science that is not susceptible of improvement, and that progress in any department of instructions must be always synonymous with improvement.

Nine. Would exclude the junior classes or limit the instructions to the older children, especially those of the high schools, and to teach them to distinguish between mere assertions and scientific evidence as to the age at which a child can distinguish between food and poison and the possible effects of either. The committee seem to overlook the fact that the use of the word food will be misunderstood by the average person and even by the older children in the high school. It

is an unfortunate term and will always be misinterpreted in relation to alcohol.

Ten. This article suggests that it might be taught while in moderate quantities beer and wine may be, in a certain sense, a food they are a very imperfect, expensive kind of food and are seldom used for food purposes. They are not needed by young and healthy persons and are dangerous to them in so far as they tend to create a habit, etc.

It should be also taught that alcoholic drinks are almost always expensive, and their use in excess is the cause of much disease, suffering, and poverty, and of many crimes, etc.

It should not be taught that one or two glasses of beer or wine by grown-up persons is dangerous, for it is not true, as children know by their own experience. We certainly agree with the committee that alcohol is a very bad kind of food, and should therefore be excluded from the average diet list of foods as being of no practical value as a food.

That its use is limited and exceptionable, and, as suggested, only under special conditions: then we advise that the laity should not use it habitually as a beverage, nor the medical profession prescribe it at random, as is so often done. All experience opposes the idea that it can be used habitually, even in so-called moderation, with safety.

As to children not being taught that even moderate use by their parents in their homes is undesirable and unnecessary and attended with the possible danger of habit, we assent that it is the home tipping on the part of the parent that will, from association and influence, lead the child to look upon as harmless and proper that which he ought to shun and detest; thus parental influence and home influence are the most profound teachings which can impress on the mind of the child.

The committee has presented an excellent report, particularly valuable for its suggestions and outline facts, which will be the base and foundation for more exact and accurate study in the future.

LEWIS D. MASON, M.D.

A TREATISE ON ORGANIC NERVOUS DISEASES.

By M. Allen Starr, M.D., Ph.D., LL.D., Professor of Diseases of the Mind and Nervous System in the College of Physicians and Surgeons, New York. Lea Brothers & Co., New York and Philadelphia, 1903. Price: Cloth, \$6.00; leather, \$7.00, net.

Students of the toxemias and psychoses following or marked by spirit and drug excesses are always confused to distinguish between the organic and so-called functional conditions present. Dr. Starr has given a work that is particularly valuable in bringing out clearly the symptoms and diagnosis of organic disease. It really has supplied a want by excluding all other except organic diseases in the study and treatment of nervous diseases. While the book as a whole is exceedingly clear and suggestive, study of the chapters on neurology and neuritis, covering over a hundred pages, will be found of great value, particularly in the suggestive graphic presentation of the facts. One of these suggestions, that neuritis following typhoid fever and pneumonia appearing in the course of tuberculosis arises from the use of alcohol which has been used as a medicine, is a statement of a new fact which is not recognized except by specialists. Some studies along this direction have supplied some illustrated cases which Dr. Starr has outlined in many ways. The chapters on sclerosis are very clear, and those on palsies are very valuable. The general paralysis of the nervous system is admirably treated and the one on cerebral circulation is of unusual interest. The first chapter on the structure of the nervous system makes a very difficult subject clear and will be highly prized by all the readers. The diagnosis, pathology, and general symptomatology, illustrate clearly the present condition of neurology, which is much more advanced than that of the treatment. The author's long experience enables him to discriminate concerning the therapeutic value of remedies and advise only those measures which are most practical.

The arrangement of the work is excellent, enabling the reader to have a complete picture in his mind of nervous disease and its relation to the rest of the body. The illustrations are numerous and many of them original, and on the whole this is one of the best single volumes on the subject of nervous diseases published. The personality of the author gives a fresh interest to every page not often seen in books of this character, and altogether this will prove one of the most popular books on the subject. The publishers have produced a volume which fully sustains their reputation for first-class workmanship in book-making.

HUGHES' TREATISE ON NEUROLOGY. The Neurological Practice of Medicine; a Cursory Course of Selected Lectures in Neurology, Neurology, Psychology, and Psychiatry, applicable to General and Special Practice (with 177 illustrations), after the author's class-room methods as a teacher of students. Designed for students and general practitioners of medicine and surgery. By Charles H. Hughes, M.D., President of the Faculty and Professor of Neurology, Psychiatry, and Electrotherapy, Barnes Medical College. Former Major and Surgeon-in-Chief of Schofield, Winter, Hickory Street, and McDowell's College Military Hospitals; Superintendent Missouri State Insane Hospital; acting and honorary member of many Home and Foreign Medical and Scientific Societies, etc., etc. Member Governing Board of Centenary Hospital, ex-member Board of Health, and consultant of City Hospital, Insane Hospital, etc. 1903. Hughes & Co., 418 N. 3d St., St. Louis, Publishers.

This volume of over four hundred pages is by far the best single study of neurology and psychology which has been published. The intense personality of the author and his

strong original conceptions of psychological problems give a positiveness and distinct flavor to the work quite unusual in books of this character. The title expresses very clearly the character and treatment of the subject which the author presents. While each chapter is not exhaustive, but rather an outline sketch, it is intensely suggestive and stimulating, resembling a shrewdly written advertisement, in which the reader is greatly interested but disappointed in not having more. The illustrations are excellent, many of them new, and the apparatus described is very satisfactory. The psychopathic side of the neurology is brought into prominence, and in this respect the book will outrank all others in the field of neuropathy. It is hard to discriminate in the thirty-six chapters presented, they are all so clear and suggestive, and while they do not claim to be exhaustive they are at least practical and helpful, creating new interest in the subject. For over a quarter of a century Dr. Hughes has been recognized as one of the foremost neurologists of this country, and his writings have been read by thousands with great pleasure and profit, hence this book is bound to occupy a high place in the literature of the subject. We urge our readers to procure this work as one of the most helpful and practical books which can be placed in the library of every student of psychiatry. Dr. Hughes' interest and writings on the toxemias from spirit and drug poisons has been marked by originality and clearness which has placed him as a foremost student of this subject.

Altogether this book presents a study of many distinct phases of nervous diseases along new lines and from new points of view which the general practitioner as well as the specialists will find very helpful and practical in everyday life. We shall give our readers some extracts from this work in future numbers of the JOURNAL.

RATIONAL HYDROTHERAPY. A manual of physiological and therapeutic effects of hydriatic procedures and the technique of their application in the treatment of disease. By J. H. Kellogg, M.D. Member of the British Gynecological Society, the British and American Association for the Advancement of Science, the American Medical Association, superintendent of the Battle Creek Sanitarium, etc., etc. With 293 illustrations in colors. Second edition. F. A. Davis Company, Publishers, Philadelphia. 1903.

This is one of the most practical and exhaustive books which has appeared in the English language on this subject, covering 1,200 pages and describing almost every known use of water as a medicine and the therapeutic power which comes from it. The chapters on hydrotherapy, historically, are very interesting, also that on the physics of water, air, heat, and light in relation to hydropathy. The physiological effects of external and internal applications of water are exceedingly valuable studies and very largely new to the literature of medicine. The physiological effects of light is another chapter that is original, and also one on general principles of hydriatics. The experimental work done by the author in the application of water to the treatment of disease is given in full detail and is very suggestive. The book as a whole is an original study and contribution introducing to science a long-forgotten remedy and showing its practical value and uses in a thorough scientific spirit. The arrangement of the paragraphs and the headings of the topics, together with its use in individual disease, is a practical novelty in medical works, but one that will appeal to every reader as most valuable. There is no book which the practitioner can own that will be more frequently consulted than this, not only because the therapeutic measures are common and simple, but because the author has a personal knowledge of what he writes and understands the wants of the prac-

itioner. In both special and general practice this volume will bring most valuable suggestions and aids in the treatment of disease. The author has done a great service to science and one that will be remembered long after his personality is forgotten. We advise all our readers to procure this book and learn how much there is in this neglected therapeutic measure.

An engineer of one of the fast trains, while oiling his engine at a little station, was offered and accepted a bottle of whisky, which, after taking a long drink, he put in his pocket. A few moments later he was accosted by the superintendent of that division of the road and ordered to leave his engine and consider himself discharged. The superintendent, taking his place in the cab, ran the engine to the end of the route, and remarked to an inquiring friend that no one should manage an engine on his road who had drunk spirits or had a bottle in his pocket. This is significant of a great change in public sentiment and shows that railroad men recognize very keenly the danger of having a drinking man in a responsible position in the train service.

Among the popular journals devoted to practical medicine and hygiene the *Healthy Home Quarterly*, published by W. H. Brock & Co. of Athol, Mass., deserves a prominent place. The tone and clearness in which the higher principles of medicine are presented and the condemnation of quacks and cranks commends it to every sensible man.

The *Homiletic Review* grows in interest with each number. Some of the papers on researches in Egypt are of intense interest, also the sketches of noted clergymen and thinkers give additional value to its pages: as a magazine for general readers it is most suggestive and valuable. We most heartily commend it.

The *Review of Reviews* is a monthly which should come to the table of every physician who would like to have a condensed summary of the world's best news from month to month. It is the clearest and most satisfactory history of passing events which is published.

The *Scientific American* is a weekly that is very stimulating to all readers, and we commend it to every physician. A year's subscription to this journal will be a continued pleasure increased by each week's visitation. Munn & Company of New York are the publishers.

The *Popular Science Monthly* has published some remarkable papers during the past year and is one of the most interesting periodicals which a physician can read. Next to the *Medical Journal* this magazine is indispensable.

Editorial.

THE STUDY OF INEBRIETY IN THE FUTURE.

For years we have sought to group in this JOURNAL a variety of facts which seem to bear on the great question how we can understand, prevent, and cure inebriety. A number of persons claim to have discovered some new laws and new methods of treating the inebriate, but with the spirit of a miser have tried to conceal them and make it turn to their own aggrandizement. This is opposed to all science and truth, which cannot be hidden and covered up. The work of our JOURNAL is investigation, and by gathering many facts and statements try to discover their meaning, and if possible point out the law which controls them. The study of alcohol and its effects is only one side of the subject. The great field of psychology and the possibilities of determining when, where, and how alcohol and other narcotics may be and are taken to excess is the other, and is almost a sealed book. The mass of poor inebriates, who pass in review in every town and city in the country, are practically unknown. They come into view and disappear, and all our crude efforts to know them or even to prevent or cure their maladies are merely gropings in the dark, with a promise of light not far away. The psychological study of inebriety has been scarcely touched up to the present time; but already there are indications of a great new continent of facts where cure and prevention can be attained to a degree not dreamed of at present. Sir Oliver Lodge, in his presidential address before the Society for Psychical Research, outlines this new field in the following graphic way:

"And why should not psychical investigation lead to practical results? Are we satisfied with our treatment of criminals?"

Are we, as civilized people, content to grow a perennial class of habitual criminals, and keep them in check only by devices appropriate to savages, hunting them, flogging them, locking them up, exterminating them? Any savage race in the history of the world could do as much as that; and, if they know no better, they are bound to do it for their own protection. Society cannot let its malefactors run wild any more than it can release its lunatics. Till it understands these things it must lock them up, but the sooner it understands them the better. Force is no remedy, intelligent treatment is. Who can doubt but that a study of obscure mental facts will lead to a theory of the habitual criminal, to the tracing of his malady as surely as malaria has been traced to the mosquito? And once we understand the evil the remedy will follow. Already hypnotic treatment, or treatment by suggestion, occurs to one. The fact of imprisonment ought to lend itself to brilliant attempts at reform. It is a great advantage to doctors to have their patients collected compactly in a hospital, and without it medical practice would languish. It ought to be a similar advantage to have criminals herded together in jails, and lunatics in asylums. It is unwise and unscientific to leave prisoners merely to the discipline of warders and to the preaching of chaplains. That is not the way to attack a disease of the body politic. I have no full-blown treatment to suggest, but I foresee that there will be one in the future. Society will not be content always to pursue these methods of barbarism; the resources of civilization are not really exhausted, though for centuries they have appeared to be. The criminal demands careful study on the psychical side, and remedy or palliation will be a direct outcome of one aspect of our researches. The influence of the unconscious or subliminal self, the power of suggestion, the influence of one mind over another, the phenomena of so-called 'possession,' these are not academic or scientific facts alone; they have a deep practical bearing, and sooner or later it must be put to the proof."

This is equally true of inebriety and equally urgent in the demands for practical solution. Every year this subject becomes more and more intense in the close relations it sustains to almost every home in the country, and hundreds of longing eyes look out to the future for some promise and hope of relief. To this end our JOURNAL and its enthusiastic supporters are pressing on with new hope and new encouragement.

Dr. Gould of Philadelphia, whose excellent papers on eye strain in literature and among literary men has opened a new field for the study of causes and conditions which influence civilization, has mentioned a most practical fact which can be confirmed in every study of inebriety. He says, in his Cleveland lecture, "that the enormous waste for alcoholic drinks during the past year can be traced in at least one-tenth of the actual loss to the evil effects of eye strain on the nervous system and digestive organs. The sleeplessness and the irritation with disturbed digestion, described by the term nervousness, headache, biliousness, is traceable to eye strains." One can readily see how these conditions would call for the narcotism of alcohol. Recently a number of studies have been made of the eyes of inebriates, and the injury found is very extensive and widespread. Whatever the condition of the eye may have been before alcohol was used, the eye more than all the other senses suffers from the continuous or periodic use of spirits. Dr. Gould's most suggestive statement is a fact which every student of inebriety can understand and confirm in many ways.

The recent publication of the report of the subcommittee of fifty on the alcoholic problem is a most remarkable work. The defenders of the food and stimulant value of alcohol will find in it evidence supporting their theories, and those who doubt that alcohol has any food value will be equally delighted with the facts published supporting their views.

Even the severe arraignment of alcoholic teaching in public schools is replete with facts showing the value of the work and the accuracy of the books which are condemned. Altogether this report is a most powerful argument sustaining the experience of railroad companies, corporations, and all employers of labor. The critics who declare that alcohol has a food and stimulant value are theorists. If their contention is true, why should corporations regard the moderate use of alcohol with fear and alarm among their employees? Why should railroads discharge moderate drinkers and insist on total abstinence in all persons in their employ? In reality, all directors and managers of railroads and corporations are becoming more and more insistent that their employees should be temperate. The mercantile agencies rate very low, as to responsibility, all persons who drink to excess, or even to moderation.

This is the teaching of experience, and is growing very rapidly in all business circles. Recent scientific experiments show that the moderate as well as the immoderate use dulls the senses and diminishes the capacity to reason clearly, and altogether enfeebles the brain in its activities. This explains why persons using spirits have less capacity and control of themselves and are weaker than total abstainers. The theory that alcohol has value as a food or stimulant dies hard. But every year experience hastens its certain death.

The statement of Dr. Wolfe on the increase of cancer, in the *Nineteenth Century* for June, showing a very close connection between inebriety and this disease, has attracted a great deal of attention and received striking confirmation from many sources. Dr. Wolfe was led to this belief by noticing a very high rate of mortality from cancer in districts where spirits was largely used. Wherever the amount of spirits consumed was increased the prevalence of cancer was most noted. Other observers have observed this connection, but have not been

able to find other reasonable causes. One fact is very well understood, that the high consumption of spirits lowers the vitality and encourages toxæmic conditions which are favorable to the growth of cancer or other obscure germ disease. One author has traced the prevalence of cancer in persons with an inebriate ancestry. In a case under my care of four children born of inebriate parents two died from cancer, one was an epileptic, and the third, after a short period of drinking, died from pneumonia. It is very evident that further researches and studies in this direction will show some relations as to cause and effect that are not now suspected.

Two men drinking heavily quarreled about the possession of a small sum of money. The next day, while still drinking, one of the men shot and killed the other. He was arrested, and, after a speedy trial, sentenced to be hung. The judge refused to consider any of the circumstances which preceded the crime, or to recognize a degree of lessened responsibility in a man who had drunk to great excess for years at intervals. The attorney announced with great emphasis that all evidence of his previous drinking simply aggravated the crime and showed a degree of malice and wilfulness that in itself should be punished. The history of this man brought out the fact of alcoholic ancestry, severe disease in childhood, with great mental feebleness and imperfect development. To this was added bad surroundings, little or no education or training of any sort, being forced to care for himself from early childhood. He began to drink early, and later, in manhood, had drink paroxysms of several weeks' duration, during which he drank at night to intoxication but continued during the day his usual work of a quarryman. On the night when the crime was committed he was in his usual semi-maudlin condition. After the quarrel he seemed greatly excited at the injustice done him by the man he shot. Next morning the same feeling

prevailed in his mind, and, when he came in contact with him, this was so intensified that he shot him, firing two or three balls into his body. Then, as if partially realizing what he had done and the necessity of protecting himself, he ran away, and remained in hiding until discovered, two days later. After being in the station house and jail for a couple of days, he claimed not to have remembered anything that happened. This claim was partially sustained by his loss of memory at times before the crime was committed, and was probably true from his dazed, erratic unreasoning acts after the crime. There seemed to be moments of consciousness, followed by blanks of memory in which his acts were not remembered. Both judge and jury committed a legal murder in condemning this man to death. The assumption that such a person was sane and conscious of the nature and consequences of his act is a stupid blunder, for which there is no excuse. A verdict of manslaughter and a life sentence would have approximated scientific justice in this case; then his mental condition would have been determined and he could have been transferred to an insane asylum. The probability of such a person regaining his mental health would be very small, and, at all events, his crime would naturally have placed him under the bond of restraint the rest of his life.

The present efforts to check inebriety by fine and imprisonment are so continuously disastrous as to reflect on the intelligence not only of the lower courts but of public opinion which continues to support it. The number of persons subject to this farcical treatment are practically trained into a dangerous class, not only in the crimes they are liable to commit but in increasing the sources of pauperism, insanity, and idiocy. Such persons become so degenerate that they are ready to sell their influence and votes at the polls, and are really doing more to corrupt society and defeat the intelligent will of the people than the ignorant foreigner who has little or no knowledge of the institutions of the country. Every large city and town has a

proportion of these purchasable inebriates, who are controlled by saloon-keepers. In one of the large New England cities a list of one thousand of these inebriates who were purchasable was recently offered for sale, with a guarantee that they would vote according to the will of the purchaser. Another list of inebriates contained 789 persons who were known to be for sale. Ward contractors, saloon men, and brewers always have lists of such persons. This peril is growing rapidly. If the police courts had the power to impose a sentence depriving the inebriate of his voting privilege, it would do far more for the public good than the petty fines and imprisonment. This JOURNAL has repeatedly urged that all inebriates should be considered irresponsible, and deprived of their power of voting and placed under confinement in special hospitals. Later they may be given their liberty on parole, and restored to their citizenship when they can prove a reasonable degree of curability. No man has a right to destroy himself by continuous toxic use of spirits, bewildering his brain, making him unfit to act rationally and exercise the responsibilities and duties of a freeman. The immorality of the man who will sell his opinions and judgment to the highest bidder deserves the severest condemnation, of which forfeiting his right and privileges of having a voice in the government is a minimum punishment. The educational qualification necessary for voting should be universal, and, in addition to this, a degree of sanity should be insisted upon that is not found in the average inebriate.

It is estimated from a study of comparative statistics that there are over ten thousand murders a year in the United States. From inquiries made in the large cities, where the facts are more accessible, it is evident that over seventy per cent. are committed by persons under the influence of spirits at the time of the commission of the crime. It is estimated that only about thirty per cent. of the murderers are punished in the courts. It is very evident that the treatment of crimes committed by

inebriates are misunderstood and the punishment applied is irrational and in no way deterrent. The legal conception that the use of alcohol is a mere vicious impulse cannot be too often condemned. It is also evident that a very large per cent. of criminality and capital crime are due to the stupid ignorance which persists in judging character and motive from theories that have long since been shown to be false. All three learned professions are responsible for murders committed by inebriates. They all should teach the public that physical laws in the culture and training of children and the prevalence of evils in society are conditions which cannot be reached except by the knowledge and observance of these forces. Permitting alcohol to be sold in a community and then holding its victims responsible is as irrational as neglecting the water supply and sewerage of a town and punishing its victims for suffering from typhoid and other fevers. If the learned professions were to join in demanding the removal of every source of evil in the condition of life and surroundings, and thus educating the public to the dangers from heredity, the free use of alcohol and the diseases which follow from it, the fearful array of murders would be stamped out.

It is announced with great confidence that inebriety has been completely cured by corporal punishment, and, like all other strange remedies, this statement is supported by the record of cases. The time intervening since the remedy was applied has been less than two months, and hence the asserted cure is a matter of faith, very much like the gold cure specifics, who claim most remarkable results within a period of four weeks. Hysterical persons, over a century ago, were often considered possessed with an evil spirit, and whipping and ducking in the water were claimed to be perfect cures. Later, when these means failed, they were hung and burned. If the poor inebriate, after severe punishment, fails, the gallows or the electrical chair will certainly end all further trouble, and the malady

may be said to be cured. Fortunately, these new methods for checking inebriety meet a cold reception in this practical age, and the promoters will discover that they are trying to revive a conception of disease and its remedy which has long since been outgrown by the intelligence of the age.

A friend has sent us a table of a hundred accidents, and the causes, occurring among inebriates or persons intoxicated. The causes were breaking of carriages, runaway horses, getting in front of railway trains, falling out of windows, and so on. From this table it appears that over half of the accidents are due to railroads and motor wagons. Within the last year a large percentage of accidents occurred in the use of automobile wagons, and he draws the inference that these vehicles are the most perilous for any persons who use spirits. An inebriate engineer in the cab of an engine has only to open or close the throttle valve, and the rails will hold the wheels on the track, and the driver has little danger unless some obstruction occurs. In driving a horse, the inebriate has the intelligence of an animal to protect him from some of the dangers, but in guiding a motor wagon there is absolutely nothing to protect him except his senses and reason. When these are defective and faulty disaster is invited at every turn of the road. Nothing will more clearly bring out the defects of reason and sense than driving a motor wagon. In a recent race the drivers were examined carefully before the race began, and cautioned under no circumstances to use spirits in any form. A moderate drinker, who probably was convinced that alcohol had a food and stimulant value, invited two friends to take a ride with him with the purpose of showing the great value of his machine. They stopped at a roadhouse, drank freely of spirits, and were never seen after. The motor wagon was found at the bottom of a river some miles away, but the occupants were carried out to sea on the tide. Several very sad accidents on motor wagons have been traced to the alcoholized state of the driver.

Clinical Notes and Comments.

TOBACCO-ALCOHOL AMBLYOPIA.

In recent times the pathogenesis of the toxics in general, and particularly the alterations which are produced in the ganglion cells of the retina and in the optic nerve by the action of quinine, ethyl alcohol, and filixmas, has attracted much attention. For a full consideration of the literature of this subject, and the various views of experimenters and observers, the reader is referred to the papers of Holden, Drualt, Nuel, Uhthoff, Siegrist, Uhthoff and Groenouw, Nohl, Birch-Hirschfeld, de Schweinitz, and Schieck. Among these authors Birch-Hirschfeld, Siegrist, Uhthoff, and Schieck have investigated the pathogenesis of chronic tobacco-alcohol amblyopia in human beings, and given the results of microscopic examination of specimens from cases of this nature. It is not, however, the purpose of the present paper to discuss whether the alcohol or the tobacco produces primarily a lesion in the optic nerve fibres or the ganglion cells of the retina, what significance should be ascribed to the vessel changes which have been demonstrated in the opticus, or whether the inflammation of the interstitial connective tissue of the optic nerve should be regarded as an essential cause of the disease or only as an accidental condition—that is to say, whether the nerve degeneration in the optic apparatus is a primary one or whether it is secondary to the proliferation of the interstitial connective tissue—but to attempt to throw some light on what the possible poison is which produces one or other or all of these changes which in their turn interpret themselves by the clinical symptoms of this well-known form of amblyopia.

Writing on this subject, in 1900 one of us said: "It is quite possible that nicotine, or one or more of the many principles freely present in tobacco smoke, liberates some toxic influence in the system which must be held accountable for the disease which, in other words, depends upon a species of auto-intoxication. Horner long ago contended that neither alcohol nor tobacco, as such, was the direct toxic agent in cases of central amblyopia, but that together these drugs produced chronic gastric catarrh, which, in its turn, established a chronic anæmia of the optic nerve, terminating in the pathological changes which are found in this disease. Sachs maintained that even in the pure tobacco cases certain complex chemical combinations occur in the stomach, and there was a resulting transformation of the normal gastric juices into acids of the fatty type, which combined with nicotine into substances which are more injurious than the simple tobacco bases themselves. This observation is important in connection with certain experimental work under the direction of Dr. Casey Wood, not yet published, which indicates that certain stomachic toxins are capable of causing in animals blindness probably of the type now under consideration.

It therefore seems to us that one method to approach this study was to submit the urine of patients suffering from tobacco-alcohol amblyopia to a thorough analysis, according to the methods of modern physiological chemistry, to regulate the patient's diet according to the findings until the normal standard in the excretions of the body was reached and to note the effect of such treatment upon the amblyopia from which he suffered. Necessarily such a research, in order to be satisfactory, would require the examination of a great number of patients and the observation of the effect of treatment over long periods of time, but even though the present communication is based upon an investigation of a few patients of this class, and though the observations cover a comparatively short time, they are reported with the hope that they may stimulate

still further researches along this line on the one hand, and, on the other, because they at least give an indication that Horner's views, expressed years ago, were not without foundation.

The results in general show that there was in all cases (except, perhaps, in Case II, in which the results are unreliable) an excessive excretion of enterogenous products in the urine, and in all there was a more or less marked urobilinuria. In all the patients repeatedly examined these abnormalities nearly or quite disappeared under treatment coincidentally with improvement in the eye conditions as follows:

In Case I there was absolutely no improvement in vision under the ordinary strychnine and potassium treatment. At the expiration of six weeks of special dietetic regimen, or when the results of urinalysis approached the normal standard, vision had arisen to 6/12, or double that which it was at the first examination, and the scotomas disappeared.

In Case II vision, which had fallen to one-half of normal, regained the normal standard at the end of one week of treatment, the patient being confined to a room in the hospital where he was under strict surveillance, and when there had been improvement in the abnormalities revealed by urine analysis. The doubt in regard to this case has been recorded.

Case III showed slight improvement in vision at the end of five days, which, however, cannot be attributed to any influence of diet and alteration in the habits, inasmuch as the patient had been exceedingly irregular in attendance and probably did not stop drinking, although he did stop smoking for at least a week.

Case IV exhibited a moderate improvement in the vision of the right eye and a slight improvement in the vision of the left at the expiration of two weeks under the influence of dietetic management. Since that date he has not reported.

Case V, who was under somewhat irregular observation for only seven days, showed a very slight improvement in vision.

Case VI, the most noteworthy of the series, regained with the restoration of a normal urinary analysis complete visual acuity. It is, moreover, noteworthy that although there had been a slight improvement in vision before the urine analyses were made, that is, after one month of dispensary treatment and one week of hospital treatment, during which time the patient probably entirely abstained from alcohol and tobacco, the marked restoration of central acuity of sight exactly corresponds with the restoration to the normal or nearly normal standard of urinary analysis.

Case VII, who had not used tobacco or alcohol for seventeen months before he was submitted to the analyses which have been described, is noteworthy because although the test type failed to reveal much improvement in sight, that is, only from 6/15 to 6/12, the patient was so certain that his general vision had improved that he was willing to continue the strict diet on which he had been placed. That he could not expect much visual improvement was evident on account of the permanent atrophy in the papillomacular bundle.

In this connection it is proper to refer to a patient with moderate, almost stationary, optic nerve atrophy, who has been coming to the dispensary for years, his original examinations having been made ten years prior to the present time. The etiology of the optic nerve disease could not positively be determined, but apparently it was not due to the abuse of alcohol and tobacco, as the man has been for many years a total abstainer. He therefore was used as a control, and showed entirely negative conditions. There was very slight reaction for indican and none for phenol. The volatile fatty acids were 50.4, the NH nitrogen 0.1412 gm. The sulphates were not estimated.

In these cases of toxic amblyopia there was evidence of a marked disturbance of digestion, or of metabolism, or of both; furthermore, this disturbance may persist for a long time after the use of alcohol or tobacco has been stopped, as in Case VII,

and the study of Case I apparently indicates that treatment of this secondary nutritive disturbance will cause improvement in a persistent amblyopia. These facts, we think, give just ground for the belief that toxic substances produced in the digestive tract, or in the course of metabolic processes, have at least a certain part in the production of the amblyopia in most of these cases, and that at times they are probably the direct cause of the continuance of the symptoms when the latter do not disappear after alcohol and tobacco have been stopped. We do not think that more should be claimed from these results.

This view is entirely in consonance with the results of investigations concerning the manner in which other toxic effects of alcoholism are produced, and it also accords with our knowledge of the effects of some other chronic poisonings. There are, for instance, excellent reasons for the belief that many of the cerebral and other nervous symptoms in lead poisoning are not due directly to lead itself, but to nutritive disturbances set in motion by the lead. In the case herein described it is quite evident that there was a marked disturbance of the alimentary tract; the disturbance was not, however, confined to that tract. Cases IV, V, and VI all showed easily recognizable enlargement and some tenderness of the liver, and all had marked urobilinuria. All the others examined likewise had some urobilinuria. In the three cases just mentioned, therefore, and perhaps in others, there was disorder of the liver as well as alimentary tract disturbance.

THE COLD BATH AN ANTIDOTE FOR ALCOHOLIC INTOXICATION.

It is a well-known fact that intoxicated sailors are often suddenly sobered up by falling into the sea. The excitant effect of the contact of the cold sea water with the temperature nerves of the skin reacts upon the brain and spinal cord with

such intensity as to arouse to activity the alcohol-narcotized centers. The author has long been familiar with this fact, and has made frequent use of it in overcoming the acute effects of alcohol poisoning. He has frequently seen a man so profoundly under the influence of liquor as to be unable to stand alone, who could not speak distinctly or coherently, completely sobered within four or five minutes by the employment of the hot and cold shower bath.

Dr. Robertson of Barbadoes reported in the early part of the present century an interesting case which illustrates very forcibly the powerful influence of cold water in antagonizing the acute effects of alcoholic poisoning. The temperature of the water employed, as determined by Dr. Robertson, was 76° to 80° . We quote as follows from page 201 of Dr. Currie's "Medical Reports," to which we are indebted for the account of this interesting case:

"A gentleman of this island whose name was Weeks, a great votary of Bacchus, was in the practice from fifteen to twenty years of plunging into cold water when he arose from his bottle, and of actually going to sleep in a trough full of water, and his head supported on a kind of wooden pillow for the purpose above the surface. When he dined abroad, and had not the convenience of his own trough, he used to strip off coat, waistcoat, and shirt, and sit exposed in the open air, and in that situation go to sleep, whether it rained or not. And sometimes he went and bathed in the nearest adjoining pond, to which he generally required assistance to be conveyed. The effect of this practice was that instead of experiencing debility, lassitude, headache, and nausea on awakening, he found himself cheerful and refreshed and free from all the effects of intoxication. In the year 1789, dining one evening abroad, he got alternately drunk and sober three several times before midnight, each time recovering his sobriety by immersing himself and sleeping in cold water, and on awakening returning to the company. The last time, after supper, he was so immod-

erately intoxicated that he insisted on his companions undressing him and carrying him to the pond. They carried him, accordingly, in a chair, and set him up to the chin in water, where he continued upwards of an hour, a person supporting him. I have this last circumstance from a gentleman of the party, whose veracity may be entirely depended upon.

“At home, however, he used, as I have already mentioned, a trough made for the purpose with a bench in it as a pillow, having been nearly drowned when sleeping in his pond, from the negro who was appointed to watch him having himself fallen asleep. In this watery bed he would sleep one, two, three, or even more hours, experiencing always the greatest refreshment. His wife and family, when they wished him to change his quarters, use to draw out the plug and let the water run off, when he would awake and humorously complain of the loss of his bed clothes. At length this expedient began to lose its effects in arousing him, and one time he continued to sleep in his empty trough. In consequence of this he was seized with extreme rigors and chills, followed by a severe attack of rheumatism, which affected him for a long time and made him desist from this practice in future. But to the end of his life he was in the habit of sitting with his clothes open, and sometimes quite naked, exposed to the wind and rain.”

— *Dr. Kellogg's Work on Hydrotherapy.*

INEBRIETY AND MATERNITY.

Among the many public evils of modern life demanding the attention of physicians and legislators alike few are of such far-reaching importance to the welfare of the race as the growing habit of indulgence in alcoholic liquors by young married women. If the root be corrupt there is little chance of the fruit ever attaining to perfection, and, similarly, if the constitution of the unborn babe or the tender nursling be undermined through the intemperance of the mother, it can hardly be ex-

pected to arrive at complete physical or mental maturity. If inebriety be so widely spread, especially among the working class population of the great cities, as it is believed to be, another influence is at work which cannot promote anything but degeneration, physical and moral, in the offspring. The practice of giving alcohol to women in child-bed in the shape of gin and brandy appears to be on the increase, and it is not an uncommon thing for a woman who has reformed during her stay in a retreat to relapse entirely into her old ways after the birth of another child. Not content with taking stimulants themselves, these women seek to cure the various minor infantile ailments with drops of spirits, so that their unfortunate children become almost literally "gin-soaked." Can it be wondered, therefore, that if their lives be spared at all such infants grow up unstable in mind and body, bearing in them the seeds of the mother's vice in the shape of some physical or moral malformation or perversion, only to be perpetuated in a more aggravated form through a third generation? The opinion of experts on the subject goes to show that when alcoholism becomes hereditary the whole family is doomed, neuroses appearing in the second generation, epilepsy and other forms of mental instability in the third, actual imbecility and ultimate extinction in the fourth. Apart from the effects upon the mind there is the increased predisposition to tuberculosis and certain diseases of the nervous system, combined with tendency towards physical deterioration. As to the causes which lead women to so indulge, idleness and grief seem to take the first place, though at the opposite poles of society. The richer classes, or that section of them which have nothing to do, find amusement in giving way to secret drinking, and even frequent private counters of innocent-looking confectioners' shops for the purpose of indulging in alcoholic beverages? At the other extremity of the social scale it is sometimes little to be wondered at, when one thinks of the misery and want endured by the poor, that a sure if temporary solace

is found in the spirit bottle. They do not intend to wilfully injure their little ones, such a thought probably never crosses their minds; they simply live for the immediate present, and any wrongs inflicted upon their offspring are done in selfishness and ignorance in the vast majority of instances. When the supply of alcohol is prohibited altogether, as in jail, it is then noted that when a child is born in prison it usually presents a better physique than the remaining members of the family. The whole subject of inebriety among young married women, and indeed in the female sex generally, is one which is difficult to handle, whether from the aspects of the physician or the legislator, and it is more likely that reforms in this direction will be effected by individual advice proffered by tactful and not too obtrusive visitors, medical or otherwise, who will take the trouble to go into the homes of the people, than by any systematic legal restrictions. The peril of inebriety in maternity is a real one, and, like other dangers which menace the public health, must be boldly faced. — *Medical Press.*

TOXIC AMBLYOPIA FROM COFFEE.

Well authenticated cases of toxic amblyopia from drinking coffee are quite rare, therefore the following undoubted case will prove interesting, possibly also explaining other cases of uncertain origin. The case is reported by Dr. P. W. Wing of Tacoma (*Annals of Ophthalmology*, Vol. XII, No. 2), as follows:

The patient, an apparently healthy well-nourished boy of eight years, was brought to the doctor's office by his mother, who stated that she had noticed failing vision the past five months, and that the boy had been sent home from school on account of his eyes. He had been fitted with glasses, but his vision had steadily become worse. Upon examination by Dr. Wing the conjunctiva was found normal; cornea, lens, and vit-

reous clear; pupil a little larger than normal and sluggish; the optic disc was much congested, could hardly distinguish its outlines; retinal vessels, large arteries smaller than veins, and vision barely 20/200 in each eye for distance; near vision correspondingly reduced; field contracted.

There was no history of cigarette smoking, and no cause could be discovered until his mother said he had two cups of strong black coffee at each meal without cream or sugar, and, frequently, when he visits his grandmother, cake and coffee between meals: six to eight cups of strong coffee daily for a boy of eight years old. Stopping the coffee at once, and strychnine, gr. 1/50, t. i. d., gave normal vision in eight days, and in a month more the field returned nearly to perfect condition. No return of trouble. This case is a good illustration of the harm in giving young children what few grown persons would care to take for a steady diet. Children are much better off without either tea or coffee, and possibly some patients may need their habits corrected in this respect if we make more diligent inquiry in obscure cases of amblyopia.

THE ADVANTAGES OF COMBINING REMEDIES.

John Moir, L. R. C. P. & L. R. C. S. Ed., in *The Therapist*, London, says: "Latterly I have been using heroin very extensively in tablet form in combination with antikamnia and found the combination to act charmingly, both for relieving pain and in procuring comfortable, restful sleep, so very desirable and necessary after sleepless periods caused by a protracted, irritable cough. The soothing rest in these cases was also characterized by a light but well-marked fall in temperature; but the greatest benefit of all in this treatment is that, although the distressing frequency of the respiration was reduced, it was stronger and heavier and less spasmodic, with a beneficial effect upon the heart at the same time. The tablets I use contain antikamnia, 5 grs., heroin hydrochlor, 1/12 gr., and

were given every two, three, or four hours, in cases of cough, bronchitis, and respiratory affections generally, according to the severity of the symptoms, but usually one tablet every three hours. I found that the respiration was rendered easy, the expectoration was loosened without difficulty, and sleep was more readily obtained than with morphine, and, unlike morphine, there were no after-effects. I have, personally, been taking antikamnia and heroin tablets three times a day for an irritating cough, with occasional inclination to breathlessness; so that I have every reason to be thoroughly satisfied with them as sedatives and calmatives."

TREATMENT OF ECZEMA OF THE SCALP.

Parker pleads for more patience and perseverance in the treatment of this troublesome affection. So many physicians prescribe time or pronounce the condition hopeless that parents often discredit the physician who promises recovery within a reasonable time. The first measure in successful treatment is a thorough washing and shaving of the head. Castile soap and much water of a temperature not less than 100 F. should be used. The same water should not touch the head twice, and pledgets of absorbent cotton are to be used to remove the crusts. When cleansed the head should be dried with a clean, soft towel. During treatment the pillow case should be consigned to the wash-tub each morning and a clean one put into its place. These are not over-particular but imperative details, if favorable results are desired. Jugglery in prescriptions can not avail and rigid hygienic measures, extending to all the surroundings, must accompany medical treatment. The second step is, in the case of nursing infants, to treat the morbid constitutional condition, generally found in the mother. The alterative, iodia, is nearly always applicable, and in severe cases should be administered to both mother and child. If the irritability attending the eruption requires special treat-

ment, bromidia should be given. Some children will require an easily assimilated iron tonic. The bowels must be kept open with a mild aperient, given in the early morning. Locally, boroglyceride is the best ointment. Ecthol is also a remedy of much value, being a powerful corrector of depraved conditions in fluids and tissues. It is employed diluted, according to the severity of the case, and sprinkled upon a thin cap of surgeons' cotton. The cap should be removed, and the old one burned, daily. — *Medical News.*

ENDLYOPIA.

The *Chicago Herald* points out that it is no inordinate desire to be puritanical that impels railway companies to weed out inebriate employees, and those addicted to the use of tobacco, but a simple matter of public safety. It says:

"The crusade which the railroads of the country are carrying on against the use of intoxicating liquors and tobacco by employees engaged in operating trains is partly due to the fact, not generally known, that the poisons contained in the proscribed articles produce color blindness, which is a fatal defect in enginemen, firemen, and trainmen. For more than twenty years the diseases of tobacco endlyopia and alcohol endlyopia, as they are called, have been recognized by the oculists as the most insidious and difficult with which they have to deal. Through the employment of official oculists the existence, growing prevalency, and terrible results of these diseases have become familiar to the management of many large railway systems.

"According to one of the railroad specialists endlyopia was rarely found in this country fifteen years ago, but was quite prevalent in European and southern countries prior to that. Now oculists of good practice in this country have to deal with quite a large number of cases yearly, the increase being due to

the increase in nicotine and alcohol infection. Endlyopia in its first stages produces slightly failing vision, often a smarting of the eye, but is not marked in effect. The disease does not progress far, however, before scotoma, or color blindness, makes its appearance. Certain portions of the eye are unable to recognize the colors green and red, which are used in rail-roading as danger and cautionary signals. To certain portions of the eye these colors will appear yellow, drab, black, or some other color. As the victim cannot recognize this defect himself, an engineer or fireman might possess it for months and not know that he was misinterpreting signals unless an accident occurred.

"Unless taken in time endlyopia produces total blindness by killing the optic nerve. If a cure is effected and the patient continues the use of tobacco, or liquor, as the case may be, the disease is very likely to recur, when it is still more difficult to cure. Eye specialists unite in declaring that if endlyopia maintains its present ratio of increase it will not be more than a quarter of a century before it will be one of the common eye troubles. Scotoma is one of the most dreaded enemies to safety in train operation, and railroad officials rightly recognize that they must wage unceasing war against anything which produces it."

SANITARIUM FOR LIQUOR AND DRUG HABITUES.

Dr. Edwin Geer of Baltimore has purchased 68 acres for \$30,000 in Green Spring Valley, Baltimore County, and will build thereon a sanitarium for the treatment of persons addicted to liquor and drug habits. It will be called the Cecil Heights Sanitarium, and will accommodate 23 patients. The consulting staff consists of Drs. H. M. Hurd, T. A. Ashby, C. G. Hill, J. D. Blake, Geo. J. Preston, John W. Chambers, and Thos. S. Latimore, Baltimore.

The Bremen Congress on Alcoholism, which occurred at Bremen in April of this year, has attracted unusual attention among both the scientists and the philanthropists of Europe. Among the medical papers read that of Dr. Hueppe of Prague on the influence of alcohol on physical exercise brought out some sharp discussion. The speaker affirmed that moderate drinkers might perform muscular work more quickly than abstainers but could not do it as well. This was denied, one class affirming that no muscular work could be performed as well under the influence of alcohol as without; another declared that prolonged muscular effort could be made under the influence of alcohol and work done more perfectly if alcohol was given in small doses and at intervals. Dr. Lagrand of Paris declared that the use of alcohol diminished the resistance of persons to the attacks of tubercle bacillus, and made all its victims more susceptible to tuberculosis. Dr. Smith traced mental defects in children to the drunkenness of parents, and pointed out the origin of defective nerve growths from this source. Dr. Crammer's paper on the legal care and restraint was a plea to recognize the insanity of inebriety. Several doctors pointed out the folly of placing persons in prisons for intoxication. Dr. Fock of Hamburg urged that inebriety be treated on the family plan of having inebriates distributed in the homes of temperate people in the country, only one or two at a place. Dr. Kefferstein of Göttingen discussed disease of the heart due exclusively to the use of beer, and showed that delirium tremens of a low type was very common among persons who use beer to excess. A number of papers were confined to the study of statistics of the presence of alcohol and its dangers in different countries. — *Mr. Hockhert.*

We desire to call special attention to the *Todd Electrical Static Machine*, noticed in our advertising pages. This machine is a decided improvement in many particulars over all

other machines in the market. The intensity of the current generated and its availability in all weather, and the possibility of using only large or small currents according to the requirements of the case, are some of the new features. It is made by the Todd Manufacturing Co. of Meriden, Conn., and promises to become one of the great machines of the day. We shall call attention to this again.

The New York School of Clinical Medicine announces a special course of lectures on diseases of inebriety from alcohol and drug narcotics by T. D. Crothers, M.D., of Hartford, Conn., the professor of neurology and mental diseases in this school. This will be a most practical study of the causes, pathology, and treatment, of these increasing neuroses found in all parts of the country. These lectures will begin December first, at 8 P. M., in the hall of this school in West Forty-second Street, New York city.

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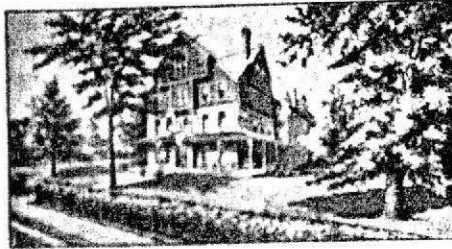
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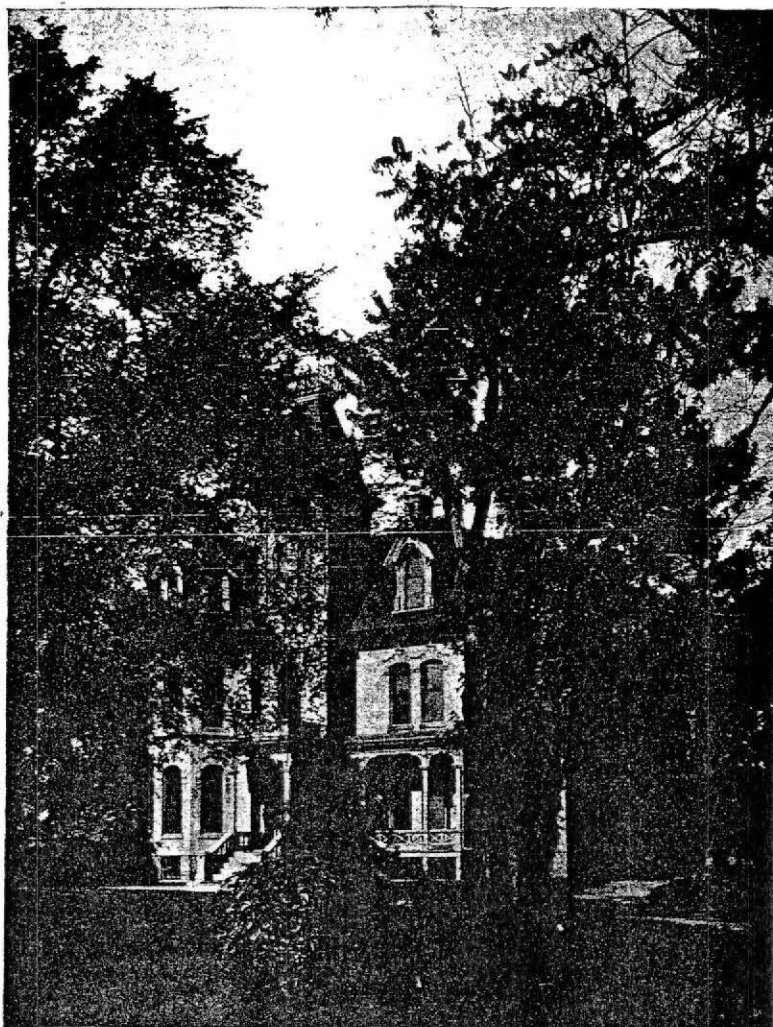
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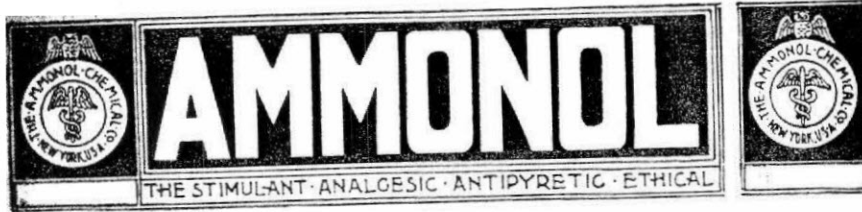
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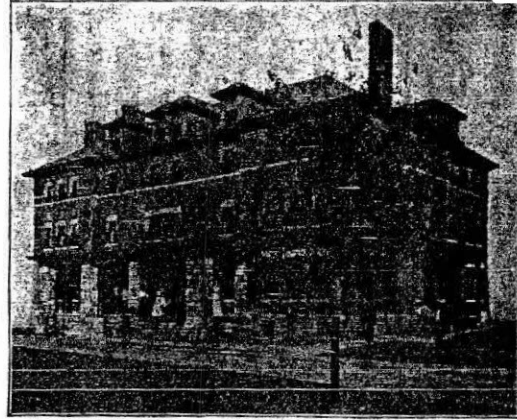
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