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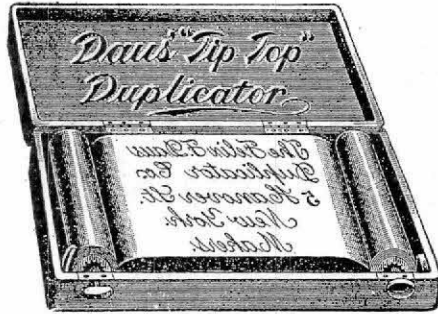
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SCIENTIFIC ASPECTS OF MODERATE DRINKING.

BY FRANCIS GANO BENEDICT, PH.D.,

Associate Professor of Chemistry, Wesleyan University.

The relation of the drinking of alcoholic beverages to the health and welfare of mankind presents several well-defined problems, the study of which has occupied the minds of many scientific investigators in the fields of pathology, psychology, and sociology.

The evil results of the use of excessive quantities of alcohol are so obvious and are so noticeably exhibited in all grades of social organization that it is a cause for wonder that in considering the alcohol question so much stress is laid upon the evil effects of excessive use and so comparatively little time devoted to the study of the effects of smaller or the so-called "moderate" amounts of alcohol. To be sure, the fundamental argument that whatever conditions alcohol induces when used in large amounts it must induce in lesser degree when used moderately has been emphasized, but it nevertheless remains

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a fact that a very large number of individuals use alcohol in moderate amount with no visible signs of deterioration or other untoward effect. Such individuals have long been considered as representing the value of the use, as distinguished from the misuse or abuse, of alcohol; for the enjoyment of the social glass, it has been said, cannot reasonably be considered as injurious to such users of alcohol, and is but a legitimate pleasure that should not be denied a large class of individuals for the sole reason that a certain class, larger to be sure, misuses alcohol.

We speak of moderate drinkers and those that use alcohol to excess; we speak of the use and misuse of alcohol, but is the line between these two degrees, moderation and excess, sharply defined in our minds? In the popular mind at least, a man is not said to drink to excess until he gives some signs of incipient intoxication; until the quantities consumed are sufficiently large to affect the speech or power of locomotion. The use of the visible signs of intoxication as an index of moderate or immoderate use is, however, fundamentally wrong. It is well known that healthy individuals vary widely in their tolerance to alcohol. While the old tippler can drink several ounces of raw whisky and exhibit no noticeable effects, the young man unaccustomed to its use may experience headache and dizziness with a single glass of wine.

We may say, in general, that long before intoxication is apparent the user has, in nearly every case, consumed more than is recognized by all authorities as the limit that is physiologically permissible.

As early as 1864 an English physician, Dr. Anstie, considered that one and one-half ounces of alcohol was the amount that could be taken per twenty-four hours without ill effect. Dr. Anstie's limit is today used as the dividing line between moderation and excess by many of the largest life insurance companies in the United States. We find such statements as these in the instructions to medical examiners:

“The daily use of any alcoholic beverage in excess of an amount representing one and one-half ounces of absolute alcohol (Anstie's limit) is not lightly regarded by the home office.”

Another paragraph, copied from the medical examination blank of a large life insurance company, is especially interesting, as it endeavors to translate the term “one and one-half ounces of absolute alcohol” into the equivalent quantities of the various common liquors:

“In reporting ‘over-indulgence’ in drink, draw the line — since there must be some fixed standard — at Anstie's limit of a daily allowance equivalent to one and one-half ounces of absolute alcohol. Such allowance will be represented, in the case of ardent spirits, by three ounces; of sherry or other strong wine by two wineglassfuls; of claret or champagne or other light wines by one ‘pint’ bottle; of strong ale or porter by three tumblerfuls; and of light ale or beer by four or five tumblerfuls.”

Recently we have another standard established by Prof. J. J. Abel of the Johns Hopkins University.

“That there is a ‘moderate’ or average permissible quantity of alcohol I conclude from the experiments already cited; from the opinions of medical authorities in many fields; from the writings of economists, explorers, and military authorities; and, lastly, from my own observations during a long residence in European countries; and this ‘moderate’ quantity I believe to be represented by one, or at most two, glasses of wine (ten per cent. alcohol) or one pint of beer, or their equivalents in terms of alcohol, in the twenty-four hours.”

Abel's limit is, it is seen, about one-half that of Anstie.

Even the layman can see that these quantities are very much smaller than those ordinarily required to induce distinct intoxication. Furthermore, with those accustomed to the use of alcohol the amount that can be ingested with no visible signs of intoxication is enormous. The following case is not believed

to be uncommonly rare, remarkable as it may seem. I give the description as furnished me, prefacing with the statement that I have every reason to believe it correct, for subsequent correspondence has verified every detail.

"I have another acquaintance who is a real first-class 'lusher' and his 'case' I can report on with authority. About three years ago this latter case was boarding in the same house with me and nearly every night he and I played cards together, and it was his invariable habit to 'get outside' of an imperial quart of juice (whisky) inside of three hours, from 9 P. M. to midnight, and oftentimes another pint on top of that. He never showed any signs of intoxication and was apparently perfectly O. K. in the morning, except his hand was of the 'early morning' variety. Through the day he also took numerous and sundry drinks of more than one variety of cocktails, etc., just how many I cannot say, as I was not with him. His daily quart he kept up from early June till into September, and later in the fall I saw him for several days, when he consumed the same amount. He was about thirty years of age, in apparent excellent health, never drunk to my knowledge, kept up his usual amount with great regularity; his drinking seemed to affect him not at all except shakiness in the morning. I have good reasons for believing he had been keeping this pace up for several years when I made his acquaintance, and, so far as I know, still continues. He has, however, grown very stout and not disposed to take any exercise or make any exertion to get about."

Astonishing as these statements seem, it is nevertheless a fact that the large cities supply many such cases, and the use of intoxication, incipient or well-marked, as a measure of moderation or excess appears in the light of such a case distinctly absurd.

The tolerance of persons accustomed to the use of alcohol is no more remarkable than that exhibited by many persons in disease.

It is evident, therefore, that individuality and physical condition play a very important rôle in determining what is commonly meant by excess, and in a similar way it can be said that what applies to the state of intoxication likewise applies to the border line between moderation and excess. Moderation for one man may be decided excess for another. In taking into consideration either of the limits set by Anstie or Abef, therefore, we must remember that no general rule will apply in all cases, and one should hesitate very considerably before stating positively that either of the quantities designated by these authorities as "physiologically permissible" could be taken with impunity by all persons.

The first question that naturally arises in considering the effects of moderate drinking is "How does it affect the general health?" Obviously this question needs very careful study. One would naturally suppose that nothing would be easier than to determine this point by asking a large number of moderate drinkers if they noticed any special effect, beneficial or injurious, that they could reasonably attribute to their use of alcohol. A physician would place practically no value on such an investigation, for it is almost universally true that if a man likes alcohol he is practically sure that, in small quantities at least, it does him good.

Where, then, can we turn for impartial information on this most important point? A statistical study of the death-rate in large communities offers an excellent, though recognizably limited, field for study of this question. In hospitals, asylums, and public institutions the opportunity is frequently had to secure data regarding the past and present habits of the individual with respect to the use of alcohol, and consequently furnishes the data for determining whether the death-rate is greater among total abstainers or drinkers. It is generally impossible to subdivide this latter class into moderate or immoderate drinkers, and the statistical evidence almost invariably found, *i. e.*, that the death-rate is noticeably lower among

total abstainers, does not in reality prove anything except that those who drink to excess raised the death-rate of the class using alcohol.

Perhaps the most elaborate and careful study of the effect of the use of different amounts of alcohol on disease and the death-rate is that instituted by the Collective Investigation Committee of the British Medical Association and republished by the United States Brewers' Association in 1888. The method of investigation was, in brief, as follows:

As a result of a schedule sent to every member of the British Medical Association, 178 replies were received, reporting in all 4,234 deaths. These physicians were asked to copy from their death certificate book data regarding the patients,— occupation, social position, age at death and cause of death, and to indicate to which one of five classes the patient belonged. These classes were: (1) Total abstainers. (2) The habitually temperate, that is, men who drink small amounts and only with meals and rarely take spirits except for medicinal purposes. (3) The careless drinkers — men who without being intemperate or free-drinkers, yet do not confine themselves within a rigid rule; who do not demur to drinking spirits occasionally as a beverage; who may at times drink between meals or even to the extent of intoxication occasionally, but who do not make these practices a habit and, on the average, do not materially exceed what has been termed the "physiological amount" of one and one-half ounces of pure alcohol daily. (4) The free-drinkers — men who drink a fair amount or "take their wine freely," habitually exceeding the physiological amount to a material extent, but yet who cannot be called "drunkards" or considered to have forfeited a character for sobriety. (5) The decidedly intemperate, drinking men, hard drinkers, and drunkards.

Though we may not agree with the nomenclature of these different classes, it is certainly obvious that considerable care was taken to segregate the users into fairly well-defined classes.

It is very much to be regretted that the data regarding the first class are practically valueless, as it comprised less than three per cent. of the total number of cases. The conclusions that have to do with the general question we are considering are:

“That habitual indulgence in alcoholic liquors beyond the most moderate amounts has a distinct tendency to shorten life, the average shortening being roughly proportional to the degree of indulgence.

“That total abstinence and habitual temperance augment considerably the chance of a death from old age or natural decay without special pathological lesion.”

It is a digression that is, perhaps, warranted if reference is made to the present status of alcohol in medicine. In March, 1902, a meeting of the Suffolk District Medical Society was held in Boston, and a number of papers were read on the use of alcohol in therapeutics. In June, 1902, the annual meeting of the Massachusetts Medical Society was devoted to alcohol in therapeutics. The November (1902) number of the *Practitioner*, an English medical journal of high repute, is devoted to this question, and while there are arguments on both sides, the overwhelming opinion is that alcohol has been accorded a false position in therapeutics.

Alcohol is not going to be entirely discarded. It never will or never should go, as it is a therapeutic agent of great value in certain cases, but its rational use is to be very much more circumscribed than ever before. One very typical example of the change in opinion and custom is furnished by the records in the Massachusetts General Hospital in Boston, which used, in 1884, alcoholic beverages per patient per year to the amount of \$1.84, while in 1900 this amount had fallen to 29 cents per person per year.

The therapeutic action of alcohol is not primarily connected with the question we are discussing, — the moderate use of alcohol as a beverage, — but as many use alcohol on the pseudo-basis that it is “good for the health,” it ought to be clearly

stated that the most progressive medical men are changing their views radically regarding the use of alcohol as a tonic, aid to digestion, heart stimulant, etc. It has been a source of wonder to physicians that so few cases of alcoholic excess are attributable to the initial use of alcohol medicinally. This is undeniably true, but we Americans are notorious self-dosers, and it is certainly true that a large amount of alcohol has been taken, in a sense as a medicine, as an aid to digestion or as an appetizer. It is to be feared that the small percentage of alcoholics arising from alcohol prescribed by physicians would be many times multiplied from alcohol self-prescribed. Alcohol from the therapeutic standpoint of the best medical authorities is primarily a narcotic, and self-dosing with it cannot be countenanced by the medical profession.

We have seen the difficulties in ascertaining the effects of moderate drinking by the direct questioning of individuals, and we have seen that vital statistics in general are capable of a wide degree of interpretation, the chief element of error being the inability to distinguish satisfactorily between the moderate and excessive users. If, however, instead of taking the vital statistics of a whole community, we take a class of selected lives in which, so far as possible, the excessive drinkers are eliminated and if, furthermore, we have means for distinguishing between the total abstainers and the moderate drinkers, data of much greater value for the question we are discussing may be accumulated. Almost ideal conditions for this differentiation obtain in the statistics of the great life insurance companies, for, as a recent writer in a medical journal strongly phrases it:

“Whatever difference of opinion there may be between the temperance advocate and the tippler; the traditional centenarian, whose chief diet is whisky and tobacco; or the theory of alcohol as a food — I repeat, whatever opinions may exist on these and kindred topics, one thing is certain, — the financiers all over the world who have their money invested in life

insurance companies all agree that drinkers belong in the class of hazardous risks."

In life insurance statistics we have the best separation of heavy drinkers from moderate drinkers that it is possible to make, as is shown by an examination of the conditions under which men are accepted as risks by life insurance companies. It has been said by medical men that a few companies will insure anything this side of the grave, but it is nevertheless a fact that the large number of the old line companies exercise every precaution to examine an applicant thoroughly and eliminate the hard drinkers.

The following questions are taken directly from the printed form of application for a policy in a large life insurance company, and are practically a copy of those used by all the large companies:

"Do you ever use or have you ever used wine, malt liquors, or any alcoholic stimulant? If so, which, when and in what daily quantity? Have you ever used any of them to excess? Describe particularly your past habits in all these respects. Have you been or do you intend to be engaged in, or connected with, the manufacture or sale of intoxicating drinks or liquors? Have you been treated for alcohol or narcotic habit?"

The examining physician is also called upon to answer:

"Does applicant use beer, wine, or other alcoholic stimulants daily and habitually? If not daily, how often? What is used and how much? What have the past habits been in this respect? Have any of them ever been used to excess? Are there evidences of impaired health or constitution from use of stimulants or narcotics? Has applicant taken treatment for alcohol or narcotic habit?"

In a special statement to medical examiners printed on the reverse of the policy we read: "The applicant's habits regarding the use of alcoholic stimulants . . . should be definitely ascertained, and in stating them in your report avoid the use of such words as 'moderate,' 'occasional' and 'temperate.'

Where their daily or frequent use is suspected, assure yourself that the stomach, liver, kidneys, and nervous system are free from any evidence of injury."

If the number of questions is a fair index, much more importance is now laid on the applicant's relation to the use of alcoholic liquors than twenty years ago.

In spite of every precaution, a number of heavy drinkers are able to get insurance, and a large number of the lawsuits over insurance matters are on the ground of the excessive use of liquors and therefore a violation of the part of the contract covering the applicant's answers, for those answers are now made a definite part of the insurance contract, and hence greater care must be exercised on the part of the applicant to avoid any chance for suspected fraud.

It is the custom of many of the large life insurance companies to keep an eye on the physical condition of their risks. This shows that there is at least an effort made to keep out the hazardous lives, for in such cases the companies lose no opportunity to drop the risk and refuse to reinstate him after an overdue premium.

Consequently it seems a fair statement that those carrying life insurance are selected lives; the proportion of heavy drinkers is kept at a minimum; and that no statistics as yet available separate in any better way the moderate from excessive drinkers in a community.

The further segregation of risks into the two classes, abstainers and non-abstainers, has not been common, at least in this country, though there are several societies in England that have done this for a number of years. Obviously, a study of the death-rate of total abstainers and the moderate drinkers would give the best comparisons of the effect of the moderate drinking of alcohol upon health.

The office having the largest experience in abstainers' lives is the United Kingdom Temperance and General Provident Institution, which was established mainly by Friends in 1840,

and has accumulated funds amounting to about \$30,000,000. It is one of the largest English mutual companies. For a number of years after its establishment, only abstainers were admitted. Later on the lives of carefully selected moderate drinkers were accepted, but the two classes were kept separate and distinct, and the bonus or profits awarded each five years to the members of the two classes. During the past thirty-five years (1866-1901), the general average ratio of actual to expected deaths in the total abstinence section has been 24.7 per cent. less than that in the general section. The bonus was correspondingly greater in the temperance section. Similar results are reported from all the other companies making this distinction between total abstainers and moderate drinkers.

In the American companies very little data are at hand. The most elaborate investigation was carried out under the direction of Dr. Emory McClintock, actuary of the Mutual Life Insurance Company of New York in 1895. In his report on the results of his investigation, Dr. McClintock says: "The abstainers show, therefore, a death loss of seventy-eight per cent. of the maximum and the non-abstainers ninety-six per cent." This difference in favor of the abstainer is slightly lower than that of the English companies. While undoubtedly there may be a valid question raised as to what proportion of this favorable death-rate is due to general good habits irrespective of the use of alcohol, the difference of nearly twenty-five per cent. in the English companies and of eighteen per cent. in the investigation of Dr. McClintock is obviously altogether too large to attribute wholly to habits other than that relating to the use of alcohol.

Just what is scientific and what is not is sometimes difficult to state, and although personal opinions founded on impressions can hardly be considered as scientific, in accumulating the material for this paper I have had considerable correspondence with a number of insurance authorities, all high officials in the large old line companies, whose opinions surely are worthy of consideration.

A physician, president of the medical board, writes: "We have on several occasions endeavored to utilize the statistics in our possession, but have found it difficult to arrive at any satisfactory conclusion, save the general one that anything but the very moderate and occasional use of liquors is prejudicial."

The president of another writes: "As between the two classes (total abstainers and non-abstainers) we know there is no question that the total abstainers are the better risks."

From the actuary of another we have much the same: "Personally I am convinced that the mortality among total abstainers always has been and always will be less than among moderate drinkers of alcoholic beverages."

A recent writer in the *Spectator*, the recognized organ of the life insurance business, says: "It is now becoming generally recognized that the alcohol habit is one of the main factors in determining the length of life. No life office will knowingly accept the proposal of any one known as a hard drinker. Evidence of a very striking kind is rapidly accumulating which shows that even the moderate use of alcohol is prejudicial to health and longevity. In England about a dozen life offices recognize this fact in one of two ways: (1) By giving a reduction of premium to abstainers, or (2) awarding them a larger share in the profits. Last year the Sun, one of the oldest life offices, established in 1810, opened a special section for abstainers, giving them a reduction of five per cent. in their premiums. When the Sun life office announced a reduction in premiums for abstainers, *The Financial Times*, commenting on the fact, said: 'A battle has long raged round the figures of those offices which keep their men in separate sections and always show a higher bonus to the longer-lived abstinent. Strenuous efforts have been made to minimize these important statistics, and it is quite likely that they do not mean all that has been claimed for them, but when we see a first-rate company like the Sun offering a direct and immediate cash bonus to abstainers, it looks very much as if the case had been proved.'"

Among the multitudinous effects of alcohol on the human organism, none is so characteristic and invariable as that upon the higher senses. Professor Abel says:

"The best bred man indulging in wine with permissible moderation no more escapes the minor psychical changes induced by it than does its meaner slave fail of its sense-destroying power when he drinks 'till he remembers his misery no more.' In the case of the former the mental changes induced will never attain the degree when self-respect and social conduct are outraged and they will pass unnoticed by all except those who are keen observers of their own mental states."

The effects of the smaller or moderate doses on mental activity are generally no more apparent to the ordinary observer than are the effects of similar quantities on health or length of life. To the trained observer in the psychological laboratory, however, small quantities of alcohol produce certain well-marked and characteristic phenomena in the brain action that should be very carefully and clearly stated to the general public, for they play a very important rôle in determining a man's efficiency in the struggle for existence. The lesser psychical effects of alcohol were not clearly defined until the experimental psychologist elaborated his methods for studying the mental state of man. By means of certain forms of apparatus and tests to be found in every psychological laboratory, it is not difficult to determine with reasonable accuracy the mental activity of an individual. Any variation from the normal is easily detected, and consequently the work of experimental psychologists, especially Kraepelin and his school, furnishes reliable data for a consideration of the effect of alcohol on these higher mental processes. The initial apparent mental stimulation immediately following the ingestion of small quantities of alcohol observed in some of the simpler tests was generally followed by a retardation period which resulted in a sum total of depression, and with the types of mental activity involv-

ing constructive operations; the time required for the completion of the mental process was lengthened from the first.

These results on small quantities of alcohol taken in a single dose are, however, not of as much importance or have not the significance of those experiments in which the alcohol was administered in small quantities for a considerable period of time. In the experiments of August Smith, the amount of alcohol used was about two and one-half ounces per twenty-four hours, and his data admit of no other possible deduction than a noticeably inferior mental activity, which, indeed, was apparent after eight days of abstinence.

In general, we may say that alcohol diminishes all forms of mental activity. The different phases of this process are very complex, but the accepted explanation of today is that alcohol paralyzes the inhibitory functions, and the reserve naturally acquired with age is cast off; a spirit of recklessness and of disregard of consequences is developed. If larger amounts of alcohol are taken, the speech becomes freer, a feeling of egotism is paramount and doubtless more than one brilliant speech has been *delivered* under this apparent stimulus, though in its *preparation* the effect of alcohol could have been but deleterious. As the quantity of alcohol ingested becomes larger, the subject becomes loquacious, boisterous, careless of speech, a coarseness and vulgarity enters into his remarks and finally the speech becomes thick and unintelligible, locomotion becomes impossible, and a deep coma is induced. The last acquisitions of mature man are the first to be affected, the first movements of the child the last to give way to the action of alcohol. All these effects, from the retardation of mental processes by small quantities to complete intoxication by larger amounts, form a perfectly connected series of phenomena of alcoholic narcotization.

The consideration of the paralyzing action of alcohol on mental processes brings us face to face with one of the most important phases of the struggle for human existence. By

just so much as alcohol in large or small quantities diminishes mental activity, by just so much does it handicap the man whose keenness of perception and manipulative skill are absolutely essential to him in this day of the sharpest competition known in the history of the world. The brain incipiently narcotized is not a normal organ. A man is not that complete master of himself that he must be to succeed, with that most intricate organism, the brain, imperfectly functioning. Smith tells us that quantities of alcohol of about two and one-half ounces retarded brain action even after a week of abstinence. Other observers have noticed this lasting effect, and Professor Cushny points out that if this is true many habitual drinkers, even if using moderate amounts, are persistently narcotized and never their real selves.

One of Kraepelin's pupils, Aschaffenburg, contributed greatly to our knowledge of the influence of alcohol on practical work involving mental processes by his experiment on the effect of one and one-quarter ounces of alcohol on four typesetters. This form of work is peculiarly adapted to the study of questions of this nature. The subjects were all accustomed to the use of beer, but abstained for the experimental period. Every detail was so perfected that the test was scientifically accurate and simultaneously adapted to the practical everyday life of the men, with the single exception of enforced abstinence. On the second and fourth days each man was given one and one-quarter ounces of alcohol in the form of a Greek wine fifteen minutes before the regular working test began. Although there were no more errors than usual, the amount of work done with alcohol was 15 per cent. less than that done without it. Here we have a complete scientific demonstration of the effect of a so-called moderate amount of alcohol (Anstie's limit) on the efficiency of labor.

This brings us to the very important question of the relation of the efficiency of labor to the success of employer and employee alike. America, by reason of her progressiveness and

ingenuity, occupies a prominent position in the manufacturing industry of the world and consequently the deleterious action of even small amounts of alcohol on mental activity and efficiency must be carefully guarded against in order to avoid the handicap the English workman has by reason of his custom of drinking alcoholic liquors during working hours. We are told that the recently returned Mosely commission has emphasized this point in comparing American and English workmen. That our manufacturers have been alive to this question is evident from the report of Commissioner of Labor Carroll D. Wright on "Economic Aspects of the Liquor Problem." Of the 7,000 establishments examined, over 75 per cent. in employing new men were accustomed to give consideration to the habits as to the use of intoxicating liquors, and more than half made some requirement that all employees or employees in certain occupations shall not use intoxicating liquors.

In response to a letter asking for the rules of the New York, New Haven & Hartford Railroad regarding the use of alcoholic liquors by employees, the following was received from the office of the first vice-president:

"In our book of rules for the government of the operating department we have a rule reading as follows: 'The use of intoxicants by employees while on duty is prohibited. Their habitual use or the frequenting of places where they are sold is sufficient cause for dismissal.'" The writer adds: "This, I believe, is the almost universal practice on railroads in the United States."

Applicants for employment on the Boston Elevated Road are required to take oath that they do not use intoxicating liquors, if such is the case. Those not taking this oath are not considered. The rules of the company concerning the use of liquor are as follows: "If a car service man is known to enter a saloon in uniform he is suspended from work for seven days. If he enters a saloon in uniform a second time he is discharged. If he is known to be intoxicated, whether on duty or not, he is discharged.

It is clear that at least in certain employments strict measures are adopted to insure the highest efficiency by practically prohibiting the use of alcohol, for that is what it really amounts to in a large number of cases. A man cannot use alcohol and retain his position. I believe that this action on the part of employers of labor will become more and more universal, for a problem involving so great social and economic interests as the effect of the moderate use of alcohol on the efficiency of labor is sure to attract increasing attention. All employers cannot do as Mr. Carnegie is reported as doing, that is, give each employee a check amounting to 10 per cent. of his yearly wages if he can truthfully say that he did not touch intoxicating liquors during the past year, but certainly the increased efficiency and the reliability that is exhibited in a marked degree by the abstainer is sure to tell in the amount, if not in the quality, of his production, and ultimately this fact will have to be recognized by all the employers.

Two years ago I heard a young clerk remark that in Boston it was considered decidedly unwise for a bank clerk to use beer or wine at his noon lunch. The following letter from one of the best-known banking men in Boston is self-explanatory: "I know one bank teller who lost his place because the directors knew that he frequented an ale and beer counter for his lunch and took those drinks with the food.

"I know a bank bookkeeper who had been marked for the cashiership of another bank, but the president of the latter, going to New York on the same boat, saw him using similar drinks and concluded that he would better not take the risk. The president afterwards stated this in my hearing. Of course individual opinions differ in that matter as in all others, but the practice is not looked upon with favor by bank managers, at least in Boston."

A personal letter from a railroad president, probably one of the finest examples of a man living the strenuous life, throws

an interesting light on the moderate use of alcohol and the relation between employer and employee:

"I more and more hear it said by business men that the business man of the future must be a total abstainer. It is very generally the practice now, I think, for men who take wine at dinner not to take anything at luncheon or during business hours. This would seem to indicate that the use of alcoholic liquors is considered on the whole injurious. It is well known, also, that so far as employees are concerned, all large employers establish rules which make it practically impossible for an employee who uses liquor to remain in the service."

The president of a large life insurance company writes in a personal letter, the phraseology of which is so telling that I give it in detail: "More and more does the man who works with either his head or his hands need for the efficiency which is absolutely demanded of him that clearness and steadiness which is possible only to a high degree of temperance; and the man who impairs his efficiency and loses time through indulgence is walking toward the door that will shut him out from promotion and even employment. Men, whatever their position or range of their capacity, cannot in these days afford to be at less than their best." Such statements as these have a force and significance that must demand attention. The experience of the large employer of labor verifies in the smallest detail the deductions of the psychological laboratory — that the moderate use of alcohol diminishes a man's efficiency.

The fact that a large number of individuals become so addicted to the use of alcohol that it requires all the skill of the medical profession, accompanied by every known psychological aid, to combat the self-destroying appetite, demands a careful consideration of the danger of acquiring the alcohol habit as a result of its "moderate" use. Just what the alcohol appetite is has been the subject of much discussion in medical, sociological and psychological journals. That it is hereditary is in

opposition to Weissman's theory, and probably we must admit that a craving for alcoholic liquors is not directly transmitted from parent to child. That the resistance of the individual to the narcotic effects of alcohol is lowered by the alcoholic progenitors seems to be much more likely to be the case. The idea that a craving is transmitted has, as Partridge points out, unquestionably done an incalculable amount of harm by relieving the individual of a sense of moral responsibility. "The belief that a habit is incurable does more than anything else to compel its continuance." The theory that the moderate use of alcohol can transmit a craving for alcohol would hardly seem plausible; but that the resistance to the strong impulse to use alcohol after acquaintance with it may be weaker in the progeny of moderate drinkers is in no sense an unreasonable assumption, though lacking in absolute proof.

That the use of moderate quantities of alcohol has a strong tendency to lead to its excessive use is a matter of common observation. To what extent this acquisition of the alcohol appetite prevails is very difficult to estimate, for unless a man drinks to intoxication we have no means of knowing the quantity used. The only statistical data at hand are those by Neison, quoted in Sieveking's "Medical Adviser in Life Assurance." There it is estimated that there is one drunkard for every 74 of the male population, and a footnote by Sieveking adds: "We fear that more recent investigations show even a larger proportion." In the investigation of the British Medical Association previously referred to, we have, of the 4,234 cases, all over the age of twenty-five years, 30 per cent. decidedly intemperate and 15 per cent., or one in six, very hard drinkers.

If these proportions are generally true, the danger of the habit-forming tendency of alcohol is indeed a real one. Furthermore, as we have seen, long before the drunkard stage has been reached, the individual has passed the most liberal estimate as to what is moderation, and is drinking to excess. Con-

sequently we may *very conservatively* estimate that one in 50 of our male population uses liquor to excess and has a well-defined, though not necessarily absolutely uncontrollable appetite for alcohol. A physician with a large practice, an instructor of twenty-five years' standing in one of our largest medical schools, in answer to a request for his opinion on the habit-forming tendency of alcohol says: "In my experience the habit-forming tendency has been so apparent in every single individual that I do not think it can be for an instant questioned. I have seen so many times the teaspoonful of whisky or the half glass of beer or the little glass of wine taken at a regular time so looked forward to and so many times gradually increased, and I have had to interdict the use of it, that I cannot feel this is a thing which can be questioned for a moment, that any amount of drinking, no matter how small, invariably tends to form a habit which inevitably tends to increase."

The medical director of a large life insurance company writes: "The great trouble (with occasional drinking) is that a young man may get into the habit of taking some form of alcohol every day, and in this I include beer and ale, and as he grows older he may feel the necessity for a larger amount, and before he realizes it he has become an habitual drinker."

Certainly it is not unreasonable to conclude from this evidence that there is a real danger from the habit-forming tendency of alcohol — a danger that we should not overlook in any consideration of the use of alcohol.

We can now more intelligently consider the conditions existing in actual life and determine in how far the moderate use of alcohol is compatible with scientific deductions. Obviously, we must very decidedly alter our views regarding what is moderation and what is excess. Certainly Abel's limit of one pint of beer per day is not too conservative. Indeed, the facts here collated would lead to the emphatic discountenancing of the *habitual* use of alcohol in any amounts. We

may say with entire reason that many of our best citizens, men the products of whose brains have furthered our commerce and industries, literature, science, and religion, have used liquors in moderation and perhaps habitually all their lives and yet are apparently not injured by them. But such men are, in fact, but a very small proportion of our male population, and we must consider the effect of moderate drinking not only on a select class of men, whose very success in life has shown their superior ability to exercise judgment and restraint upon their impulses and practices, but we have to consider its effects on the average man.

Dr. J. S. Billings has, at the instance of the Committee of Fifty, prepared a statement of the result of a series of questions submitted to 900 men of the type designated above as "selected." They were the typical brain workers of the United States. Accompanying the schedule returned with the answers, a number of individuals added paragraphs expressing their personal opinion. The same differences of opinion invariably found in an investigation of this nature are here present, though the general opinion is to the effect that the use of alcoholic drinks as a stimulus to mental effort gives bad results, although they may be agreeable as restoratives in fatigue.

Thus these data indicate that even to the select class of men the moderate use of alcohol is, on the average, of doubtful benefit, and we see here nothing to alter our view that the *habitual* use of small amounts of alcohol cannot be considered innocuous even to the select class of men.

The average man, with perhaps a family or relatives dependent on him, should not jeopardize his chances for success by the use of alcohol. The diminution in mental and muscular power invariably accompanying the use of even small amounts of alcohol is a potent factor in determining his efficiency, chance for promotion, and appreciation by his employers. Clearness of thought, quickness of perception, keenness of sight, deftness of touch, skill, and accuracy in manipulation are valuable

assets of the successful man, and each and all of these factors are so immediately affected by the use of alcohol as to practically interdict its use with men whose ambition leads them to hope for and strive for the best in life.

Statistics show that the drink habit is formed most frequently between the ages of fifteen and twenty-five, and it is with the young man that special pains should be taken to show clearly that any use of alcohol, even though it be occasional, must be regarded as contrary to scientific teachings. While alcohol in small amounts does not produce any demonstrable changes in the tissues, it certainly does retard the physical and mental growth of youth, for the growing organism is especially susceptible to the injurious effects of alcohol.

In general, while the impulses are uncontrolled by that reserve acquired with age, the danger of forming the habit must always be recognized; and by acquiring the alcohol habit I do not necessarily mean to the degree that the user becomes a miserable sot, but the feeling of the need of any amount of alcohol regularly—a feeling that can be considered in no other way than an injurious habit, sure to be followed by a train of physical and mental misfortunes that distinctly incapacitates the sufferer for the normal life of man.

The legislature of New Jersey has passed a law making it a serious penalty to give, sell, or furnish cocaine in any form as a patent or proprietary remedy, except by a practicing physician or dentist. It also forbids the sale of cocaine to any one known to be a habitual user of it. The same legislature forbids the marriage of epileptic, insane, or feeble-minded persons, under severe penalties. A curious question was raised whether a druggist was not responsible for the persistent sale of cocaine to one who was known to be a habitual user. One authority held that cocaine, being a poison with a like effect to that of alcohol, would render the seller who knowingly and wilfully furnished it to the customer responsible.

ALCOHOLISM AND INEBRIETY: AN ETIOLOGICAL
STUDY.

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

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Some leading physicians have affirmed with emphasis that alcoholism and inebriety are the same, and that the attempt to dignify them by the term "disease" is absurd, as they all come from alcohol, and disappear when this drug is taken away. A few writers have accepted this opinion, and declared that there could be no disease without alcohol, and even this drug did not produce uniform effects, hence the term "disease" was not accurate. Within a recent period a leading medical society discussed this question, and concluded that inebriety was a vice, and remediable only by moral means.

One man asserted that the only cure was to remove alcohol; others doubted any cure by medical means and believed all alcoholics had a depraved brain, which could be reached only by conversion and stimulation of the will of the patient. Such views, coming from medical men at this time, show the persistence of the delusive theory of moral causes, which was urged so prominently by clergymen a quarter of a century ago. These and similar theories have become formulated into many of the great efforts to suppress this evil. Prohibition assumes that stopping the sale of spirits and removing alcohol is an effectual cure for this disorder. The efforts of the law by fine and imprisonment are based on the theory that the causes are the willfulness of the victim and his reckless disregard of the interests of others.

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Moral suasion by the pledge, prayer, and solicitation is based on the theory that the disease is only sin, for which conversion and change of heart are the true remedies. Thus nearly all the measures used to check inebriety are based on the theory that the causes are vicious, immoral impulses which not only seek alcohol as an outlet but which alcohol develops in its worst forms. Hence the real remedy is punishment and fear, driving back the vicious nature and encouraging the better part of the man.

One of the great modern efforts to break up inebriety is by teaching to children in public schools the nature and effects of alcohol and the dangers from its use. This is a very important and significant advance toward the scientific study of the subject, and worthy of all encouragement. It is founded on the theory that ignorance and false teachings concerning inebriety are an active cause, the removal of which will largely do away with the evil. Unfortunately, the medical profession has not led in the education of the public concerning inebriety, but has followed, endorsing plans and measures for relief in a confused way. The Association for the Study of Inebriety, which has been over thirty years before the public urging the disease theory of inebriety, and its curability, is still largely unknown. Delusional theories of alcohol, based on mercenary and other interests, have been accepted as true by the public; and the medical profession, as a whole, are reluctant to change and admit errors of the old-time theories and beliefs.

Alcohol in these later days has been studied with some degree of exactness, and the dense delusions which have prevailed concerning its action on the body are rapidly disappearing. A careful study of a large number of inebriates has brought out some facts which give an entirely different conception of inebriety and alcoholism, and the diseases which they represent. The term "inebriety" is used to describe the condition of persons who are stupid or demented from alcohol or other narcotic drugs.

Alcoholism, more accurately, refers to conditions which are specifically due to alcohol as an active or predisposing cause. It is not correct to call all persons alcoholics who use it to excess at times or continuously. Many cases when examined indicate that the use of alcohol is only accidental and by no means the cause. The following are examples:

A man jumped off a railroad train, sustaining a severe shock by a fall on his head, and almost immediately he began to drink spirits to stupor. Another man, after a protracted illness from typhoid fever, drank constantly to great excess. Another person, after an exhausting period of overwork and mental excitement, began at once to drink spirits to excess. Innumerable instances of this class, dating from some profound change in the brain and organism, are marked by alcoholic excesses, and the use of alcohol is literally a symptom of some central lesion and not the disease itself. These persons were abstainers, or used alcohol in such moderation as not to attract any attention, and the sudden appearance of the alcoholic craze was a symptom of distress and pain demanding relief. Such persons are inebriates and not alcoholics. The true alcoholics are those who have been wine, spirit, and beer drinkers from early life, using it at the table with food, or as medicine for all pains and disorders.

The result of this is alcoholism, either in paroxysms, with free intervals, or continuous without object or purpose. Thus persons in prosperous circles of life, who have used wine or beer with their food regularly from early life, and later take spirits as a medicine or for any conditions, real or imaginary, steadily increase the amount until intoxication (or continuous stupor following), are alcoholics.

In the lower walks of life, where beer is used on the theory that it is a concentrated food, and where spirit drinking is encouraged by the contagion of surroundings, faults of nutrition, and delusive theories of its value to both body and brain, alcoholism is the natural and inevitable termination. Many

persons of both these classes are not stupidly intoxicated, or unable to perform their daily duties, but they are more or less demented, with mental and physical incapacity to act normally.

Often the alcoholic classes exhibit grave mental and physical defects, which have been intensified by the continuous use of alcohol from early life. In the families of the poor and degenerate, where the faults of environment and nutrition are prominent, the use of alcohol not only covers up these conditions, but makes the deviation from health greater, preventing growth and diminishing vitality. If to this is added defective heredity, the damage is intensified; and although the children may survive, and even reach middle life, they are defectives and degenerates, and alcohol is a contributing cause. The alcoholics of this country belonging to this class are largely foreigners, either the very rich or the very poor.

The rich in this country are often imitators of customs in high life abroad, and adopt the use of wines at the table to show their superior capacity for enjoyment, and continue to do so unless they become disabled through sickness, poverty, or disease. If they are under strenuous mental and physical conditions, spirits are used to excess, and death from intercurrent disease is common. While the parents may continue to drink wines and spirits without showing great excess, the children born during this period, and brought up under these conditions, are practically alcoholics, having inherited a neurotic and alcoholic diathesis to use spirits for all forms of exhaustion. This diathesis and tendency is cultivated and increased through early life and down into manhood, and ends, in the vast majority of cases, in alcoholism and death. As an exception to the rule certain children brought up to use spirits at meals in this country may continue to be moderate drinkers, and live an ordinary lifetime, but the majority become alcoholically diseased, and die in early or middle life.

Lower down in the circle, the poor foreigner who comes here wedded to the use of beer daily finds that its effects are

more serious in this climate, and after a few years he is broken down, and dies from acute disease. His children may become abstainers, but usually develop into some form of degeneration with early mortality. The alcoholics from this circle of life furnish the large stock of criminals and of the lowest type of tramps and paupers. From this stock the degenerates and defectives and the dangerous classes are largely recruited.

Fortunately, persons of this class, coming from the prosperous and the very poor, are literally alcoholics in the technical sense, and are early eliminated by the laws of the survivals. The other or inebriate class comprises those who are physically and mentally crippled or poisoned and suffer from retarded developments, hereditary tendencies, and all degrees of paranoia. They comprise a vast army of men and women, who, through neglect, overwork, and underwork, have encouraged and cultivated soils and conditions for the growth and life of spirit and drug diseases. They have what may be called a neurotic constitution, or neuropsychosis, with feeble powers of control, nerve inability, and defective nutrition. Another term describing their condition is psychoneurasthenia, meaning persons in whom brain and nerve failures are more prominent than any other defects.

Such persons have obsessions, impulsions, manias, phobias, states of morbid anxiety, with hesitating, uncertain control of life. Forbes Winslow describes these persons as having hysterical brains and constitutions. Associated with this are varied nutritive disturbances and emotional exacerbations, heart irregularities, and acute and transient neuralgias. Another term is the deterioration type, or a class who are slowly or rapidly growing feebler, persons in whom the power of resisting pain and discomfort is very feeble, and who are unable to adapt themselves to the changing conditions of environments. Remedies that are narcotic in their effects are most grateful, because they cover up the real conditions with a semblance of vigor and strength that is delusive to the mind.

The craze for alcohol or narcotics may appear at any time. These persons cannot be called alcoholics, because the removal of this drug is not followed by restoration. On the contrary it often uncovers and brings to the surface other and more serious acute and chronic diseases. This is seen in the large death rates from acute pneumonia or tuberculosis noted in those who have been inebriates. Serious functional disorders and local inflammation break out with or without cause at this time, and the general impression that the removal of alcohol has only intensified the original degeneration and concealed the acute symptoms and its use has been a symptom and not an actual cause. There is undoubtedly a marked type of neurosis which develops into excessive spirit and drug taking, both with and without temptation. It may take on different forms, and does not always appear as a drug mania.

One symptom may be gormandizing, lack of self-control, and erratic credulity, combined with feeble judgment, low vitality, physical pain, and cowardice; in another, emotional extremes of great depression and exaltation from the most trifling causes. From moderate drinking parents one son developed a maniacal dread of poverty, and spent his time amassing property and investing it in all sorts of ways to prevent loss. He starved his body and finally drank alcohol the last two months of his life. The second son was a drug taker from early life, using spirits and drugs alternately to avoid suffering and discomfort. Both were inebriates and both had a constitution that was defective in balance and control. These defects were transmitted from their parents. A very large number of persons who suddenly begin the use of spirits in early and middle life suffer from neurasthenic condition, with low vitality and tendency to physical and mental exhaustion from the slightest strain. Often this debility is painful, provoking an intense desire for relief from every possible source. This indicates an inebriate constitution, which is very likely to develop into a mania for spirits and narcotics at any time.

The removal of alcohol in these people is only a small part of the treatment. The restoration must depend on the use of a great variety of restorative measures in exact surroundings. Many times this diathesis or peculiar defective organization is the result of conditions of life; hence the danger of treating exhausted and worn out persons by giving alcohol or narcotics. The use of these drugs focalizes and intensifies states of degeneration and organic changes from which recovery is impossible. The alcoholic is curable, and when the demand for alcohol and drugs is dispelled a prominent cause is removed. In the inebriate the suppression of this symptom is only turning the degeneracy into other directions and removing the narcotics which have covered it up. The intense egotism of reformed patients as to the finality of their cure is an indication of the delusive state of the brain. When this egotism is based on the effects of specific drugs or forms of treatment it is still stronger evidence of delusion. When the inebriate turns from one drug to another or from one addiction to another, there is a progressive deterioration that cannot be mistaken. The alcoholic can be relieved temporarily by long abstinence, exact living in the best surroundings, but his restoration or cure in the sense of totally recovering is difficult. Abstinence from alcohol may be complete the rest of his life owing to physiological change, but the defects of cell and brain circulation and metabolism of the body are seldom cured.

The inebriate, on the contrary, is often permanently restored, and the defects of constitution, if acquired, may be remedied in a measure, and the particular condition of the exhaustion and feebleness which preceded the drink craze can be overcome. It is a question of determining to what extent the brain and body have sustained damage and injury, and of removing these states. The desire for spirits is easily overcome by increasing the vigor and correcting the disorders of the system. This is not a matter of drugs alone, but is a question of the long use of means for nerve and brain rest. The very best statistics

from the most reliable authorities show that over one-third of all inebriates who go under treatment and remain from four to ten months as permanently restored, and remain abstinent, living temperate lives for periods of fifteen years or more. This is the most hopeful indication, and shows how much can be accomplished by exact scientific study and the application of the proper means and measures for relief and restoration of the body and the brain. — *Medical Record.*

USE OF SPIRITS IN GERMANY.

The commission appointed by Kaiser Wilhelm to look into the drinking habits of his subjects reports that the German people consume alcoholic liquids to the value of \$750,000,000 in the course of one year; that the portion of income spent by the Germans for drink, on the average, is one-eighth of all they earn. The average income of a grown-up German is said to be \$100 per annum. The commission, by comparing, found that the German people's drink bill is four times as high as the state's total income from duties and food and drink taxes; it is eleven times as high as the entire budget of the post and telegraph; twenty-one times as high as the cost of old-age insurance in the empire; one thousand times as high as the cost of caring for the poor, and considerably more than is spent by the government to sustain its immense army and navy.

There are nine inebriate hospitals or reformatories in England which receive inebriates committed by the courts for periods of from one to two years, for the purpose of treatment, with no idea of punishment. There are twenty-one similar institutions for the voluntary care of persons who commit themselves. The reports of these institutions show that quite a percentage are permanently restored, and the promise for larger results is very satisfactory.

ALCOHOL AS A FACTOR IN RENDERING MOTHERS
INCAPABLE OF NURSING THEIR CHILDREN.*

BY C. W. STEWART, M.D.,

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The frequent and rapidly increasing inability of the modern mother to nurse her offspring is a condition which confronts every medical man whose practice brings him in contact with parturient women. As a result those who have the welfare of the race at heart are seriously inquiring into the cause of this alarming state of affairs; for, unless it can be checked, the number of artificially fed children must rapidly increase, which means that the mortality rate among them must proportionately increase as the ability of the mother to nurse her child decreases. While it is a fact that the adoption of more scientific methods of artificially feeding children has been a means of greatly reducing the death rate, the latter still remains enormously high; and, more than this, those who are successfully reared through infancy are, in the majority of cases, considerably below par in their physical make-up. Thus the outlook for the development of a sturdy, long-lived race from such a class is far from encouraging.

Whatever the causes for the existence of such a condition, they should be carefully sought out and remedied as early as possible. Many causes have been assigned as being instrumental in rendering mothers incapable of nursing their children, but nothing which seems to have been at all conclusive has been presented until recently, when Professor Bunge of

* Read before the Medical Temperance Association, Atlantic City, June 8, 1904.

Basle, Switzerland, who has for a number of years been making a close study of the subject, in an article published in Virchow's *Archives*, called attention to the fact that the use of alcohol is responsible for a very large proportion of the cases of agalactia. In order to obtain the necessary information in regard to the possible causes of the great increase in the number of cases of agalactia which he and others had observed and called attention to, he sent out circulars containing detailed questions to physicians chiefly in different parts of Germany. His inquiries were upon the following points:

1. Number of children borne by the woman?
2. Number of children she was able to nurse for nine months each?
3. If unable to nurse, why?
4. Number of children borne by her mother?
5. How many her mother could nurse?
6. Alcoholism in father and mother?

In all, 3,000 answers were received. Of these, 1,629 contained answers sufficiently complete to enable him to compile valuable statistics.

Bunge divided the cases into four classes:

1. Those who did not use alcohol habitually. (This class included abstinent also.)
2. Moderate drinkers. (Those consuming one liter of wine or two liters of beer daily.)
3. Immoderate drinkers. (Those consuming more than one liter of wine or two liters of beer per day, yet not regular drunkards.)
4. Alcoholics.

He then divided them into groups, designated A, B, and C. In group A the mothers and daughters were able to nurse their children. In B, the mother was able, and daughter unable. In C, neither mother nor daughter were able.

The women able to nurse their children for a period of nine

months, without having to supplement the breast milk with other food, he designates as "capables." Those unable to nurse any or all of their children he called "incapables."

Cases in which a temporary illness or a pregnancy interrupted lactation he still called "capables." Group A included 422 cases, with data of the amount of alcohol consumed by the daughter in 386 cases; by the mother in 389 cases; by the father in 346 cases.

In the four classes (abstinents, moderate drinkers, immoderate drinkers, and alcoholics) belonging to group A, in which both mother and daughters are "capables," we have the following percentage of cases:

	Daughter.	Mother.	Father.
Abstinents,	69.9	75.3	52.3
Moderate drinkers,	28.8	23.6	38.2
Immoderate drinkers,	0.8	0.8	6.9
Alcoholics,	0.3	0.3	2.6

In group B there were 281 cases, with data as to the amount of alcohol consumed in 210 cases by the mother, in 280 cases by the daughter, and 199 cases by the father. In group B daughters are "incapables" and mothers "capables," with the following percentages in the four categories:

	Daughter.	Mother.	Father.
Abstinents,	99.6	56.7	11.1
Moderate drinkers,	45.2	40.3	11.1
Immoderate drinkers,	4.0	1.9	35.7
Alcoholics,	0.9	1.0	42.2

In group C there were 435 cases. The amount of alcohol consumed by the daughter in 222 cases, by the mother in 203 cases, by the father in 190 cases, was given. In this group both mother and daughter were "incapables," with the following percentage of cases in each of the four categories:

	Daughter.	Mother.	Father.
Abstinent,	39.2	32.5	13.1
Moderate drinkers,	57.2	64.0	56.3
Immoderate drinkers,	2.7	1.0	11.6
Alcoholics,	0.9	2.5	19.1

From a careful study of the above statistics, some very valuable information can be obtained and the relationship existing between the use of alcoholic beverages and agalactia becomes very apparent.

In group A, in which both mother and daughter are "capables," the percentage of cases decreases at an alarming rate with the amount of alcohol consumed. In group B, where the daughter is "incapable," notwithstanding the fact that the mother was "capable," the table shows that the more alcohol the father consumes the more likely his daughters are to be "incapables."

In group C, in which both mothers and daughters are "incapables," it will be observed that the number of cases of agalactia do not increase, but rather greatly diminish in cases of moderate drinkers or alcoholics; but it must not be forgotten that the ability to nurse had already been lost in many of these cases, at least for several generations, and so it was impossible to find the initial alcoholic parent who first communicated this degenerative condition to his or her offspring.

Of the 1629 cases from which Bunge compiled his statistics, 519 were "capables," 1,110 "incapables." Of the 519 "capables," 423 gave information as to whether or not they could nurse their offspring, and with one exception the mothers of these had been able to nurse their children for the usual length of time. In the case of the mothers of the "incapables," it was found that 39.2 per cent. had been able to perform this function normally.

It is further noted that almost without exception the daughter of an "incapable" mother is also an "incapable." Besides there is an increase in the number of "incapable" women

which cannot be explained by hereditary influences on the maternal side, and a study of the paternal history of those "incapables" whose mothers had been "capables" shows that 78 per cent. of the fathers of these women were chronic alcoholics, *i. e.* they drank more than two liters of beer or one liter of wine daily. It was further observed that only 2.6 per cent. of the "capable" daughters of "capable" mothers had had drunken fathers. In the families of drunkards when there were several daughters, it was noted that in many cases where the older daughters were "capable" the younger daughters were "incapable" of nursing their offspring. This is accounted for by the fact that the father had so gradually undermined his health by the use of alcoholics that he was no longer capable of begetting healthy offspring. It was plainly evident in this same class of cases that there is a close association between agalactia and a susceptibility to nervous and psychical disturbances, for only 1.6 per cent. of the class of "capables" were found to suffer from disorders of the nervous system, while the alarming proportion of almost 26 per cent. was reached for the "incapable" daughters of "incapable" mothers.

Bunge states that the statistics show that when once this important function is lost it is seldom, if ever, regained. If this be true, the number of mothers incapable of nursing their children must necessarily increase with each succeeding generation, and it will be but a comparatively short time before this function will be entirely lost, for there will always be drunken fathers who will beget daughters incapable of performing this function, even though their mothers may be capable.

These facts, coming from such an eminent authority as Professor Bunge, are certainly worthy of careful thought and consideration. They give the most rational explanation of the cause of the rapidly increasing number of cases of agalactia, and afford us a working basis whereby we may in a measure

check the onward progress of this alarming state of affairs. It is not alone essential for the physician to refrain from prescribing alcoholic beverages for his parturient cases, but he must in his daily contact with them inform them most emphatically concerning the pernicious influence of this drug. As shown by Bunge's statistics, the mother is not only rendered incapable of nursing her offspring through the use of alcohol, but the foundation is also laid for various nervous disorders.

The use of alcohol by pregnant women very materially and detrimentally affects the foetus. French authors have shown in the case of pregnant women who use alcohol that it, as such, passes in considerable quantities into the foetus and that non-developments, monstrosities, and malformations are brought about in the alcoholized foetus. It is a well-known fact that abortion and miscarriage are frequent in inebriates. Dr. T. Clyde Shaw tells us that in Dr. Sullivan's prison experiences he found that in inebriate prisoners 56 per cent. of the children were either born dead or died within two years. He also found that the mother exerted a very decided influence upon the mental characteristics of the child, as it is shown by the ascertained laws of hereditary taint, by the transmission of particular qualities and of neurotic liability, mother's marks, etc.; members of a family were quite sound mentally, but the younger ones neurotic, impulsive, and distinctly degenerate, in cases where the mother in the meantime became an inebriate.

Such conclusive evidence regarding the detrimental effects of alcohol upon the function of lactation is worthy very serious consideration by the medical profession, and it is to be hoped that some thorough and effective plan may be adopted whereby every mother and father may be made familiar with the detrimental effects of alcoholic beverages.

The United States Commissioner of Labor asserts that for every dollar received from the license revenue by the state at least twenty dollars is paid out to care for the victims and the injuries which follow from the use of spirits.

THE MEDICAL PROFESSION AND THE USE AND
ABUSE OF ALCOHOL.*

BY T. N. KELYNACK, M.D., M.R.C.P.,

Honorary Secretary of the British Society for the Study of Inebriety.

The alcohol question confronts us in every day's duties. It is fitting that at least once a year we, as medical practitioners, should review our relationship to this matter.

Alcoholism is a widely prevalent and most serious evil. It is a pathological state with direct and indirect prejudicial influence which is far reaching. It hinders individual development and hampers national progress. It hastens personal decadence and makes for racial deterioration.

The alcohol problem offers to all serious students of human affairs abundant material for investigation; but it appeals particularly to members of our own profession, for, many-sided though it may be, it is essentially a subject concerned with personal and public health.

The causal factors of alcoholism are highly complex; its clinical features are very varied; the pathological manifestations differ widely; and its prevention, arrest, and amelioration are surrounded by difficulties.

Prejudice, apathy, and ignorance still continue to increase the perplexities of the situation.

For long, solitary workers have sought to unravel the intricacies of the alcohol problem. The methods of research have often been crude, and the manner of conducting reform unscientific.

* An address delivered at the annual breakfast, given by the National Temperance League, at the Oxford meeting of the British Medical Association, Thursday, July 28, 1904.

check the onward progress of this alarming state of affairs. It is not alone essential for the physician to refrain from prescribing alcoholic beverages for his parturient cases, but he must in his daily contact with them inform them most emphatically concerning the pernicious influence of this drug. As shown by Bunge's statistics, the mother is not only rendered incapable of nursing her offspring through the use of alcohol, but the foundation is also laid for various nervous disorders.

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DELIRIUM TREMENS.

BY THOMAS N. VINCENT, M.D., Washington, D. C.,

Professor of Clinical Medicine, Georgetown University.

Delirium tremens is one of the most interesting manifestations of the effect of the long-continued abuse of alcohol upon the nervous system. Under ordinary circumstances, an unfortunate person afflicted in this way, brought into a hospital, is the recipient of anything but sympathy and the proper care which his grave condition deserves. He is usually passed along from the visiting physician to the resident, from the resident to an attendant, and eventually is left alone by that functionary to get along as best he can, to wear off his spree. Unfortunately, too many cases subjected to treatment of this kind, being worn out and exhausted, perish through lack of care.

It is necessary in the first place for the appearance of a condition of affairs of this kind, that the subject should have been addicted to alcoholic excesses for a sufficient period of time to have allowed the alcohol to produce its two effects, sclerosis and steatosis, particularly of the brain, of the cord, and of the nerves and arteries in general and of those pertaining to the kidney in particular. It is not necessary that the effects herein mentioned should be visibly evident, but it is necessary that they should be there, whether they give evidence of themselves or not.

It is necessary, furthermore, for the production of this condition, that the person liable to be affected thus should be

The physiologist can now demonstrate that alcohol, even when taken in comparatively small amounts, produces a distinct interference in the normal oxidation of the tissues, lowers the functional activity of various organs, impairs the working power of the human machine and diminishes capacity for endurance.

The pathologist now not only examines the morbid tissues of the human alcoholic, but can experimentally produce various disease processes by the action of alcoholic drinks.

The bacteriologist has shown that alcohol lowers powers of immunity and increases predisposition to many infectious diseases.

The experimental psychologist has also done much to explain the influence of alcohol on mental processes, and by means of psychometric tests has proved that even in quantities hitherto considered strictly moderate it may slacken and derange mental action.

The results of the experimentalist are in full accord with the experience of the clinician. It is remarkable how almost simultaneously in nearly every field of research into matters concerning the well-being of the human, similar conclusions have been reached, pointing to alcohol as the chief causal factor in the establishment and maintenance of innumerable ills.

Students of evolution, working from the standpoint of the anthropologist, the historian, and the sociologist, have amassed valuable evidence, which goes to show that alcoholism, not only among savage races and primitive people but amidst the highly civilized, has acted as a drag on human development.

Medical practitioners in all branches of the profession are testifying to the widespread disaster accruing from the all too prevalent use of alcohol.

Physicians find that in every rank of life alcoholism is answerable either directly or indirectly not only for the widespread prevalence of many so-called minor ailments, but also

Recent years have witnessed a remarkable and almost spontaneous concentration of scientific observation on this subject. Long surviving errors are being swept aside, many mere empirical procedures have been discarded, and a stultifying dogmatism is now generally discountenanced. In alcoholism we recognize a morbid condition which must be studied in accordance with the strict requirements of the best modern scientific methods. Already results rich in directing force have accrued.

It is but fair to admit that much of present ignorance pertaining to the use of alcohol, both in health and disease, is the outcome of incomplete knowledge, erroneous teaching, and ill-advised practice in the past.

It was formerly believed that alcoholic beverages were desirable, and even necessary *dietetic agents* for the healthy, and served as useful *nutrients* for the diseased.

The custom of placing alcohol among the so-called stimulants, instead of grouping it with what we now know as narcotics, has also tended to perpetuate misleading views, both among the profession and the public, regarding its therapeutic value.

Until comparatively recently alcoholism only in its grosser forms has been recognized pathologically or studied clinically; and generally speaking it has been customary to regard it as an unavoidable and even necessary evil. With the coming of clearer and fuller knowledge scientifically directed effort may accomplish much that is rich in prophylactic power and discover measures fruitful in attaining permanent arrest.

By the application of the experimental method many of our views regarding the action of alcohol have been recast, and our knowledge concerning the nature of the pathological changes induced much extended. New light has recently been thrown on the subject from many quarters.

The biologist has shown us that the physical basis of life in both the animal and vegetable kingdoms may be detrimentally affected by alcohol.

Certain sections of the public are sometimes wont to accuse the medical profession of encouraging or even initiating habits of alcoholic excess, by an unrestricted advocacy or ill-regulated administration of alcohol.

Whatever may have been the influence of medicine in the past it is clear that now every well-informed practitioner is fully alive to his responsibility in regard to this matter.

The modern practitioner, whether in his capacity of personal medical adviser or custodian of the public health, willingly recognizes and supports all rational hygienic measures which seek to establish and maintain habits of sobriety.

We acknowledge also in the practice of complete abstention from alcoholic drinks a common-sense and highly scientific prophylactic measure.

And, as a profession, we are deeply impressed with the urgent necessity for reliable instruction in the hygienic principles on which temperance depends.

We also desire an extension of legal measures and rational means whereby the confirmed inebriate may be more effectually dealt with.

It is very necessary to insist that in the scientific study of alcoholism we are but at the beginning.

We have still much to learn regarding its etiology, pathology, and symptomology, and as to treatment we are yet in the experimental stage.

The investigation of inebriety opens fields of deepest interest to the biologist and affords an insight into problems of the most pressing importance to the humanitarian.

With the coming of accurate knowledge it may be that effectual agencies will be secured whereby we may provide effectual prophylaxis.

At least, in regard to our efforts to procure the arrest of alcoholism, I think we may justly contend that what is scientifically right cannot be ethically wrong.

for much of the deterioration and decay of tissues which form the physical basis of many chronic and incurable affections.

The surgeon recognizes in alcoholism a fruitful cause for injury and accident, a strongly predisposing factor in certain forms of infection, and a condition inimical to processes making for repair.

The neurologist and alienist of recent years have collected an enormous amount of evidence from all parts of the country, which goes to show that either directly or indirectly alcohol is answerable for much of the widespread nervous derangement which exists, and is undoubtedly a causal factor of great importance in the establishment of mental disease.

Important evidence is now forthcoming from those we are accustomed to speak of as "specialists," all of which evidence tends to show that alcoholism is more widespread and exercises a greater ill both on the individual and the state than is generally admitted.

There is strong reason to believe that alcoholism is rapidly extending among women.

Undoubtedly much of the disease and disaster which overtakes such a large proportion of the child life of this country is due to alcoholism in the parents, and the pernicious influence exerted by the alcoholic environment.

It is interesting to note the importance placed by those having to deal with diseases arising in tropical climates on the avoidance of an alcoholic indulgence.

Mention should also be made of the valuable evidence afforded by medical advisers to assurance societies and those practicing in the public services, the army and the navy.

Medical officers of health and sanitarians generally have not been slow to draw attention to the close connection between alcoholism and various non-hygienic states and insanitary conditions. It is well that the public should have been aroused to the close association of alcoholism with tuberculosis and other preventible diseases.

endowed with a markedly prominent nervous diathesis, or what might be termed a naturally superabundant quantity of nerve force.

Given these two factors, no matter whether the person be of a plethoric diathesis, of a nervous diathesis, of a gouty or rheumatic diathesis, it is necessary in addition to these two qualities that he be subjected to some shock. It is not necessary that the shock, as such, should be severe. The more severe, of course, the more liable is the person to have this condition of affairs set up. The less severe the shock, and the more prominent the alcoholic condition, the more liable is the person to be subjected to delirium tremens, and this shock must not be taken in its ordinary restricted sense. Anything which is capable of creating a jar to the already diseased nervous system can cause the disease to supervene. Surgical injuries, from the slightest to the most severe, are capable of producing it, and indeed it may be said that surgical delirium, with very few exceptions, is nothing more than a manifestation of delirium tremens. Persons who are in a susceptible condition, and who are subjected to the action of disease of any character, not infrequently have it. Persons who are weakened in body and strength, and are subject to cold or disease of any kind, frequently suffer therefrom, and debilitated persons, who are just recovering from or are in the midst of an alcoholic spree, are very frequently the most liable to be the victims of an attack.

As regards the disease, we recognize in the first place its premonitory symptoms. Indefinite in character at the outset, attended with a total disarrangement of the gastro-intestinal tract, there is marked nervousness as to movements and muscular action; inability, to a greater or less extent, to sleep; a feeling of dread, and terror of impending calamity; manifestations of delusions, illusions, and hallucinations, which under ordinary circumstances may for the time being be quite promptly dispelled; a total inability to rest quietly under any

circumstances; a desire to be in constant movement of some kind, and this state of symptoms lasting for a period of a few hours up to at least twelve hours or more. In usual circumstances, we often find, after a short period, supervention of what may be called the real delirium tremens — an increase of all the symptoms heretofore mentioned, in which marked symptoms of delusions, illusions, and hallucinations, and marked muscular action are co-existent, and with the carrying out, to the most remarkable degree, ideas and fancies; an inability to remain quiet, in so far as the brain and muscular system are concerned, for any period of time, with a peculiar characteristic tremor, particularly of the muscles of the upper portion of the body, and especially of the tongue, face, and upper extremities; marked illusions, pertaining to the sense of hearing, the sense of sight, the sense of touch, and the sense of smell; a ramification throughout the entire system of symptoms of extreme dread and terror. At the same time, when properly brought about, there is a remarkable clearness of mind, which in a few minutes is obliterated with a return of the delirium; an attempt on the part of the patient, caused by fear and dread, to do anything, to commit any act, good, bad, or indifferent, in order to get away from the evil of the supposed impending trouble hovering over them, and, in this condition, very frequently to commit acts of violence, both as to one's self and as to those surrounding them. After a period of time varying from twelve hours to three, to four, to five days, this period of full-blown delirium is stopped by the supervention of a remarkably profound sleep, due to an already exhausted brain and nervous system. From this sleep the patient usually comes clear headed but weak, exhausted, and as one recovering from a severe, protracted, ordinary illness. On the other hand, if the person afflicted with delirium tremens has a debilitated constitution, and poor health, we frequently have the violent stage gradually and slightly, as if it were by lysis, pass into a stage of typhoid delirium, where the movements of the muscles

are not as pronounced in manner as in the active stage, and, by reason of the lack of physical force and the exhaustion present, are but phantoms, so to speak, of their previous conditions. The delusions, illusions, and hallucinations of this stage are milder in degree and kind, but partake of the same nature. The muscular movements are also milder in character. The gastric and all other symptoms present in the first two stages are still present, though modified to the weakened and exhausted condition. The patient loses control in time of the sphincters of the body, the delirium and mental derangement gradually continue, and we have partial evidence of oncoming coma, which in time gradually increases to that of complete coma, and death eventually ends the scene, due either to the watery compression of the nervous tissues of the body and of the brain, or to the supervention of cerebral hemorrhage as a result of the congestion of the blood vessels of the brain. In connection with the symptoms herein noted one or two prominent factors ought to be mentioned, one of which is the promptness, no matter how severe the patient's condition may be, with which his mind responds to commands or to questions addressed to him. Not only is the mental action prompt, but the physical effort, which may or may not be dependent for its success upon his bodily condition, is likewise prompt, wherein this condition is in marked contrast to that which is the result of disease of the brain itself or of its appendages.

The second factor is the marked prominence of fear, underlying all the actions in a person so affected. A third factor is a modification of the delirium to the nerves, characteristic of the patient as such. If the person be of the educated class, his delirium is thereby modified; if he be of the illiterate or semi-educated class, his delirium varies accordingly. If he is naturally of an athletic build, his actions are markedly indicative of this condition; and if, *per contra*, he is usually of delicate constitution, the delirium and its characteristics reflect it. Another prominent factor connected with this delirium is the effect

which his occupation and environment have upon the patient at the time when he happens to be seized. The writer has been struck with the fact that so many persons engaged in intellectual as well as physical occupation have in delirium tremens continued their actions of the time they were taken ill. He has known this to be true of gentlemen of intellectual pursuits, of musicians, of artisans of all kinds and descriptions, of professional pugilists, and, in a word, of persons of all degrees and shades of occupation, physical or intellectual.

Another peculiarity of this delirium is that it is remittent in character; at times violent, at times somnolescent. No matter what may be the state or degree between these two extremes, at no time in the delirium is the patient's condition such but that with a sharp answer or command he can be aroused and made to understand clearly and distinctly the questions addressed to him. At times in the delirium it is not infrequently accompanied by a marked rise in temperature, and the rule holds good here, as in other diseases, that the more marked and higher this characteristic, the more dangerous is the situation. We have the pulse proportionate to the temperature, and a characteristic respiration throughout the disease in all its phases.

Another peculiarity in this delirium is the inability to appreciate pain, whether severe or mild. It seems that the super-vention of this condition is sufficient, for the time being, to mask it. We find that persons who have been subjected to severe surgical injuries, such as fractures and wounds, which, under ordinary conditions, would produce a marked degree of pain, when affected with this delirium, complain in no way, and it is only with the subsidence of the delirium that the appreciation of pain supervenes.

With regard to the diagnosis of this interesting condition, it may be mentioned that not infrequently it is confounded with mania *a potu*, or the mania produced by the quick injection of a large quantity of alcohol in a person unaccustomed to such.

In these cases the lack of tremor, or the character of the delusion, illusions, and hallucinations, the history of the case of mental condition, the temperature or pulse, and the general condition, if correctly observed, ought quickly to enable one to make a diagnosis. The same points ought to enable one to quickly diagnosticate the difference between delirium tremens and acute mania. The same points ought to enable us to make a diagnosis between this condition and acute uræmia, and, in addition, as before stated, an examination of the entire body of each and every person so affected should be made to note the possible condition and masked condition due to possible wounds and injuries, particularly fractures of the various bones. Indeed, it might be here repeated that the vast majority of cases of surgical delirium, so called, are manifestations of delirium tremens, the result of a shock from a wound or injury to which the person has been subjected, and that the most prominent causes of delirium tremens are probably wounds and injuries of great or slight degree.

With regard to the pathology of this interesting delirium, it may be said that no person is affected with it unless they have suffered to a marked degree from sclerosis and steatosis of the general body tissues, particularly sclerosis of the kidney and of the various arteries of the body. On post mortem examination, we find a marked congestion of the membranes of the brain and of the brain itself, particularly the latter, and water is found to a greater or less extent surrounding it, causing pressure upon the brain and spinal cord; and, if this congestion is sufficiently prolonged and sufficiently severe, we not infrequently find rupture of veins and arteries in various parts of the cerebro-spinal system and, as a result, apoplexy. It might be remarked that in proportion to the degree of the delirium we find at the post mortem, in so far as eye can observe, very few symptoms. It is only by a microscopic examination of the brain and its membranes, and of the nerves and cord, that we find a degeneration, sclerotic or steatotic, of

the various ganglionic centers, or, in other words, the beginning of a marked spinal neuritis.

The prognosis of delirium tremens depends entirely upon the condition of the person at the time he becomes so affected. Generally, in a relatively strong person, the first attack is tided over, but in persons who are victims of exhausting diseases, severe surgical injuries, or extensive and exhaustive operations, or who are debilitated by reason of long alcoholic excesses, added to advanced years and a poor constitution, we find that delirium tremens has a very exhausting effect and rolls up an extremely high death rate. In fact, between these two extremes mentioned the percentage of mortality ranges all the way from two per cent. to forty-five and fifty per cent.

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Owing to the fact that delirium tremens is a condition of affairs which will go on and expand irrespective of the administration of hypnotic agents, etc., the writer is strongly opposed to the administration of opium, or its derivative alkaloids. He can see no use and no good in their administration other than to ultimately exhaust the already over-exhausted nervous system, and he thinks that in the majority of cases where opium and morphine are administered to produce sleep they can have but one effect, and that is to cause exhaustion. The sleep which they are supposed to produce is simply that which would come about anyhow in the period of remission always noted in the delirium.

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The writer desires to enter a protest against the administration in this condition of the long list of coal tar hypnotics and their secondary derivatives, and against the administration of so-called hypnotic agents in general, among them bromide of potassium, for the reason that he cannot see why these agents, all of them depressing in character, should be made use of as frequently as they are in a condition where the disease is going to run its natural course, according to the physical strength

of the person involved, plus the development of his nervous system, plus the individual peculiarities and idiosyncrasies of each patient.

In conclusion, the writer wishes to make a plea that delirium tremens may be regarded as a manifestation of chronic alcoholism, marked in character, and of such a degree that a person may be said to have his vitality greatly reduced, his ability to resist disease markedly diminished, and, by reasons due to alcoholic causes, to have his life span markedly shortened. The writer has never seen a person attacked in this way who was anything but an easy prey thereafter for disease of all kinds and descriptions, and who, in addition, was not, when examination was made, found to be a victim in a more or less marked degree of fibroid kidney.—Taken from *New York Medical Journal*.

THE MANUFACTURE OF COCAINE IN PERU.

According to a report published in the *Pharmaceutische Centralhalle*, August 4, 1904, the cocaine industry has greatly increased in Peru within the last few years. The German consulate at Callao, in a recent statement, reports that there were in the various provinces of Peru 21 factories in which cocaine was manufactured. The production of cocaine in 1901 comprised over 10,700 kilograms, which corresponds to the use of 1,500 tons of coca leaves. The export of leaves for the manufacture of wines and other medicinal preparations comprised 610 tons. So that the total production of leaves, excluding that which is consumed in the country itself by the natives, may be estimated at 2,100 tons. The cocaine exported contained from 1½ to 2 per cent. adulterations. In 1901 the production of cocaine was more than twice as large as that reported in 1897. The chief market for this product is Hamburg, where the cocaine is purified and is sold in various parts of the world.

CIGARETTES.

BY J. W. COLEMAN, M.D., Jerome, Arizona.

It seems to me that the general public is ignorant of the evils of cigarette smoking. The fifteen grains, more or less, of tobacco, rolled in a little paper, seem so harmless that a great many parents are not uneasy when they discover that their boy is smoking cigarettes. They are fashionable, especially among certain classes. The "poor white," troubled with "hook worms" (*Uncinaria Americana*), rolls his tobacco in corn husks. The courtesan and those who frequent her house roll the tobacco in rice paper. The ultrafashionable men and women smoke their delicately perfumed, imported ready-made cigarettes and dream of new sensations. Modern fiction is full of so-called heroes who smoke cigarettes. You who write for the reading public, can't you make your characters do without this?

Recently I saw a comment in *Merck's Archives* on an editorial in the *Medical Examiner*. The editorial in the latter ridiculed the idea that cigarette smoking was more harmful than other forms of using tobacco. *Merck's Archives* had the temerity to call it "a rather strong editorial." I saw but part of it. Judging from that, it was weak and full of error. The *Medical Examiner* makes the same mistake that others have made in calling attention to the purity of the paper. The danger is not in the wrapper but in the method of smoking the cigarette. It is this that makes cigarette smoking more dangerous than other forms of using tobacco. Cigarettes are not injurious because the tobacco is wrapped in paper, even though

said paper be made of old clothes, nor is it injurious because of the introduction of some foreign drug, nor to the ink that may be used in stamping the paper of the manufactured ones. Manufacturers of cigarettes and cigarette paper call attention to the purity of the paper: that it is rice paper and perfectly harmless; that there is no copper in the ink used in the manufactured ones; that there is no foreign drug added to the tobacco; and I believe they tell the truth. Of course the paper is harmless. They don't need to add anything to the tobacco to make the cigarette pernicious when smoked as they usually are. Why strain at a gnat and swallow a camel?

Why is the cigarette more injurious than other forms of tobacco? Because the smoke is inhaled into the lungs; because it covers an area 500 times greater than the smoke from a cigar or pipe, or the solution from a chew; because it comes in contact with mucous membrane especially made for the absorption of gases; because the alkaloids and glucosides of tobacco are volatile substances and the heat changes them into gases. Said gases are quickly absorbed when spread over an area of about six hundred square feet, which, roughly speaking, is the mucous area of the lungs.

Cigarette smoking is much harder to stop than other forms of using tobacco; more difficult than opium; more dangerous than chloral and more harmful than other narcotics. The effect of cigarette smoke is much quicker than the hypodermic syringe. Ten to twenty seconds and the silent poison is pursuing its deadly work.

Business men are recognizing the evil of cigarette smoking and refuse to employ men who smoke them. They recognize the fact that the man who smokes cigarettes is not a good workman; that he wastes his time; that his nerves are not steady and that his heart is weak. That he cannot be depended upon when the occasion arises calling forth all the powers of the brain, muscle and nerve. The heads of great railroads have issued orders forbidding their employees smoking cigarettes.

I have seen a trainload of people wait while the fireman rolled a cigarette. Go into any public place frequented by men and you can see the little burnt marks made by the half-smoked cigarette. I have seen them on pieces of furniture in private homes.

Who of you physicians have not treated the "cigarette cough," "cigarette sore throat," "tobacco heart" and many other ills, due, directly or indirectly, to the so-called innocent cigarette? Who of you have not been called to see the young man who was found unconscious? You who are on the ambulance staff, have you not been called in great haste to some man found unconscious on the street? Too many cigarettes.

I saw a man who smoked seventy-five cigarettes a day of twenty-four hours, waking up at night to smoke eight or ten times. Many others have I seen wake up at night to smoke their little "coffin nails," slaves to a habit stronger than nature.

The cigarette smoked as a cigar or pipe is not more injurious than other forms of tobacco, but when that smoke is inhaled, the smoke becomes dangerous. Smoke and chew if you must, but never inhale tobacco smoke. — *Colorado Medical Journal*.

Several European authorities are discussing with eagerness what they call a new sign of chronic alcoholism or inebriety. Literally it resolves itself into this: The suspected patient spreads out his finger-tips and presses them against those of the examiner. If the person is an alcoholic the examiner will feel a number of slight shocks of the nature of a crepitus. This can be heard by the stethoscope like friction sounds. One author concludes that it must be a neurosis of the terminal ends of the nerves; another thinks that it is a tremor showing the instability of the nerve centers. It is difficult to understand how this can be of any practical value when inebriates have so many other signs that are unquestioned.

EITHER OR NEITHER?—A NOTE ON THE TREATMENT OF INEBRIETY.

BY G. H. R. DABBS, M.D.

I have been at some pains to ascertain why three cases of inveterate alcoholic inebriety, which were failures to me by my methods, were a success to the methods of the Salvation Army. The men themselves say, and I am inclined to agree with them, that the prohibition of tobacco by the "Army" was exactly the vital prohibition omitted by me. They do not put it nicely in that way, but they put it bluntly in their way; the result is the same, and it seems to me, if they are right and I have been wrong, I had better "own up" and say so. I am very pleased that they are kind enough to my feelings to reduce their criticism to an omission of mine which I can appreciate. I had rather expected to be met with an argument as to supernatural assistance, which was not needed as a reason while tobacco was allowed, and while its use explained, in their idea, their chronic derogations.

Now let me be quite understood. These three men have never met one another, and do not know one another. To each of them I write a congratulatory letter, and I praise the Army for saving their bodies. I ask each of them where I failed, and all three, uncollusively, give me the same reply. It is true they may have it stereotyped in their consciences by the Salvation Army assertions to that effect. But that would not invalidate the soundness of the reply if the fact is fact. Is it? Well, frankly, I am inclined to think there is a great deal in it. I will talk about it a little more later on. I just wish to quote my "authorities" first.

No. 1 says: "Seems to me no chap as used to drink and smoke can give up one while he does t'other. Directly I smells a pipe I thinks o' my ole pint pot."

No. 2 declares: "You did your best, but you was 'alf-'arted. You felt you could give up your drink, but you couldn't give up yer baccy, and so you let me 'ave mine. Once take too much drink, and any bacca at all will make you go to it again."

No. 3 is a little more dubious: "The only thing, dear sir, which I can think of beyond the saving grace that has come to me, which may be all, is that the Salvation Army does not allow tobacco, and it seems to me that the surrender of this, hard as it was, really helped me to conquer my old vice," etc.

Now, here are three bits of fairly conclusive evidence, though, as you can see, the more highly educated witness is, as usual, the comparative trimmer. The other two have no doubts, and they would probably say that the "saving grace" (with tobacco) would hardly, in their opinion, be a specific.

I wish to consider the question raised. I am immediately met by the argument that says: "But women inebriates do not, as a rule, smoke," and that lands me just two links on in the chain of consideration. One link is marked, "Are women as possibly curable as men?" and the other link is, "Have we possibly omitted some equally vital prohibition in their case?"

Frankly, I think enough of importance of the tobacco veto to always include it now in the prohibited list. I am told (and the report is, I believe, justified) that the biggest temperance organization on earth is the Salvation Army, and knowing myself of three "brands snatched from the burning" which I could not reclaim, I am only too willing to believe that, consciously or unconsciously, intentionally or unintentionally, the Army, by prohibiting the use of tobacco, has rendered it easier for the alcoholicide to avert that form of self-murder.

We all know the power of suggestion and the potency of the olfactory nerves in provoking reminiscence. I can quite understand that the whiff of tobacco smoke may remind the

(perhaps) rather bored recent practitioner of sobriety of the bar parlor and old boon companions. Where modern methods fail is in the lack of alternatives. We ask a man who has passed his evenings in the choral development of head symptoms to stop at home and read, or go out for a walk, or generally moon about. The Salvation Army is far wiser. They give him no rest. He has no time to feel dull. They flatter his latent æstheticism with a uniform, and put him on the terms of intense personal familiarity with the unseen world. They may substitute one habit for another, and for two other habits (I don't say they do not), but in an imperfect world they at least instruct him in the attempt to acquire a kind of perfectibility. But, better still, they load him with duties, often emotional, but duties which foreshorten ennui and annihilate the loneliness of civic or bucolic boredom.

Now, if it be true that in vetoing alcohol we must also veto tobacco, will it be improbable that there is something we must veto, not hitherto vetoed, or have not hitherto done, if we are to reclaim the female inebriate? I shall be asked: "What success has the Salvation Army had with them?" I am told in that irresponsible bruit which all can hear who listen, that their success has been almost equally great with women, and that would go to prove (if true) that the independent testimony of my three male correspondents must be rather considered as coincidences than true evidence. I am inclined to think that in the case of the female inebriate the spiritual influence of the Army may count for more independently than in the case of the men. We treat such cases, when we can, by the Inebriate Home. I wonder if any of my readers have ever grasped what a nadir of dullness an Inebriate Home for Women may be. I can fancy that the virtue of sobriety under such conditions might preferentially revolt in favor of its old vices. The whole secret of the success of the Salvation Army is in the intensity of the personal element which is imported into all their work. It is this living interest in each one which must be

encouraged; it is not enough to make a lot of inebriate women gregarious within four walls, forget them for a space, and talk of a cure. That is no cure; that is a semi-penal parenthesis in the vast human sentence of inebriety, and when they come out they are very often, and perhaps very soon, as bad as ever. I do not mean to say that emotional religion is a very good stimulant to substitute for other stimulants; but if, as in the Army, emotional religion is backed by hard work on business lines, I would chance the possible evil in exceptional cases for the very evident good in a vast number. But, most decidedly, I do put forward this view — and it is not a “view” without experience to back it — that no ever so reclaimed female inebriate should be encouraged, if a married woman, to have more children. I knew a quite pitiful case where a lady, under the symptoms of the disorders of pregnancy, and after an apparent cure from inebriety of five years’ duration, went back irretrievably, and against all our precautions, to her old habits; and I have heard of similar experiences in the practice of other men. This I say now from the mother side of the question. It is sufficient “for the day”; but an argument might also be stated from the child side which would not diminish the force of my plea. — *British Journal of Inebriety*.

In the *Archives of Neurologie* Dr. Legrain reports that alcoholics are treated in Russia very largely by hypnotism. Each patient is required to sincerely desire to abstain from spirits and to second the efforts of the physician. Then he is placed under military care, and mental suggestions are repeatedly given with remedies which cause disgust to the taste of spirits. It is claimed that after a while a profound impression is made on the will power, and the patient is practically cured, and such cures continue for years. In all probability the military restraint and care is continued, so that the patient practically outgrows the diseased condition.

THE REFORMATION OF INEBRIATES.*

BY DR. A. M. ROSEBRUGH, Toronto, Canada.

Whatever else the Canadian Conference of Charities and Correction may be said to stand for, it certainly stands for the diminution of pauperism, vice, and crime, inasmuch as it stands for the paternal care of neglected children.

Parental neglect is one of the chief causes of crime, vice, and pauperism, and the Ontario government did a wise thing in 1894 in passing the Act for the Better Protection of Children. This was a step, but only a step, in the right direction. It should have been followed by an Act for the Reformation of Inebriates.

Drunkenness, as we know too well, is responsible for a large amount of crime, that is, drunkenness directly; but inasmuch as drunkenness is the principal cause of parental neglect it will be seen that drunkenness, both directly and indirectly, is really the chief cause of crime. If the drunkard could be reformed there would indeed be little parental neglect, and consequently much lighter work for Children's Aid Societies and other charity organizations.

An act for the reformation of drunkards would be *de facto* an act for the better protection of wives and children as well as for the better protection of society, and the lifting of a heavy public burden.

But can the drunkard really be reformed? Can he regain his lost position? Can he be made a decent member of society?

* Abstract of a paper read before the Canadian Conference of Charities and Correction, held at London, October 5-7, 1904.

Can he be restored to useful citizenship? Is the effort really worth while? To this I say: Most decidedly yes. What are the facts?

1. As the result of treatment of bad cases of dipsomania at the State Hospital for Inebriates at Foxborough, Mass., over 10 per cent. are found to be doing well at the end of nine months after discharge.

2. The Certified Inebriates Reformatories in Great Britain receive every class of case. Over 50 per cent. are found doing well at the end of twelve months.

3. As the result of medical treatment combined with the Probation System in Montreal during the last six months, 60 per cent. of police court cases are claimed to be still doing well.

4. Over 70 per cent. of selected cases placed on probation by the courts of Massachusetts are never known to be again arrested for drunkenness.

5. At the New York Christian Home of Intemperate Men it is claimed that a large percentage are reformed.

These are some of the facts, and this is my reply to the question, Can the drunkard be reformed? If, then, the drunkard can be reformed, is it not but right that he be given at least an opportunity to reform? For his own sake, for the sake of those depending upon him as well as for the good of society generally, should he not be given a helping hand? If he may be reformed, does it not behoove us to ask ourselves the question, What is my duty with reference to this important question? And also the further question, Am I or am I not my brother's keeper?

In 1891 the Ontario Prison Reform Commission reported that the system of sending drunkards to jail or prison on short sentences is neither deterrent nor reformatory, and they made a recommendation to the effect that other and special provision should be made by the government for their reformation. This the government declines to do, on the ground of expense. That is, the government declines to establish a provincial institution for the reformation of drunkards.

Under these circumstances the Prisoners' Aid Association in 1898 formulated an economical scheme for the reformation of inebriates without the establishment of a provincial reformatory, the object being to secure maximum efficiency with minimum expense.

Two years later, with the coöperation of the Ontario Medical Association, this scheme for the reformation of inebriates was drafted in the form of a bill and submitted to the government. No action has as yet been taken by the government, however, with respect to the question, and, owing to the small government majority in the legislature, the time has not been considered opportune for urging it.

In the meantime a society has been formed in Toronto to promote the treatment of indigent inebriates. At the inaugural meeting of this society, held at Government House, September 19th last, both the Premier and the Lieutenant-Governor were present. This, we take it, augurs well for the success of the undertaking. Its promoters have also received not a little encouragement recently from the fact that the Government Inspector of Inebriates' Institutions in Great Britain reports that the Inebriates Act which came into operation in 1899 is working most satisfactorily, first, by stimulating voluntary effort on behalf of inebriates, and, secondly, in the large percentage of reformations, namely, about 60 per cent. This percentage of cases do well for at least twelve months after discharge.

Although the proposed Ontario bill was drafted independently of the Imperial Inebriates Act, the two measures have certain important features in common, namely, (1) Provision is made for the appointment of government inspectors; (2) assured government aid to promote the treatment of inebriates; (3) encouragement to municipalities to establish inebriate hospitals; (4) conditional liberation; and, (5) careful supervision after discharge.

In one important respect, however, the proposed Ontario

bill differs very materially from that of the Imperial Act. With a view to reducing the expense in the working of the measure to a minimum, the bill contemplates making full use of the system known as the Massachusetts probation system, that is, placing the more hopeful cases under the supervision of a judicious friendly visitor or probation officer on suspended sentence, in lieu of imprisonment or giving hospital treatment. The drunkard would be assisted in finding employment, and every effort would be made to place him on a higher plane of life and living. In addition to this the bill provides for giving medical treatment in the form of home treatment, but without interfering with regular employment.

In this movement we desire the sympathetic coöperation of everyone who is in a position to give it a helping hand. The movement may be aided as follows :

1. Members of the medical profession can very materially aid the cause by bringing their influence to bear where it will be most effective, both individually and through medical societies.
2. When making additions to public hospitals, making provision for the reception and care of inebriates.
3. The cause may be aided by calling the attention of city and county councillors to the question, and suggesting the propriety of memorializing the government on the question.
4. Using personal influence with representatives in the local legislature, very few of whom have probably given the question much attention.

There is one much-needed reform, however, that might be brought about in the meantime, without further legislation, and without delay, a matter wholly in the hands of the magistrates of the province, namely, by very materially lengthening the sentences of habitual drunkards. Let first and second offenders be dealt leniently with, but leniency is not true kindness to the confirmed inebriate. Long sentences give an opportunity for reformation, while short sentences are of no benefit.

Long sentences are especially desirable in the case of con-

firmed and degraded female inebriates. In the interests of morality, in the interests of coming generations, in the interests of the inebriates themselves, these unfortunates should be sentenced for the full term allowed by law. Unreformed and unreformable drunken women—corrupt and corrupting—should not be allowed at large for a single day.

COMMITMENTS FOR DRUNKENNESS.

In the annual report of the State Commissions of Prisons, recently presented at Albany, it is stated that during the past year there was 28,519 commitments to the jails and 3,615 to the penitentiaries for intoxication, making a total of 32,134 commitments for the single offense of drunkenness. The total commitments during the year to the penal institutions of the state, for all offenses, were 102,581. Thus it appears that nearly one-third of all commitments were for intoxication. While it may be necessary for the protection of the public that intoxicated persons should be taken into custody and receive treatment at the hands of the state, it is urged that this offense should not be treated strictly as a crime. "Drunkenness," the report continues, "has in it no element of malice— one of the usual and necessary elements of crime. Habitual drunkenness arises largely from mental weakness, and its treatment should partake of the characteristics which the state has deemed wise to use in other cases of mental aberration. There is a large distinction between the man who cannot control his appetite for drink and the man who wilfully and maliciously commits an offense against the person or property of another. The law should recognize this distinction. The present practice of sending him to jail or to a penitentiary, branded as a criminal, to consort with thieves, only depraves and discourages him, and at the same time inflicts punishment and privation upon his family. Some wiser methods of dealing with this offense should be ascertained and adopted."

DIPSOMANIA AND INEBRIETY.

BY WILLIAM LEE HOWARD, M.D., Baltimore, Md.

The word dipsomania is a misnomer and misleading. This psychokinesia is not demonstrated by an insane craving for drink, but a morbid uncontrollable desire for alcohol or any narcotic that will give relief from intense periodical mental restlessness and physical weakness. There is no thirst pushed to the insane point, no rabid, feverish desire for fluids, as the word would indicate. Narcomania would be a more correct term, for all the symptoms point to a functional disease of the nervous system characterized by a morbid uncontrollable demand for some narcotic that will give relief from periodical mental sufferings. The unfortunate victims belong to the constitutionally discontent, except during their periods of inhibitory insanity, which for them is euphoria. It was careless and superficial observation of this class of cerebral neurasthenics, with slight understanding of the causes for these periodical attacks of uncontrollable impulses, that caused writers of the last decade to designate the victims dipsomaniacs. True it is that these victims of unstable nervous equilibrium drink enormous quantities of liquors without regard to time, price, or quality, but only because this narcotic can be readily and constantly obtained, supplies the morbid craving for something that produces mental hebetude and physical comfort, and can be consumed with apparent safety by the unfortunate in unlimited quantities. This condition gives us a hint as to the etiology of these periodical outbreaks, for it is a fact that during the height of the attack the subject will go without food

and sleep for days while consuming alcohol in quantities large enough to bring on delirium tremens or kill outright several normal individuals, and this without showing any decided symptoms of alcoholic intoxication. This may go on for several weeks, the subject getting but little food or sleep, and this sporadically. The attack over, he will cease almost immediately taking his alcohol—an entirely different condition from that met with in the inebriate and drunkard. So little understood is this difference between inebriety and dipsomania (I use the term for familiarity's sake) that one is not surprised to find laboratory workers confounding the symptoms with the effects. Berkley (*Treatise on Nervous Diseases*) says delirium tremens frequently follows dipsomaniacal attacks. This has not been my experience. The true victims of this nervous explosion seem to be physiologically unaffected by the enormous quantities of alcohol consumed.

The individual who is the victim of periodical attacks of mental restlessness and who succumbs to the uncontrollable demand for alcohol is of a type distinct from the chronic inebriate. Socially and mentally he belongs to the intellectual and educated class. He is to be found in the studio and in the pulpit, pleading in courts of justice, prescribing for his wealthy patients, or interesting large audiences in the theater. He is found to be an individual of pronounced mental gifts and intense nervous activity; he is often a genius. While in his normal and untrammled state of mental activity he repudiates any thought of help from the physician; and when he is wandering aimlessly without any lucid consciousness of self, he does not want any medical advice; he is contented. In this latter state he does not stagger, is not noisy or quarrelsome, but is genial, is wasteful of his money, and exhibits an exaggerated ego which has all the objective symptoms of incipient paresis. He gravitates to saloons and "dives" unknown to his other self; yet is not vicious, has no lecherous thoughts, nor will he join the denizens of these dens in their orgies. He will talk

in Orphic tones on any and all subjects, exhibiting always a high degree of knowledge and intellect, but demonstrating want of continuity and logic. Companions he must and will have, and he seeks those who will listen to his uncontrollable volubility and drink with him, frequently using up a score or more of the barroom "bums" and degenerates who try to consume all the liquor that he will pay for. These alcoholics are the "dipsomaniacs" seen in hospitals and clinics — the real type, the temporarily alienated, who can physiologically absorb such quantities of liquor without showing any symptoms of acute poisoning, never appearing in the public hospital, except to be treated for some secondary effect of these continued attacks, which have in time, of course, produced pathological changes. One must have an intimate acquaintance with the world outside of the laboratory and clinic to understand these unfortunates. Berkley (*loc. cit.*), in describing the habits of the dipsomaniac, says: "They sit silent and alone; companions are shunned." As I have said, quite the contrary is the case. The inebriate, the drunkard, will "sit silent and alone." Oppenheim (*Diseases of the Nervous System*) also misunderstands the true nature of this brain disturbance, for he confounds the symptoms with the disease. He advises the patient after being discharged from an institution to take the pledge or join some temperance society. One might with equal justice ask the epileptic not to fall when he recognizes the aura.

In the dipsomaniac we have a temporarily heightened mental activity with loss of inhibition over judgment, will, and correlative forces, with companionship of a controllable nature an absolute necessity to complete the cycle of content. In inebriety we have a deadened, sluggish mentality with physical inertness due to alcoholic poisoning, an entirely different condition from that seen in the dipsomaniac. In the inebriate we often find a chronic or subacute myelitis, in the dipsomaniac seldom. In the subject of chronic alcoholism epilepsy is common, in the dipsomaniac it is rare, as is also alcoholic neuritis.

As a large percentage of the dipsomaniacs are of a gouty diathesis, there are sometimes pains after the attacks, but they are gouty pains and not alcoholic.

Mr. W. E. Johnson, editor of *Temperance Encyclopædia*, writes as follows on the growth of the temperance cause:

"I have before me half a dozen official journals of the House of Deputies at Berlin, almost wholly taken up with discussions on the liquor traffic and what to do with the nuisance. The medical fraternity of Paris has just decorated the walls of that mighty city with denunciations of liquor, and French government authorities, military and industrial, have smote the business with an axe. Russia has organized a department of her government to eradicate the traffic. The question of what to do with the liquor business has been at the forefront of the Japanese Parliament at each session for three years, and a letter on my desk from a member of that body says that they are organizing for another onslaught next winter. Peru has called a congress to consider the problem. Mexico has just decreed prohibition for a federal district. New Zealand has the business by the throat and the death rattle is heard around the world. Northern Africa is entirely under Mohammedan prohibition so far as the natives are concerned. The most drastic law ever known in South Africa has recently been promulgated for the Transvaal colonies. Chili, a few months ago, enacted a hostile restrictive law, the most stringent ever known in South America. England has adopted the policy of providing general prohibition for natives of distant islands "in the interest of trade." The traffic is outlawed in all the railway and great industrial circles of America. It has been kicked out of the lodge rooms of respectable fraternities. It is tabooed by medicine, denounced from the bench, scourged by the pulpit, and damned by the drinkers themselves."

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TOBACCO AND THE SENSE OF HEARING.

At the Congress of Otology at Bordeaux M. Delie read a paper upon "Tobacco and the Auditory Sense." Tobacco, he said, exercises a direct and selective action upon the auditory nerve, and nicotine brings about circulatory troubles, owing to its exciting action upon the great sympathetic. It also gives rise to, or stimulates, a trophoneurosis which ends in neuritis of the auditory nerve. Tobacco should be used in moderation, and practitioners should warn patients in whom there is already auditory trouble that its action is specially harmful in their cases. In persons who are already suffering from arteriosclerosis or who have a family history of such a condition it ought to be forbidden, and all the more if they are comparatively young. — *Lancet*.

Abstracts and Reviews.

IS THERE HOPE FOR THE DRUG INEBRIATE?

BY DAVID PAULSON, M.D., Hinsdale, Ill.

A properly equipped sanitarium, operated upon rational principles, is best prepared to undertake the cure of the typical drug-habit victim. Yet, in view of the alarming increase of this class of patients, it is evident that a large number will either have to be cured at home or else abandon all prospect of securing the longed-for deliverance from this slavery.

The average drug fiend soon develops definite traces of moral depravity. One of the most characteristic of these is an invariable tendency toward falsehood, and a peculiar deceitfulness which frequently enables him to continue the use of the drug when his friends do not in the least suspect it. One of my patients for several days successfully eluded the vigilant eye of his trained attendant and succeeded in supplying himself with morphine tablets which he had secreted in the cap of his fountain pen. This shows how utterly useless it is to attempt to cure such a patient unless he is placed under the constant supervision of some responsible person who acts under proper medical direction.

The "tapering off" method appears at first thought to be the most feasible plan. This consists in slowly reducing the dose until the patient, without his knowledge of the fact, is given nothing but pure water at each hypodermic injection; but in actual practice this process generally proves to be a

delusion and a snare to the patient, for when he experiences the first trifling physical ailment or mental depression he as readily again falls back into the old habit. It assists materially in the permanency of the cure for the patient to be able to recognize the decisive moment when he secures the victory from this slavery.

Another popular idea consists in substituting some less harmful drug for the particular one to which the patient is addicted. The majority of the widely advertised "cures" are based upon this principle. As a rule, they are unsatisfactory, for the patient soon discovers that he is leaning on a broken reed, which does not afford his wrecked nervous system the support it craves, and when the desire for more unearned felicity than the substituted drug can furnish becomes almost irresistible, the patient again resorts to his favorite drug.

It is not enough merely to cure the drug habit. The patient himself must be cured; he must receive such a physical uplift as will enable him henceforth to camp above the drug line. As long as he maintains himself upon this plane, by the diligent cultivation of moral and physical health, so long he remains cured.

When the patient's irritated nerves are properly quieted by sedative physiologic measures, the drug may be completely withdrawn at once, and in the majority of cases it is not necessary to administer even a second dose; in fact, incredible as it may seem, a number of these patients do not even call for a single dose of the drug after beginning a proper line of treatment. It is absolutely essential that other enslaving agents should be abandoned at the same time. If the patient persists in the use of alcohol or tobacco, or even is so habituated to tea or coffee as to be miserable when deprived of them, it will be only a question of time when these agents will serve as connecting links in a chain of circumstances which will eventually lead back again to the old life; for the temporary stimulation which they afford will sooner or later fail to satisfy him, and nothing

but morphine or cocaine or some other drug will then answer the purpose.

Dr. Haig, the eminent English medical authority upon this subject, speaks as follows: "No doubt all stimulation is wrong, and we thus merely enjoy today by mortgaging tomorrow, and just as we may rise today a few inches above our normal level, so shall we fall tomorrow exactly the same amount below it."

Often an individual is addicted to the liquor, tobacco, and drug habits at the same time. It is as great folly to advise such a victim to abandon these habits on the installment plan as it would be to suggest to a man with several fingers in the fire to withdraw one at a time.

One of the most soothing measures that can be employed in these cases is a neutral bath, the temperature of which should be precisely that of the skin, or about 94 to 96 degrees. The patient may remain in such a bath from half an hour to several hours. The sedative effect of this upon the system is so marvelous that the patient invariably feels refreshed and soothed, and often secures some refreshing snatches of sleep. Patients who have sustained severe external burns frequently live for a number of weeks constantly in such a bath without experiencing any unpleasant effects. The mistake is likely to be made in allowing it to become too warm, in which case it is both weakening and debilitating. The application of fomentations quickly relieves to a large degree the distressing pains which are apt to develop upon the withdrawal of the drug. Firm rubbing will often accomplish the same result. Properly applied galvanic electricity is also a very useful agent in these cases.

The diet should be extremely simple, consisting of egg toast, gluten gruel, buttermilk, fruit, and fruit juices. The patient should be inspired with the thought that he has a right to expect divine assistance while he resolutely determines to give up these life-destroying habits.

It is highly essential for the permanency of the cure that

the patient should have indelibly stamped upon his memory that there is no royal road out of the morphine habit; that it is utterly impossible to trifle for years with nature and not to expect her to inflict some penalty.

When the case is managed in harmony with the principles outlined in this article, the patient ordinarily passes the crisis of his ordeal within thirty-six to forty-eight hours, and after that time experiences but little discomfort.

After the patient has been cured of his drug habit his health must be gradually restored, and to accomplish this it will be necessary for him to adopt a natural and wholesome dietary, and to undertake some systematic course of physical development. He should daily utilize such tonic hydratic measures as a cool sponge bath or cold mitten friction, or brief cold baths, gradually lowering the temperature as his ability to react increases. Such an individual must exchange his sedentary life for one that includes a considerable amount of vigorous outdoor activity. He must learn to look to divine sources to impart to him permanently that calmness of spirit which he has sought to secure from the delusive effects of drugs. — *Good Health.*

AGAINST USE OF WOOD ALCOHOL IN FLAVORING EXTRACTS.

Chapter 378 of the Laws of Maryland of 1904 provides, under penalty, that no person, firm, or corporation engaged in making, compounding, and selling extracts, essences, or other fluids commonly used for flavoring articles of food or drink shall use or permit to be used by employees in the manufacture of such extracts, etc., any methyl or wood alcohol; nor shall any person, etc., sell or offer for sale any such extract, etc., containing any methyl or wood alcohol.

A STUDY OF ALCOHOLIC INSANITY WITH
ANALYSIS OF CASES.

Dr. Mitchell, assistant physician of Danvers Insane Hospital, Mass., has recently read a very interesting paper on the above subject, which appeared in the *American Journal of Insanity* for October. His conclusions and analysis of cases are interesting, and his detailed reports of cases show great care and observation. He makes four divisions of the subject.

1st. Delirium Tremens, which he calls a disturbance of consciousness, disorientation, confusion and tremor, with active hallucinosis. The following are his conclusions from a study of these cases:

There were forty-one cases of delirium tremens, 27.7 per cent. of the alcoholic cases. This low percentage is due to the fact that many cases of delirium tremens never reach the hospitals, while the graver forms of alcoholic insanity more generally require commitment. This is shown by the history given in many cases, of the latter groups, of antecedent attacks of delirium, not requiring hospital restraint.

These forty-one cases showed no special features. In every instance there was disorientation, with vivid visual and auditory hallucinations and illusions, tremor and various somatic symptoms. It was the first attack in thirty-two cases, the second in three, the third in two, in four the history was unreliable. Thirty-nine patients were discharged as "recovered"; one "much improved," after remaining in the hospital only a few days; and one died from pneumonia. Two of the three patients seen first in the second attack and one in the third were admitted later, suffering from alcoholic hallucinosis, and the other seen first in the third attack died about one year after his discharge during a fourth attack. The average age of all delirium tremens cases at the time of the first attack, was 33.9 years. The patients were usually convalescent by the end of the first ten days after admission, but the average duration of hospital residence was 3.1 months. So far as can be estimated

from these cases, the prognosis in uncomplicated cases of a first attack is good, there having been no development of any more serious disturbance that could be connected with this attack.

2d. Alcoholic Hallucinosi. (*a*) Acute, (*b*) sub-acute. A slight impairment of consciousness, active hallucinations, and delusions, usually of the persecutory and apprehensive types, with little memory disturbance. The following are the conclusions from a study of these cases.

In the thirty-three patients observed, sixteen were of foreign, seventeen of native birth. Twenty-one were married, twelve single. Average age thirty-seven. Only four were above the grade of laborers or tradesmen. In fourteen cases it was the first attack; twelve had had one previous attack of delirium tremens of hallucinosi, and seven had had two or more. Eight preferred ale and beer, but all used distilled liquors.

Twelve were considered to show varying degrees of congenital deficiency. In eight cases, heredity could be excluded. There was distinct insane heredity in nine cases, a number which would probably have been increased had reliable histories been obtainable from all. In eight of these nine patients there had been previous attacks. They invariably presented severe symptoms, and their subsequent history, with one exception, shows a return to drinking habits and more or less mental disturbance.

Of the entire number, ten made definite suicidal attempts and two suicidal threats, as a consequence of active hallucinations. No characteristic neurological symptoms were observed. In seven cases the tendon reflexes were increased; in seven they were diminished. The knee-jerks were absent in two cases. Ankle clonus was present in one case. Unequal pupils, with impaired light reaction, in six cases. In twenty-four, there was a varying degree of muscular tremor.

As regards the mental symptoms, nine patients had auditory

hallucinations alone; twenty-two had auditory and visual hallucinations with prominence of the former, and in two olfactory hallucinations were seen in addition. The duration of the hallucinosis varied from a few days to several months. The reaction varied from slight apprehensiveness to distinct persecutory ideas, definitely related to the hallucinosis. There was imperfect insight in all the cases and in the more severe there was hallucinatory confusion with some impairment of memory for the period.

One patient died at the hospital; all others were discharged after an average hospital residence of three and one-half months, as recovered or much improved. Less than 25 per cent. of the patients traced after discharge have remained temperate and able to perform their duties successfully. Several have been reported as drinking excessively and showing changes in character and disposition, and all of these have had two or more attacks of alcoholic mental disturbance.

3d. Alcoholic Delusional Insanity; or what may be called alcoholic paranoia, characterized by the slow formation of paranoid delusions, upon the basis of chronic alcoholism. The following are his conclusions from a study of these cases:

In thirty-four cases of the group fifteen were of native, nineteen of foreign birth. All were laborers, tradesmen or small dealers. Twenty-nine were married, five single; nineteen of the number would have to be considered as below the average in mental capacity. A satisfactory family history was not obtained in eight cases, but in 50 per cent. of remainder there was a record of psychoses, neuroses, or intemperance in immediate relatives. The average age on admission was 44 years. Seven used beer or ale as their favorite drink; twenty-seven had a preference for distilled liquors, but, as in the former cases, all used more or less distilled drinks. As to the manner of drinking, four were in the habit of going on periodical sprees, with intervals of comparative abstinence, but in thirty cases there was a history of steady, almost daily, drink-

ing, and frequent intoxication in the great majority of these. Eleven had had a previous attack of delirium tremens, or hallucinosis, from four to fifteen years previously. Five had had two or more attacks, none being later than two years before admission. Four had made attempts at suicide, and seven had threatened to kill themselves. Thirteen showed no definite neurological symptoms. Exaggeration of the tendon reflexes was twice as common as diminution. Tremor, more or less pronounced, was seen in fifty per cent. of cases, and seven unequal or sluggish pupils were noticed. Six cases had no history, and presented no evidence of hallucinations. It is interesting to note that the average age of this number was fifty-four on admission; that all had been addicted to daily drinking for over twenty-five years. Without exception they were men little affected by large amounts of liquor in early life. Of the entire number nine had auditory hallucinations, three had auditory and visual, ten had auditory, visual, and tactile, and six had auditory, visual, olfactory, and tactile. The delusion system in many cases was based upon the hallucinations, but was elaborated to an extent not seen in the subacute hallucinosis. Nearly fifty per cent. of the married cases showed delusions of marital infidelity, the most common and natural acts of the wife being interpreted as evidence of her guilt. Many believed that attempts had been made to poison them, hallucinations being often the basis for this belief. Various somatic ideas were common and seemed to have the same basis.

In others, persecutory ideas were developed, changing according to the environment of the patient; changed personality, and grandiose tendencies were seen in some of the more severe cases. A listless indifference to the delusions was common after some months' duration, many patients speaking humorously of their fancied trials, while there was still lack of insight. Twenty-three cases were discharged from the hospital, and in these the average duration of the disease from its inception to the time of discharge was nearly two years. In

the eleven cases remaining in the hospital, the average period of observation has been four years, with apparent prospects of improvement in two cases only. Thirteen of the twenty-three discharged cases have been traced, and after a period of from one to four years, only four are reported by relatives to have resumed their work and family relations without appreciable detriment from their psychosis. The other patients have either resumed their habits of inebriety or display mental symptoms recognized by relatives.

4th. *Alcoholic Dementia.* These cases show irritability, impaired memory, emotional and intellectual deterioration without prominence of hallucinations or delusions. The following are his conclusions:

Thirteen cases of dementia have been observed. Nine of the patients were of native, four were of foreign birth. Eight were married, five single. Eleven were laborers or tradesmen. Eight would be considered below the average in mental capacity. Distilled liquor was the usual drink of twelve. The average age on admission was 51 years. With one exception, the entire number had been daily drinkers for periods varying from 20 to 40 years. Drunkenness had frequently increased with advancing years, and was usually the direct cause for commitment. Five had one attack of delirium tremens or hallucinosis from five to fourteen years before admission. One had had two attacks, the last over fifteen years ago. There was a history of recovery from these in each case. Ten of the patients were free from any form of hallucinosis during observation. Three had transient auditory or visual disturbance at the time of admission, and these three were the only ones to show any delusion formation, which was of short duration and based upon hallucinosis. There was a permanent memory defect in every case, imperfect recollection of recent events being pronounced.

Two made suicidal threats at different times, and two made suicidal attempts while under the influence of liquor.

The neurological symptoms were more prominent in these cases than in the other groups. Unequal and sluggish pupils, Romberg's symptom, ataxia, tremor, and changes in the tendon reflexes were symptoms noted separately or in combination in nine of the cases.

The prognosis is unfavorable. There is usually sufficient improvement from the immediate effects of hard drinking to warrant removal from the hospital in a few months.

Of eleven patients discharged within the past five years, six have been traced and only two are capable of doing any regular work, and none were believed by relatives to have recovered their normal state.

Epileptiform convulsions has been a symptom about equally divided between the several groups, ten per cent. of the entire number having had from one to several seizures during periods of hard drinking. There were no convulsions after admission to the hospital.

Some conclusions drawn from a limited number of cases are as follows:

I. Heredity of insanity or intemperance is common, and has an unfavorable influence on the course of the disease.

II. The persistence of tactile and olfactory hallucinations in cases of subacute hallucinosis affects the prognosis unfavorably.

III. Somatic and grandiose delusions or a changed personality in alcoholic delusional insanity indicate a chronic course, with a probable unfavorable termination.

IV. A history of periodical habits of drinking is more common in delirium tremens and hallucinosis, and of daily drinking in the delusional type and dementia.

V. The free use of distilled liquors is noted almost without exception in all cases.

VI. Hallucinosis but rarely develops directly from an attack of delirium tremens, but is often preceded by one or more attacks.

VII. Alcoholic hallucinosis often serves as the basis for elaboration of the delusion system seen in the delusional type.

ANOTHER DRINK CURE.

It is a thousand pities that ministers of religion, in common with many other well-meaning people, take so little trouble to enlist the sympathies of the medical profession in many of their philanthropic schemes. They cannot be unaware of the enormous amount of charitable work cheerfully performed year in and year out by medical men, and if they would take the trouble to inquire into the subject they could easily find out why the medical profession preserves the code of ethics laid down by Hippocrates. That code is the guarantee to the citizen that in consulting a medical man his highest and best interests will be scrupulously respected.

The vicar of St. Luke's, the Rev. Hugh B. Chapman, has been stirred by the wonders of some drink "cure" to start a campaign to exploit this remedy on his own account. We have no knowledge of Mr. Chapman. However willing we may be to believe in the personal disinterestedness of his action, we cannot condemn in too strong terms the form that his appeal has taken. Two months ago he wrote to the press, saying "that he had come across a striking remedy for dipsomania, and since then he has had 1,800 letters on the subject." So great is his confidence in the "remedy" that he has now written to the lay papers again, asking that all applicants for relief from alcoholic habits should communicate with him, and that he will be prepared to undertake their treatment. The generous proprietor of the "cure" — "a purely vegetable drug, guaranteed perfectly harmless" — has placed a supply at Mr. Chapman's disposal for a nominal sum, seeing, no doubt, a splendid advertisement for his goods by so doing. Mr. Chapman admits that his object is to bring this remedy within the reach of all and secure it for the common good. Has he,

we wonder, acquainted himself with the life-history of a hundred and one of these "drink-cures" that have had their little day, and disappeared when their credit was gone and their owners sufficiently enriched at the hands of their victims? Mr. Chapman should know that the medical profession refuses to prescribe esoteric drugs that are exploited as private ventures, because it considers such a proceeding detrimental to the interests of its patients, and because secret remedies, like secret dealings of all kinds, are contrary to public policy. — *From Medical Press and Circular.*

ALCOHOL AS A FUEL.

Alcohol is now used in many parts of Germany as a fuel, and it is cheaper than kerosene oil and more powerful and rapid as a heat producer. It is made from beet roots. Some difficulties have been experienced in having the boiler adapted for this kind of fuel. The Germans have shown that it can be used as a fuel with more profit than in any other way. This new use of alcohol promises to make a wonderful revolution in the commercial world. It is found by experiment that alcohol from any substance by fermentation and distillation is expensive compared with what will be done in the future. Already it has been shown that alcohol can be made from acetylene. Now that this substance is cheap it is possible to make alcohol on a large scale from calcium carbide and the electrical combination of lime and charcoal. There is every reason to believe that the processes of fermentation and distillation will give way to the synthetic process, by which alcohol can be produced as a fuel or for any other purpose at very low rates, and its use in the arts will revolutionize and change much of the present methods.

The following is an extract from President Tunstall's address at the Canadian Medical Association at Vancouver, B. C.:

"This brings me to my fourth and last point: 'The Treatment of Inebriates.' A conviction has been steadily growing in the minds of most medical men of late years that something should be done for the care and control of dipsomaniacs and inebriates in the form of founding establishments combining the main features of a hospital and an insane asylum, where drunkards could be legally confined under medical authority and treated in a systematic and enlightened manner. The practice, hitherto, of treating them as criminals, subject to a fine or short periods of confinement in the common prisons of the country, has been shown to be wholly unsatisfactory and often productive of the greatest evil to themselves and those who may be dependent upon them.

"There can be no doubt, I think, that the care and treatment of those unfortunate members of society is a question of the gravest and most vital importance, and should command the interest and attention of medical men as a subject which, coming well within their province, affects so seriously the general commonwealth.

"A movement towards this end has already been taken in Ontario, and a bill drafted, the principles of which have received the endorsement of the Toronto Medical Society and also of our own association; but what we want is a Dominion act, affecting the whole country, and it would be the source of the greatest satisfaction to me if this meeting would take this question up seriously and nominate a committee to draft a measure that could be submitted to the federal authorities. This could be done either on the lines of the Ontario bill or any other that might commend themselves.

"Speaking personally, I may say that I shall be only too glad to help in drafting such a measure, and giving any other assistance in my power, for I am convinced that the adoption and carrying out of the provisions of a bill of this kind will do

much to diminish the volume of sickness, pauperism, vice, and crime that now stains the annals of our country, and restore to lives of usefulness and self-respect many of those poor unfortunates whom it is the design of such a measure to control and help."

TESTS FOR DRUNKENNESS.

The assumptions of the police surgeon and even the policemen themselves that they can recognize the unconsciousness due to alcohol from that of any other brain trouble is often lamentably at fault. Every now and then most serious blunders are made. Recently one of these surgeons explained that he found fifteen symptoms of inebriety in a man who was consigned to a cell. The autopsy a few hours after showed hemorrhage of the brain, and no evidence whatever of using spirits, although a few moments before arrest some one gave some brandy as a stimulant. A noted professor gave a lecture to his class in which he mapped out a number of absolute symptoms showing the presence of alcohol. In actual practice not one of these symptoms could be trustworthy for the purpose of detecting the actual condition. The old-time physicians had the suspected man walk a line chalked on the floor, and pronounce a sentence requiring accurate articulation. This was satisfactory to them and is as nearly scientific as some of the tests laid down with such positiveness.

HOW TO STUDY LITERATURE. A guide to the intensive study of literary masterpieces, by B. A. Heydrick, A.B., Professor of English Literature, State Normal School, Millersville, Pa. 31 West 15th St., New York city: Hinds, Noble & Eldredge, Publishers, 1905.

This little work is a very graphic presentation of how best to study the literary masterpieces and works of the day. It shows the student the principles of literary construction, and

points out the lines along which all literature should be judged. Such handbooks are great helps in developing clearness of style, and method of presenting thought, either of the imagination or of accurately stated facts. It shows that a certain style of structure and grouping of sentences make all the difference between good and bad literature. It has often been remarked that the facts of medicine are frequently presented in a very awkward shape, and that their force and meaning is seriously injured by these faults; hence books of this kind are of great value to physicians and persons who have occasion to write for publication. Send to the publishers for a copy, which is worth many times its cost — 75 cents, postpaid.

MENTAL DEFECTIVES; THEIR HISTORY, TREATMENT, AND TRAINING. By Martin W. Barr, M.D., Physician to Penn Training School for Feeble-minded Children, Elwyn, Pa. 10-12 Walnut St., Philadelphia, Pa.: P. Blakiston, Son & Co., 1904.

This volume of twenty-one chapters is of unusual interest, not only to the specialist, but to the general practitioner. The author has grouped all the various forms of degeneration expressed by the term "defectives," and pointed out the etiology and the possibility of training and relieving many of these hopeless conditions. The part that inebriety plays as an active cause has been the subject of many papers. From the author's statistics and studies covering a large number of authorities, it would seem that the percentage of idiotic and imbecile children due directly to the drunkenness of the parents range all the way from five to forty-five per cent. In the state of Connecticut thirty-five per cent. of the idiots had drunken ancestors. In Illinois only eight per cent. was found. Insanity seems to be a more active cause. The author makes clear the fact that all these defectives are more or less traceable to exact causes, which are preventable and to some degree curable by exact

treatment in proper surroundings. Many of his descriptions of what are termed high grade imbeciles would describe a class of very troublesome inebriates, who go from place to place seeking help and finding none. Many of the chapters of this book are extremely suggestive, and illustrate conditions of mind and body that are often found in persons whose mental feebleness has not been questioned. An instructive chapter deals with the higher grades of idiocy combined with insanity, and by illustrated cases points out some very remarkable conditions, which fortunately are rarely seen. The author's description of the famous Henderson case puts in a permanent form a graphic study of the sanity of a boy murderer. Altogether the book is a very welcome addition to the psychological literature of the day, and the author is to be congratulated on giving so clear and graphic a picture of a field of study that a few physicians ever engage in. We shall quote from this book in the future. The volume is in the usually attractive style of the publishers, and well illustrated.

THE GREAT PSYCHOLOGICAL CRIME. The destructive principle of nature and individual life. By Florence Huntley. Harmonic Series, Vol. 11. Chicago, Ill.: Indo-American Book Company, 1903.

This work seems to be a protest against hypnotism, suggestion, mediumistic control, and other forces along this line. The "Great Psychological Crime" appears to be the neglect of the soul and coöperation with nature's constructive principles by which individual immortality and happiness can be achieved. At present the crime is promoting and encouraging the operation of nature's destructive principles, which lead to dissolution, disintegration, back to animal life and extinction. Many of the chapters are suggestive and new discussions on the boundary lines, which are decidedly clearer than most of the work done in this region. While the author is a graceful,

graphic writer, many of her conclusions are stated with a positiveness that is quite unusual to science. Our readers will be interested in this work, and to many it will be very helpful. The following from a chapter on inebriety, with spiritual causations, will be new to our readers.

In the study of mediumship and martyrdom it is stated that persons enter spirit life with the same habits, appetites, and ambitions, and the same unrestrained will which they had here, only they have dropped the physical organism, and are deprived of the gratifications which they had in the flesh. They then seek to gain control of the organism of persons still living, making them mediums, which enables them to gratify their former appetites and desires. The medium finds himself suddenly impelled to do unusual things, repugnant to his will, and thus loses his individuality. Two examples are given: one of a confirmed inebriate who died in a toxic state, and three months later he was able to get control of an intimate friend, who, unconsciously acting under his influence, went off and drank to great excess. Whenever this friend saw the form of the inebriate who was dead he was impelled to go off and drink. This was a case of obsession, through which the spirit inebriate was able to get some satisfaction from the effects of spirits on his friends. The spirit inebriate stated that in order to satisfy the demand for spirits he would visit saloons and mingle as closely as possible with drinking and carousing companions, and in a degree become satisfied. The more closely he could approach the inebriate in the flesh the more he was able to absorb the stimulating effects of the spirits he had drunk. In another instance mentioned a very good man was taken possession of by an inebriate's spirit, and so thoroughly controlled that he died from delirium tremens. At all times he knew that he was under the control of spirit forces beyond his power to resist. Other instances are mentioned of similar character. The author concludes that a very large per cent. of inebriety, criminality, and general degradation is directly due to spirits

getting control of persons in the flesh, who become the pliant, willing subjects of these degraded spirits.

The chapter on spiritual gravity will interest and suggest many new things, and the appeals to the bench, bar, clergymen, and physicians are somewhat startling from the lofty standpoint in which the subject is viewed. As a contribution to speculative theology and higher spiritualism it will well repay perusal, and we believe our readers will enjoy it greatly.

The author has great courage in opening up a new field, considerably in advance of spiritualists and other daring ones who are trying to penetrate the hereafter.

A TREATISE ON ALCOHOLISM. By Dr. Triboulet, Professor of Medicine; Dr. Mathieu, Clinical Assistant of Medicine; and Dr. Mignot, Chief of Clinique of the Medical Faculty of the Study of Insanity. Preface by Professor Joffroy. 120 Boulevard Saint Germain, Paris, France: Masson & Co., Publishers, 1905.

This book of nearly 500 pages is the work of three authors. Dr. Mathieu writes the first chapter, on the Physiological Action of Alcohols and Their History, also the second chapter, on the Toxicology of Alcohols in General, and also the last chapter, on the Legislative Methods and Means for Prevention and Cure. Chapters third, fourth, and fifth are by Dr. Triboulet, the first on the Physiology of Alcohol and Its Action on the Organs, its Influence on Alimentation and its Antagonism and Infectious Qualities. The next chapter is on the Pathology of Alcoholism, describing the effects on the various organs. The fifth chapter is on the Clinical Study of the Disease Alcoholism. This chapter describes at some length the degrees of alcoholism and the effects on the blood, heart, and liver, also its association with tuberculosis and the influence of traumatism. This is a very suggestive chapter. Chapter six, the Psychology of Alcoholism, by Dr. Mignot. Chapter seven by the same author,

with Dr. Triboulet, gives the therapeutics and general plan of treatment. Chapter eight is devoted to the Medico-Legal Study of the Subject. Chapter nine, by Dr. Mathieu, is a Study of the Prevalence of Alcohol in France and in Different Countries.

We shall take great pleasure in making quotations from this book in the near future, but at present will simply say that this treatise is a very graphic and popular presentation of the whole subject, addressed not only to the medical profession, but to intelligent laymen, giving a very fair impression of the present state of the subject that the latest teachings of science on the action of alcohol and its pathology and treatment.

We congratulate the editors, and hope that a translation may be soon made into English.

The Folly of Meat Eating is the title of a fifteen-page pamphlet written by Otto Carque, and published by the Kosmos Publishing Company, 765 N. Clark Street, Chicago, Ill. This is an excellent discussion of a subject that is practically unknown, especially to laymen. Two very valuable tables are given of the composition of food products, which of themselves furnish the best reasons why meat should not be eaten. We shall make some quotations from this pamphlet in our JOURNAL.

The *Medical Temperance Review*, under the care of Dr. Ridge, is a most excellent monthly, and groups a very great variety of new facts that will be very valuable in the future. This journal should go into the library of every specialist for the authoritative matter which it presents.

The *National Temperance Advocate* is doing a grand work in calling attention to many of the evils associated with the use of spirits, which need correction, and should have a very wide circulation.

The *Arena*, which claims to be the twentieth century review of public opinion, gives a very rich table of contents in every issue. The reader is sure of hearing the other side of every subject discussed with vigor, and generally very clear. Each author seems to be independent as to his views and the manner of presenting them. No other magazine is more stimulating to its readers, provoking comment, objection, or endorsement. As a critical comment on passing events this journal is unrivaled.

The *Homiletic Review* is an international monthly magazine of current religious thought, sermonic literature, and discussions of practical issues. The January number has particular interest in the several symposiums — one on evangelism, the other on the problem of reaching men. Other very graphic papers and discussions on vital subjects are presented. All the topics have a very striking significance to physicians and scholars. It is published by Funk & Wagnalls, East 23d Street, New York city.

The *Review of Reviews* is a monthly encyclopædia of events, with wise, liberal comments, which commends it to every one. The selections from magazines are excellent, and no one who wishes to keep abreast with the times should be without this journal. It is published at Astor Place, New York, at \$2.50 per year.

The *Popular Science Monthly* for 1905 begins with a rich table of contents and a group of papers that are of intense interest to every medical man. We repeat what we have said so often before, that this is one of the few journals which is indispensable to every lover of science. It is published at Garrison-on-the-Hudson.

Our contemporary, the *English Journal of Inebriety*, is doing very good work. Each issue contains excellent papers, some of which we republish. We hope they will give more attention to the problems of prevention and the therapeutics and psychology of the inebriate.

The *Scientific American* brings every week a grouping of new facts and discoveries that are very stimulating and helpful to every physician. No other weekly is read more thoroughly than this. Munn & Co. of New York city are the publishers.

PHYSICIAN'S POCKET ACCOUNT BOOK. By J. J. Taylor, M.D. Published by The Medical Council, 4105 Walnut Street, Philadelphia, Pa.

This pocket handbook combines a daybook and ledger in a small compass, and appears to be very superior to books of this class. The arrangement for keeping each person's account balanced from day to day, so that at any time the bills can be made, simplifies the matter greatly. Such books as this are to be commended and adopted by the profession everywhere. Send to Dr. Taylor for a copy.

The Columbia Battery Company have put on the market a massage electrical machine which promises to revolutionize the hand batteries that have become so common of late. It consists of a dry cell in a framework resembling a sad-iron, which generates a degree of electricity that can be felt through the clothing, and is used as an iron up and down the body. A certain amount of muscular massage follows with the electric current, hence it may be properly called an electrical vibrator as well as massage machine. Dr. Rodebaugh of Columbus, O., is president of the company. We commend this battery for its simplicity and value in many forms of neuralgia, and defective innervation. As a hand massage machine it is without a rival, and can be used on the most delicate persons. Write the president for circulars.

A CORRECTOR OF IODISM.

Dr. W. H. Morse reports (*Southern Clinic* for May) success in the use of *Bromidia*, which he says has proved corrigental of iodia. Discussing his results he says: Vomiting is so frequent and troublesome a symptom in many diseases besides irritation and inflammation of the stomach, as to demand much practical attention from the physician. So, although the causes are so various, and although we are actually treating a symptom for this symptom *Bromidia* is remarkably effectual. We have all employed the remedy for colic and hysteria, two disorders where nausea and vomiting are as pronounced as they are persistent, and almost the first evidence of relief is shown by the disappearance of these disagreeable symptoms. It is quite as efficacious for the nausea and vomiting from ulcer or cancer of the stomach. There is nothing that will more quickly check the vomiting, and the hypnotic effect is quite in order.

Blakiston, Son & Co. of Philadelphia have sent out a new physician's visiting list for 1905. This is a worthy successor of more than fifty predecessors. It is undoubtedly one of the best pocket books for physicians' memoranda and daily notes printed. Its simplicity and usefulness makes it a most welcome addition to the companion books a physician must always have. The price varies with the size from \$1.00 to \$2.00.

The National Temperance Society in 1902 organized a pledge-signing crusade, and in October, 1904, a period of about two years, over four million pledges were received. This is a mere hint of the direction of public sentiment. It is estimated that over one-third of all the citizens of the United States are living in states where prohibitory or no-license laws exist. If this is true there is an immense forward movement.

Editorial.

WORK IN 1904.

The past year has been marked by an increasing interest and agitation of the various problems of alcohol and the treatment of the inebriate. More than fifty papers, editorials, lectures, and addresses, and three symposiums on alcohol and the inebriate have appeared in medical journals of this country. The insurance circles have been startled by the studies of the mortality statistics of a London insurance company, showing an increased mortality of moderate drinkers over that of abstainers to the extent of thirty or forty per cent. This has already produced some proposed changes, one of which is either to refuse to admit moderate users of alcohol into insurance companies, or, if accepted, to collect higher rates of premiums. The unusual fatalities and accidents occurring on railroads, when studied, have indicated beyond question that alcoholized persons were either directly or indirectly responsible for a large number of these casualties. As a result, all the railroads of the country are showing unusual activity in eliminating moderate drinkers, and insisting on total abstinence among their employees. Several companies have very strenuous rules governing the conduct of their men both on and off duty. Severe prohibitory measures are quietly being introduced in all the large corporations and banking institutions, and mercantile agencies are constantly rating lower all individuals and corporations not managed by total abstainers. In this there is an increasing recognition of the economic and the hygienic danger from the use of alcohol in any form; also that the losses, disabilities and injuries from this source can be prevented and eliminated along common-sense and scientific lines. The more scientifically alcohol is studied, the more prominent the evidence

appears of its narcotic and depressant qualities. The so-called stimulant, tonic, and food value are theories rapidly receding and passing away. Many foreign teachers and writers condemn alcohol as a tonic and beverage, while in this country medical authors hesitate and timidly intimate that its possible good may have been overrated. All the modern text-books, while admitting the tonic and stimulant value of alcohol, point out other remedies of equal value with less danger. The reform movements of the year have been less prominent in the use of the pledge and prayer, as the exclusive means of treatment. The teaching of the dangers of alcohol in public schools has been contested in many sections, with the result of its becoming more thoroughly established and recognized as a reform work of the highest importance and of far-reaching results. Its opponents have literally done more than its advocates to show that it is one of the most practical evolutionary movements of the century to clear away the delusions of alcohol, and promote true temperance. Questions of license and prohibition in different localities, while rousing intense discussion, are thoroughly educational, and are doing more to bring out the facts, and the causes and preventions of this evil, than many reform movements. The union of the two medical societies devoted to the study of alcohol and the inebriate is a step in the right direction, and by concentration of effort give greater scientific interest to the practical problems connected with the subject. In several states bills have been introduced to organize state institutions for the care and treatment of the inebriate, and the recent studies of the statistics of Foxboro Asylum, showing that among the most incurable cases there is a percentage of recovery, points out possibilities of restoration not suspected before. The specific gold cure asylums are passing away, and a strong sentiment for the organization and state control of workhouse hospitals for this class is prominently mentioned in many sections of the country, and warmly endorsed by the leading papers. It is very evident that the theory of what alcohol is or is not is considered of less impor-

tance than hygienic and economic measures for its cure and prevention. In all the problems of prohibition, high license, the sale of alcohol in the army, teaching its dangers in public schools, and the medical treatment in hospital, the vital subject seems to be a study of the causes and the means of prevention. The report of the English inspector of inebriate asylums and the work done in these institutions indicate the great necessity of control and inspection of hospitals devoted to this work in this country. Two large conventions of medical men, one an international congress of medical and lay men, were held in Europe last year. The problems of alcohol and the inebriate were made the subject of exclusive study. Three new societies for the study of these subjects have been formed by physicians, and five different journals are now published in Europe in which these problems are made a special study. The literature of the subject is already quite voluminous, and while it is conceded by all that the American contributions to this subject are more scientific, broader, and more practical there is a sad lack of organization, or concentration of efforts to understand and utilize the facts already known. This is the particular work our JOURNAL is intended to take up. The new society for the study of alcohol and other narcotics includes every phase of the subject which can be presented scientifically, and aims to summarize and outline every new advance in this field. The new studies of wood alcohol, and its peculiar effects on the eye and heart, are attracting a great deal of attention, and shows how much may be done in fields that are entirely unknown at the present. The influence of proprietary drugs and the degenerations which follow from their use is sought to be overcome by prohibitory bills introduced in many of the legislatures of the different states. These are only a few of the signs of change in public opinion and revolution of theories in this field, which are very hopeful and indicate clearly that the alcoholic problem and the inebriate and his diseases will occupy a very large place in the scientific study of the future.

REPORT OF THE INSPECTOR OF THE INEBRIATE
ASYLUMS IN ENGLAND.

The fifth annual report of Dr. Braithwait, the medical inspector of inebriate hospitals and reformatories in England, has a special interest to our readers. All institutions in England which care to have legal control over their patients must be licensed and come under the supervision of an inspector, who makes frequent visits and gives general advice as to treatment and management. The first report made by the inspector was of work done in 1899, when four institutions with eighty-eight patients were under government control. This report of the year 1903 shows that nine institutions were licensed and taking care of over a thousand patients. The medical inspector gives his entire time to the subject, and regulates the admission and classification of patients, surroundings, and buildings, also the diet and treatment. Both the arrangements and classifications of patients and the study and treatment show very thorough work, equal to that done in any of the most skillfully managed surgical hospitals in the country. It would seem almost impossible for any one of the thousand patients not to improve or become restored under such careful treatment. The physical and mental condition of each patient is made the subject of a thorough study, and treatment is conducted along most exact scientific lines. The restraints and duties required by the patient are administered with firm hand and wise recognition of his exact needs. Physically the report shows very few of the patients suffering from serious organic disease, but mentally the conditions are far more serious and present a great variety of most complex disorders. A number of patients are considered incurable, requiring continuous control for their own and the public safety; others are permanently restored, and the experience shows at least one-third of positive cures.

The following extract from the inspector's report relates to the mental condition of a large class of these persons: "There is no doubt that with the detention and treatment of a large

majority of the inmates of these reformatories we are dealing with persons of feeble mind who are not amenable to any jurisdiction in lunacy, but nevertheless are to a certain degree irresponsible and in consequence are both a danger and a burden on the community. In my opinion it would be difficult to find more than a third who are capable of passing muster as sane, compared with persons of average mental capacity." After describing the types of mental abnormalities found in these institutions, he compares them with the same classes and prototypes found in the insane asylum, such as mania, dementia, and melancholia. The classification by which quiet, well-disposed inebriates are separated from the violent, demented, and practically chronic cases, is a great advance and should be carried out in every institution. Many of the obstacles which superintendents encounter in this country in practical treatment arise from permitting the mingling of these two classes, one requiring sharp restraint, and vigorous military treatment, the other needing freedom, quietness, and protection. Notice is made of the injury apparent in persons who have taken cures by the means of secret remedies, motor palsies, brain feebleness, and defective eyesight, being prominent symptoms in nearly all persons who have taken quack cures. This admirable report by Dr. Brainthwait indicates that the subject is being studied in a most thorough manner, and the results amply confirm the predictions of curability. It is a source of great sorrow that we have nothing in this country of this character. Inebriety is treated anywhere, in any place or surroundings, by anyone, and without any plan, purpose, or system. Reformed inebriates open institutions, receive patients, treat them in any way, and close up the institution at any time. There are probably nearly a hundred homes and sanitariums for inebriates managed in this irregular way by unknown and irresponsible men. There are probably twenty or more institutions where mildly insane and nervous patients are treated with the inebriates, but there is no government control and no restric-

tions. What wonder that the results will be uncertain and confused? This is a state of affairs which reflects on the intelligence of the community and will no doubt be corrected in the near future.

The annual meeting of the Association for the Study of Alcohol and Other Narcotics will be held at Portland, Oregon, July 12th. The meetings of this society are held at the same time and place with the American Medical Association for the purpose of giving an opportunity for the attendance of leading medical men who are interested in this work, and would like by their sympathy and presence to encourage it. The study of alcohol and narcotics is a most practical one, and is coming into greater prominence daily, and leading men in Europe are giving the subject increased attention. In this country clergymen and laymen are the most prominent agitators, while the physicians, to whom the subject rightly belongs, are indifferent, and practically unacquainted with the medical side of the inebriate. This Society for the Study of Alcohol aims to meet this great want by arousing keener interest to study and become teachers, rather than followers, as at present. The secretary will be very glad to hear from anyone who would be pleased to take part, or be present at the annual meeting at Portland.

The tenth International Anti-Alcohol Congress will be held in Budapest, Hungary, September 12 to 16, 1905. The subjects for the discussions have been announced as follows:

1. The influence of alcohol on the human body, especially the hereditary influences.
2. Alcohol as a social evil.
3. Alcohol and the sexual question.
4. The labor question and the alcohol question.
5. Influence of alcohol on the muscles, especially on military training.

6. Alcohol and criminology.
7. The organizations of the anti-alcohol movement.
8. School instructions on temperance as a remedy against alcoholism.
9. The reformation of the public houses.
10. Alcohol in the industries.
11. The influence of the alcohol traffic on the aboriginal population of Africa.

Among the members of the committee of organization we find the names of Prof. Aug. Forel of Switzerland, Prof. M. Legrain of France, Drs. Rudolf Wlassak and Max Kossowitz of Austria, Prof. Gruber of Bavaria, Prof. Cæsar Lombroso of Italy, the world's most prominent neurologist today, and Dr. Mattic Helenins of Finland, the statistician. Among other prominent men we find Mr. Joseph Matins, the present chief of the Good Templar order.

There is in England a society called the Inebriates' Reformation and After-Care Association, the object of which is to promote the continuation of the reformation and restoration of inebriates; also to provide for the after care of persons who have been inebriates, and to assist authorities in the arrest and control of inebriates and furnish information and coöperation in all matters connected with the restoration of this class. This society issues its fifth annual report, describing the efforts of the past year to have proper persons placed in institutions and cared for on discharge, and also to befriend anyone who is unable to determine what should be done. The report mentions that a small island, situated on the Essex coast in Black Water Bay, is soon to be set apart as a retreat for inebriates. It contains nearly four hundred acres of land and is removed some distance from the shore, from which it is separated by a wide stretch of water. This is thought to be an ideal place for inebriates. The society is able to give all the information pos-

sible as to the best homes and retreats for the treatment of these persons, and advise what shall be done on their discharge and assist their family in every practical way to promote the best interest of the patient. This movement is most practical and can do an immense amount of good in ways unknown at present, especially in this country. This is a new field for charity which will be occupied very soon and commends itself to every person familiar with the wants and needs of inebriates.

The *Abstinence*, a temperance paper of Switzerland, publishes a report of replies sent by a large number of medical men to the following questions:

- 1st. Is $1\frac{3}{4}$ liters of wine taken each day favorable to health?
- 2d. Is it without effect on health?
- 3d. Is it injurious to health?

Eighty medical men answered these inquiries: over sixty of them declared that wine in small quantities was without injury and favorable to longevity; ten were in doubt, and eight were quite convinced that wine was injurious in all forms, particularly for a healthy man. Others believed wine to have great value in building up strength and vigor and preventing disease. It is evident that the medical men in Switzerland are not familiar with the research on these lines in other parts of the world. Another canvass was made of the opinions of medical men in Florence, Italy. Of fifty who responded practically to the same inquiries, thirty-seven denounced wine and spirits in all forms as dangerous, and injurious to health. Only six of the fifty believed wine to be a safe and hygienic beverage.

We take great pleasure in presenting the portrait of Dr. V. A. Ellsworth, who is the superintendent of one of the oldest hospitals for the treatment of inebriety in the world, namely the Washingtonian Home of Boston, Mass. This institution

was organized in 1857 as an inebriate lodging house, and two years later became incorporated, and since that time has gradually grown and developed up to the present moment. During this long period the late Dr. Day was its superintendent, with only a few years interval during which he had charge of the Binghamton Asylum. On his resignation in 1893 Dr. V. A. Ellsworth was appointed to take his place. The rapid growth since that time indicates clearly the doctor's rare fitness for this position. Dr. Ellsworth came from a Connecticut family, and was born in Otsego county, N. Y., in 1846. He received his degree in medicine in Buffalo at the Buffalo Medical College in 1876. From a general practitioner with a large and varied experience he grew to be a specialist and finally was appointed as superintendent at this famous home. His work here has been marked by painstaking efforts and a practical recognition of the disease of inebriety, and he is now recognized as a leader in this specialty and a man of exceedingly good judgment, whose counsel can be followed with the greatest confidence. The yearly reports of this home are good indexes of the movements and the progress being made.

The government of Denmark has sent out a circular letter with blanks to every physician in the country, asking him to carefully write out the true causes of death, both exciting and predisposing, in every case during 1905. The intention is to get the correct figures of the deaths from alcoholism, even in all such cases where it has been only a secondary cause.

The *English Temperance Record* appears in a greatly enlarged form and gives a very excellent account of the literature and progress of the temperance work along educational lines. It is edited by John T. Rae, an eminent man who is thoroughly familiar with all phases of the temperance movement abroad. It is a source of great satisfaction to note the excellent organization of the temperance people, and the thorough manner in which the subject is presented. A summary of the report of the parliamentary committee on deterioration is compiled by Mr. Gourlay, and comprises one of the most interesting contributions to the subject. We commend this journal to all our friends, and believe it will be very useful.

Clinical Notes and Comments.

COMMENT ON ANTIKAMNIA AND HEROIN TABLETS.

Under the head of "Therapeutics," the *Medical Examiner* contains the following by Walter M. Fleming, A.M, M.D.,* regarding this valuable combination: "Its effect on the respiratory organs is not at all depressing, but primarily it is stimulating, which is promptly followed by a quietude which is invigorating and bracing, instead of depressing and followed by lassitude. It is not inclined to affect the bowels by producing constipation, which is one of the prominent effects of an opiate, and it is without the unpleasant sequels which characterize the use of morphine. It neither stupefies nor depresses the patient, but yields all the mild anodyne results without any of the toxic or objectionable phases.

"When there is a persistent cough, a constant 'hacking,' a 'tickling,' or irritable membrane, accompanied with dyspnoea and a tenacious mucus, the treatment indicated has no superior. In my experience I found one *Antikamnia and Heroin Tablet* every two or three hours, for an adult, to be the most desirable average dose. For night-coughs, superficial or deep-seated, one tablet on retiring, if allowed to dissolve in the mouth will relieve promptly, and insure a good night's rest. In short, it will be found futile to delve for a more prompt and efficient remedy than *Antikamnia and Heroin Tablets* in all bronchial complications with laryngeal irritation, dyspnoea, asthma, winter-cough, and general irritability of the thoracic viscera."

*Qualified Examiner in Nervous and Mental Diseases for Supreme Court, New York City.

A PERFECTED FOOD.

In treating anæmia is it not true that our first thought, and that to which our instinct should naturally lead us, is a normal blood standard? That there is a deficiency of iron in the blood in most forms of anæmia, is, of course, indisputable; and to endeavor to supply this lack by the administration of iron seems but a common sense procedure. This practice would be sufficient if anæmia were, in reality, nothing more than a condition of iron deficiency; but the profession realize now that the underlying costive factor is a disturbance of the process of nutrition and cell proliferation, and that iron poverty is but one manifestation of this disorder. Ample proof of this fact has been presented to every doctor when he has observed how anæmic conditions persist in spite of the long continued administration of the various preparations of iron. Here, then, iron preparations must be supplemented by such remedies or by such a remedy as has the ability to awaken the depressed nutritive and cell proliferating process. To stimulate, tone up, and supply perfect nutrition in all anæmic conditions, I have found *Bovinine* to meet every indication par excellence.—*John Griggs, M.D.*

Visiting and Pocket Reference Book for 1905, the following is a comprehensive contents: Table of Signs and how to keep Visiting Accounts, Obstetrical Memoranda, Clinical Emergencies, Poisons and Antidotes, Dose Table, blank leaves for Weekly Visiting List, Memorandum, Nurses' Addresses, Clinical, Obstetrical, Birth, Death, and Vaccination Records, Bills Rendered, Cash Received, Articles Loaned, Money Loaned, Miscellaneous, Calendar 1905; 126 pages, lapel binding, red edges. This very complete call book will be furnished by the Dios Chemical Co. of St. Louis, Mo., on receipt of 10 cents for postage.

CASH OFFERS TO WRITERS.

Any person who will send *well-written* stories, dramas, poems, or recitations showing the danger of home-prescription of alcoholic liquors or patent medicines, or evil results of the professional prescription of alcoholics, will be paid good prices for their articles. Those not accepted will be returned to the

authors, if stamps to cover postage are enclosed. The shorter the stories the more likely to be accepted. Do not exceed 2,000 words. Well-written dramas will receive generous compensation. There is a fine chance for humor in writing a drama upon the patent medicine craze. Dramas should be long enough to occupy a half-hour, and not longer than an hour to an hour and a quarter. All manuscripts will be examined and valued by an experienced committee. Address all articles to Mrs. Martha M. Allen, 27 Broad St., Oneida, N. Y.

THE DISEASES OF SOCIETY ; THE VICE AND CRIME
PROBLEM. By G. Frank Lydston, M.D.

This is a book recently issued by Lippincott Company of Philadelphia, and is undoubtedly the first effort of the kind to study from a scientific point the evils which infest society. This is one of the great books that will have an immense circulation, and is of special interest to every physician.

We take great pleasure in calling attention to the *Health Food Company* of New York and their products. We have used several of their prepared foods and found them invaluable. Many of the concentrated vegetable substitutes for meats are veritable remedies in Bright's Disease and various forms of rheumatism. We urge all our readers to try these remedial foods and test them. Send to the Health Food Co. for samples.

PHYSIOLOGICAL EXPERIMENTS WITH VERONAL.

Dr. P. Kleist has performed very detailed and exhaustive experiments with *Veronal* on warm-blooded animals to determine its toxicity, absorption, elimination, effect on temperature, hypnotic power, etc. He concludes: If administered in substance, *Veronal* dissolves on reaching the alkaline intestinal secretion, and in about half an hour after administration its absorption and hypnotic effect begin. The effect is much more rapid if the *Veronal* is introduced in solution. In small doses the drug is an excellent hypnotic, free from danger. Large doses may prove dangerous. It does not affect the hemoglobin or the blood corpuscles, and does not irritate the kidneys. — *Therap. d. Gegenw.*, 1904, No. 8.

ELONGATION OF THE UVULA.

As a gargle in sore throat or elongation of the uvula, Kennedy's *Dark Pinus Canadensis* has very general endorsement, the usual proportion being a teaspoonful to a glass of water.

The *Battle Creek Sanitarium* is the most palatial, scientific, and complete of all the hotel hospitals of the world. It is a pioneer in diet reform and hydrotherapy. All its inmates are educated, while being restored, to the practical value of nutrient temperance and the perfection of hydropathy in restoring and lengthening life. It is a curious fact that Battle Creek Sanitarium has over forty branch institutions in the world, where its methods of treatment are carried out, following the same lines as the parent hospital. This makes it one of the greatest trusts in the highest sense of the word that exists. Its numerous friends celebrated this in a day set apart for this special purpose at the St. Louis Exposition, last year. To all of our friends and readers a visit to this institution will be a revelation in what is being done along lines of preventive medicine.

In a recent story the hero is cast on a desert island and is just at the point of starvation when he discovers a bottle of *Bovinine* in a mass of wreckage on the shore. This is taken, following directions, and his life is saved, and he is enabled to walk around and discovers some matches by which he makes a bonfire of the wreckage. This is seen by a passing ship, and he is rescued. *Bovinine* was his salvation. There are many persons who believe that this drug has saved their lives, although in a less dramatic manner.

The *Todd Electrical Static Machine* is indispensable to every hospital and institution for the treatment of inebriates. We particularly call attention to this machine for the reason that it is so simple, efficient, and powerful, giving the best possible service with the least repairs. There is no machine of this class that is apparently more simple and less liable to get out of order, and it would be impossible to treat neurotics successfully without it.

The *Chattanooga Vibrator* has proved to be invaluable in our experience, and we shall always take pleasure in commending this machine to every institution as an exceedingly valuable

and powerful remedy for a great variety of diseases. The efforts of the manufacturing firm to teach the medical public how to use it properly deserves the warmest commendation.

The World's Work is a special magazine giving prominence to current history, and summarizing in short, brief articles every stage of the remarkable progress of this century. It is published by one of the leading firms of the country and commends itself to every reader who would be in touch with the great events of the world.

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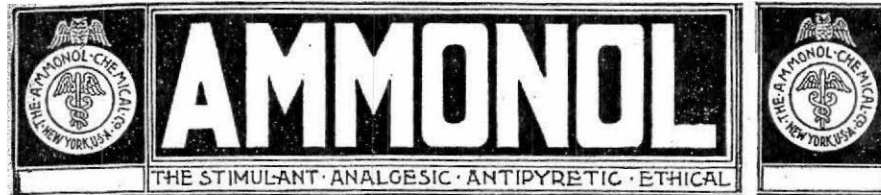
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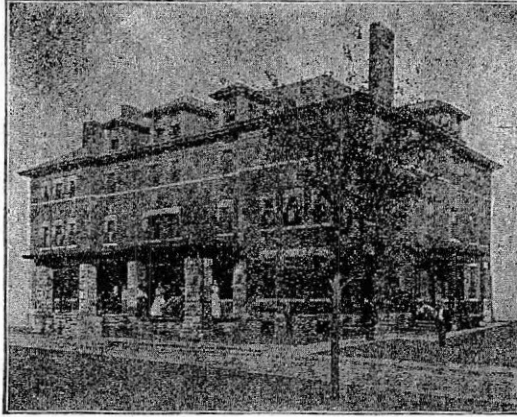
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Sanitariums and Hospitals.

The following is a directory of the most prominent private institutions in this country, where inebriety is treated as a disease. Many of these places take mental cases also, and have separate departments for the two classes. We take great pleasure in presenting this list, and commending them to our readers as places managed by responsible and scientific men. We shall add to this list from time to time, and in this way try to keep the public acquainted with the reputable and scientific hospitals for the treatment of this class:

The Milwaukee Sanitarium at Wauwatosa, a little village in the suburbs of Milwaukee, Wis., is a well conducted, home-like hospital for nervous and mental diseases. A department for alcoholic and drug takers is fitted up with every appliance for successful treatment. The superintendent, Dr. Dewey, is a noted specialist, and can be seen at his Chicago office, 34 Washington St., on Wednesdays of each week.

Oak Grove of Flint, Mich., is a large private hospital for the treatment of all forms of mental and drug addictions. On the grounds are mineral springs of great value, and hydrotherapy as well as electro-therapy are special means of treatment. The superintendent, Dr. Burr, is eminent in the profession, and the hospital has been organized over a quarter of a century.

Dr. Broughton's Sanitarium at Rockford, Ill., makes a specialty of treating opium addictions. His long experience and special study of this class of cases give rare facilities for the treatment of these neurotics.

The Waukesha Springs Sanatorium, located at a little village of this name, under the charge of Dr. Caples, furnishes excellent surroundings, care, and protection for neurotics and drug takers. The mineral waters at this place give additional help in the treatment of cases, and the institution is well managed and an excellent place for skillful treatment.

Fair Oaks at Summit, N. J., is a small hospital for a few selected cases, and presents many ideal conditions for the successful restoration of these cases. The physician, Dr. Gorton, has had many years' experience as a specialist, and manages a most excellent place.

The Oxford Retreat and The Pines describes two pleasantly situated hospitals under one management at Oxford, Ohio. Mental, nervous, and drug cases are received. This institution has been organized many years, and is among the oldest, most thoroughly equipped sanitariums in the middle West. The physician, Dr. Cook, is associated with his son, and both are men of fine reputation and very widely known.

The Richard Gundry Home at Catonsville, in the suburbs of Baltimore, Md., under the charge of Dr. R. F. Gundry, is an excellent sanitarium, with every appointment for the successful care and treatment of nervous and drug cases. Its location and surroundings make it an ideal home for the treatment of this class.

The High Oaks Sanitarium at Lexington, Ky., receives a limited number of mental and nervous cases and is under the care of Dr. Sprague. It is a thoroughly well organized, scientific institution.

Dr. Pettey's Retreat at Memphis, Tenn., receives only drug and spirit takers, and is a well organized, carefully managed home for the best class of cases suffering from these addictions.

Hall-Brook is a private hospital for mental and nervous diseases, under the care of Dr. D. W. MacFarland, Greens Farms, Conn. Its location is unsurpassed for mountain and water scenery. Drug cases are taken and the institution is well patronized.

Dr. Sterns' Sanatorium for nervous diseases, called "The Norways," in the suburbs of Indianapolis, Ind., is a very attractive place for neurotics and drug takers. The surroundings and appliances for thorough scientific care are of the best class, and both the institution and its managers are thoroughly scientific and have the confidence and respect of all medical men.

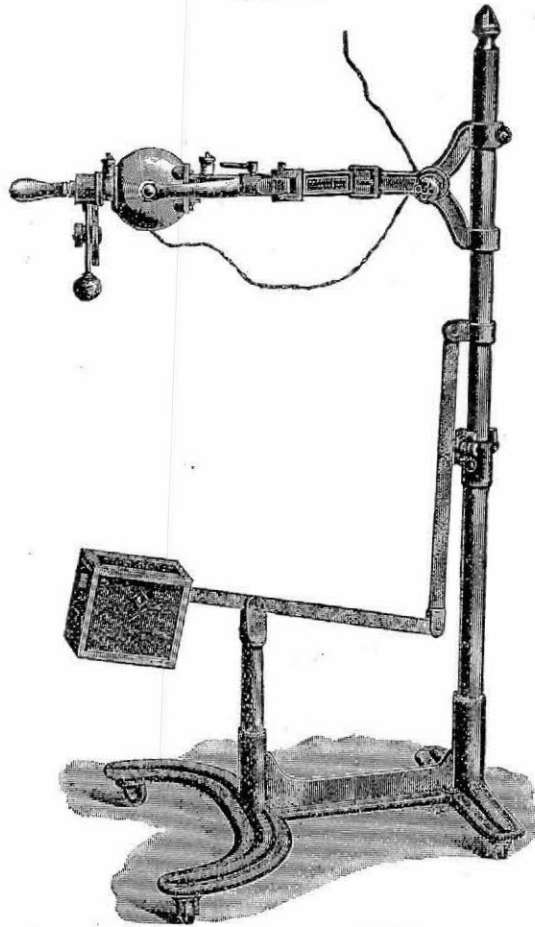
Dr. Bond's House is a private home for a few persons at Yonkers, N. Y., overlooking the Hudson River. Both the treatment and surroundings are scientific and of excellent character. Special personal care is given to each one, and for persons able to pay there are exceptional advantages in this place.

The Grey Towers at Stamford, Conn., is an attractive sanitarium with beautiful location, overlooking Long Island Sound, receiving mental nervous cases with all forms of drug addiction. This well established home has been before the public for many years under the care of Dr. Barnes, and is doing very excellent work.

The following is a partial list of excellent institutions for the care of inebriates and mental cases, each one of which has special facilities for the successful treatment of such cases:

- The Highlands, Winchendon, Mass. F. W. Russell, M.D.
- Falkirk, Central Valley, Orange Co., N. Y. J. Ferguson, M.D.
- Westport Sanitarium, Westport, Conn. Dr. F. D. Ruland.
- River Crest, Astoria, L. I., N. Y. J. J. Kindred, M.D.
- Greenmont-on-the-Hudson, Ossining, N. Y. R. L. Parsons, M.D.
- Walnut Lodge Hospital, Hartford, Conn. T. D. Crothers, M.D.
- Mt. Tabor Sanitarium, Portland, Oregon. Dr. H. W. Coe.
- Maplewood, Jacksonville, Ill. F. P. Norbury, M.D., 420 State St.
- The Cincinnati Sanitarium, College Hill Station, K, Cincinnati, O.
Dr. F. W. Langdon.
- Long Island Home, Amityville, L. I., N. Y. Dr. O. J. Wilsey.
- Knickerbocker Hall, College Point, New York City. W. E. Sylvester, M.D.
- Lake Geneva Sanitaria, Lake Geneva, Wis. Dr. W. G. Stearns.
- The Blue Hills Sanitarium, Milton, Mass. J. F. Perry, M.D.
- Dr. Dunham's Home, 1392 Amherst St., Buffalo, N. Y. S. A. Dunham, M.D.
- Dr. Moody's Sanitarium, San Antonio, Texas, 315 Breckenridge Ave. Dr. G. H. Moody.
- Private Home for Nervous Invalids, Kansas City, Mo. J. Punton, M.D.

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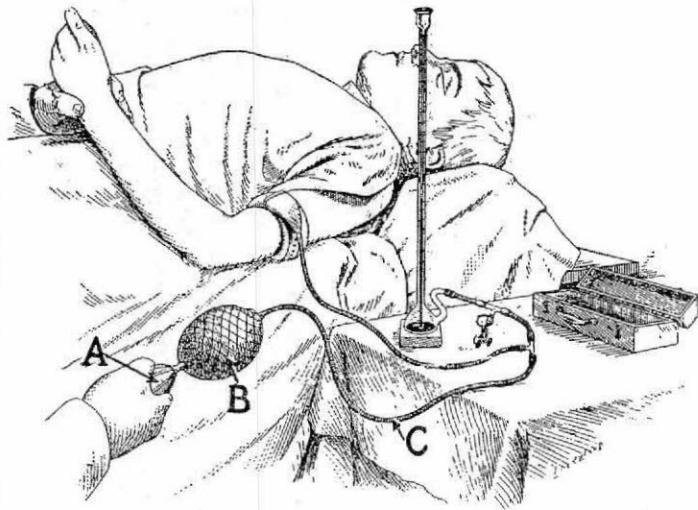
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