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CERTIFICATE OF COMPOSITION AND PROPERTIES OF LACTOPEPTINE BY PROF. ATTFIELD,
Ph.D., F.R.S., F.I.C., F.C.S., PROF. OF PRACTICAL CHEM. TO THE PHARMACEUTICAL
SOCIETY OF GREAT BRITAIN.

LONDON, May 3, 1882.

LACTOPEPTINE having been prescribed for some of my friends during the past five years—apparently with very satisfactory results—its formula, which is stated on the bottles, and its general characters, have become well known to me. But recently the manufacturer of this article has asked me to witness its preparation on a large scale, to take samples of its ingredients from large bulks and examine them, and also mix them myself, and to prepare *Lactopeptine* from ingredients made under my own direction, doing all this with the object of certifying that *Lactopeptine* is what its makers profess it to be, and that its ingredients are in quality the best that can be obtained. This I have done, and I now report that the almost inodorous and tasteless pulverulent substance termed *Lactopeptine* is a mixture of the three chief agents which enable ourselves and all animals to digest food. That is to say, *Lactopeptine* is a skillfully prepared combination of meat-converting, fat-converting, and starch-converting materials, acidified with those small proportions of acids that are always present in the healthy stomach; all being disseminated in an appropriate vehicle, namely, powdered sugar of milk. The acids used at the factory—lactic and hydrochloric—are the best to be met with, and are perfectly combined to form a permanent preparation; the milk sugar is absolutely pure; the powder known as “diastase,” or starch-digesting (bread, potato, and pastry-digesting) material, as well as the “pancreatin,” or fat-digesting ingredients, are as good as any I can prepare; while the pepsin is much superior to that ordinarily used in medicine. Indeed, as regards this chief ingredient, pepsin, I have only met with one European or American specimen equal to that made and used by the manufacturer of *Lactopeptine*. A perfectly parallel series of experiments showed that any given weight of acidified pepsin, alone, at first acts somewhat more rapidly than *Lactopeptine* containing the same weight of the same pepsin. Sooner or later, however, the action of the *Lactopeptine* overtakes and outstrips that of pepsin alone, due, no doubt, to the meat-digesting as well as the fat-digesting power of the pancreatin contained in the *Lactopeptine*. My conclusion is that *Lactopeptine* is most valuable digesting agent, and superior to pepsin alone.

JOHN ATTFIELD.

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| Sugar of Milk, | 40 ounces. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | Veg. Ptyalin or Diastase, | 4 | Lactic Acid, | 5 | Hydrochloric Acid, | 5 | drachms. | fl. | fl. | | | | | | | | | | | | | | | | | | | | | | | | | |

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THE
QUARTERLY JOURNAL OF INEBRIETY.

Vol. V. OCTOBER, 1883. No. 4.

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INEBRIETY IN WOMEN. ITS CAUSES AND
RESULTS.

FROM OBSERVATIONS MADE AT THE REFORMATORY PRISON
FOR WOMEN, SHERBURNE, MASS., BY LUCY M. HALL, M.D.,
PHYSICIAN IN CHARGE.

In collecting the data which are intended to form the basis of this paper I have had in view: 1st. A desire to know what are the conditions under which women of the classes with which I am dealing, yield to temptation, either subjective or objective, and become drunkards: 2d. The action of alcohol upon the organism and the resultant psychical and physical disturbances manifested.

In presenting the first part of my subject, I do so with the belief that it is by far the more important. It is in the modifying or controlling those forces which produce disease that the physician of to-day finds his truest and most exalted work, and the foundation of all successful effort in this direction must lie in a knowledge of whatever tends to produce the conditions which we seek to control.

He who discovers and eradicates the sources of contamination which would result in an outbreak of diphtheria or

typhoid fever in a household or a community, does a far better work than he who simply cures or conducts to recovery the victims of preventable disease.

In no department of medicine does this question of prophylaxis assume so high a degree of importance as in dealing with the mighty problems of inebriety, for whether a vice in the beginning, or whether attributable to the action of a diseased nervous organism, inherited or accidentally acquired, or whether produced by a combination of causes, inebriety at length becomes a disease in itself, and demands at our hands all the consideration due to any other diseased state.

Moreover, as the results of this condition are not confined to the individual, but are transmissible to the offspring of the inebriate, burdening the world with beings faulty in organization, in whom the nutritive processes have been perverted from the moment of their earliest action, necessity for prevention of an evil so wide-spread and so lasting, assumes double importance.

Nor are all the conditions antenatal whereby the inebriate's children are defrauded of that which is the birthright of every child, a sound body in which a sound mind may expand and develop. These children are too often, in consequence of the parental vice, poorly clothed, poorly fed, living amid squalor, discomfort, and perturbation, subjected to exposure, to cold and wet, to cruel beatings, especially to blows about the head ; in short, their congenital deficiencies are so supplemented by post-natal surroundings the most detrimental, that we are often in doubt as to the origin of the defects which we are called upon to note.

I will here state that of eighty-two inebriate married women, I find thirty-two who have been mutilated about the head until from one to twenty scars *per capita* are visible. In all these cases it was alleged that the injuries were received at the hands of drunken husbands, and it is safe to suppose that the husbands did not always escape from the encounter unscathed. Amid such wholesale brutality the children are always the greatest sufferers. I find that of four

hundred and eight children born of one hundred and eleven inebriate mothers, eighty-three of whom had inebriate husbands, two hundred and twenty-seven perished in infancy and early childhood; while of the survivors many are infants and young children, having apparently but a frail tenure of life.

From the standpoint of the sanitarian the results of inebriety are too far-reaching, too complicated and perplexing to be fully presented here. In order that the *causes* of this great evil may be more fully understood, a vast amount of work must be accomplished, and each searcher for truth, in his own particular field, must labor patiently to swell the slowly accumulating mass of material from which finally a basis for more well-directed and efficient work in the prevention or control of inebriety may be evolved.

In the hope of adding something which may aid those who are laboring to the accomplishment of this end, I have directed my efforts toward ascertaining, so far as possible: 1st, The age at which the habit of using intoxicants is most likely to be formed. 2d, Associations, inducements, etc., which led to their use in these cases. 3d, Condition, occupation, and place of residence at the time. 4th, Intoxicating beverages first used. 5th, Place where they were drunk. 6th, Hereditary influences.

Of the 204 cases examined by me, 132 were committed to the prison for drunkenness, 56 for crimes against chastity and public order, and 16 for crimes against property. Their ages when committed averaged thirty and one-half years. Sixty-five were between thirty and forty-one years of age; forty-nine between twenty-five and thirty-one years; thirty-four between twenty and twenty-six years, and thirty between fifteen and twenty-one years; the remainder were over forty years of age. Fifty-six were serving a first sentence, forty-one a second, forty-two a third, and twenty-six a fourth. Of the older cases many could not tell the number of sentences which they had received. One of them thought she had been committed more than a hundred times. Seventy-

three were married, but separated from their husbands ; seventy were single ; thirty-nine were married, and twenty-two were widows.

Twenty-seven began to use intoxicating drinks before they were ten years of age ; eleven began between the ages of nine and fifteen years ; seventy-four between the ages of fourteen and twenty-one years ; thirty-seven between twenty and twenty-six years ; thirty-three between twenty-five and thirty-one years ; nineteen between thirty and forty-one years, and three between forty and fifty-one years. The average age was eighteen and one-third years. *More than one-half* had formed habits of intemperance before they were twenty-one years of age, and more than one-third at the giddy ages between fifteen and twenty inclusive.

One hundred and thirty-two claimed to have drunk socially, and never otherwise ; forty-seven admitted that they loved the liquor which they drank ; eleven gave trouble or anger as a reason for the indulgence ; fourteen were more or less ill when they began, and I regret to state that in three instances it was alleged that the appetite was awakened by the use of stimulants which had been prescribed by a physician. In the other cases a mother, husband, or some officious friend had recommended or urged their use as a medicine.

One hundred and thirty-two began to drink with female friends ; twenty-eight with male friends (20 of the 28 were the husbands of the women) ; three with male and female friends together, and seven alone. A few began by drinking beer in mill or shop while taking lunch with their companions.

When the indulgence commenced, one hundred and fourteen were single ; seventy-two married ; eight married but separated from their husbands, and ten were widows. Forty-eight were engaged in domestic service, forty-four worked in mills, and fifteen in shops (usually shoe shops). One hundred and ninety-seven resided in the city, and seven in the country. One hundred and twenty-eight began by drinking beer ; thirty seven by drinking whisky (usually as punch at

first); twenty began with wine, and eight with gin; eleven were unable to remember the beverage first used. A large number averred that they fell into habits of intoxication by first using a substance familiarly known as *tonic*.* This beverage is harmless in itself, but when drunk in the company of those who were indulging in stronger drinks it was soon supplemented by beer or other intoxicants and thus insidiously the habit was formed. Ninety-one began to drink at their own homes, forty-nine at the homes of friends, and sixty-four in saloons.

In but one hundred cases were even the most meager details of the family histories obtainable, but these, no doubt, may be considered to fairly represent the class. Intemperance, transmissible disease, or any family neurosis which would be likely to affect the offspring unfavorably were noted.

Of the fathers, sixty-seven were dead. Of these, twenty-four died of consumption, four of heart disease, two of kidney disease, one of scrofula, and one of neuralgia; one committed suicide. In several cases the cause of death was not known. Fifty-six were intemperate, eight were extremely nervous, and three were insane. Of the mothers, thirty-seven were dead. Of these, twenty-one died of consumption, three of heart disease, one of cancer, one of epilepsy, thirty-one were intemperate, twenty-five were extremely nervous, and three were insane. Of the brothers and sisters, fifteen were known to have died of consumption and two of heart disease; eight were insane, and two simple. Of the grandparents, four were known to have died of consumption and two of heart disease; two were known to have been insane. Of the uncles and aunts, thirty-two were known to have died of consumption, one of cancer, and one of heart disease; twenty were known to have been insane. In all but eight of the one hundred cases examined were one or more of the above conditions found to have existed in the family. In one case—

* Made of hops, sugar, and water, charged with carbonic acid, and colored with burnt sugar.

that of an extremely nervous but intelligent girl—both father and mother were very nervous, a grandfather, brother, and uncle were insane, and two brothers were simple.

It may be of interest to add that of these 204 inebriate women, 126 had been guilty of other crimes; yet in but sixteen instances did the first commitment of these crimes antedate the habit of drinking. Fifty-three used snuff in the mouth (in Massachusetts a habit confined chiefly to the mill population); forty-three used snuff in the usual way, thirty-nine smoked tobacco, and three opium. The last named vice is making rapid headway in New York and in many of our western cities; in Boston only a beginning has as yet been made, but a swift spread of the evil is feared. Six used opium or morphine hypodermically or *per orem*.

Concerning nationality sixty-seven were Irish, fifty-two Irish-American, seventeen American, seven negro, seven of mixed foreign parentage born in America, and twenty-two born in other countries. Of the Irish-born forty-five came to America when young, and claimed never to have used intoxicants prior to this time.

To determine the actual effects upon the system of the habitual use of alcohol is a difficult or rather impossible task. Yet nothing can be more obvious than that results the most profound and enduring do follow its use. Boehm tells us that "alcohol must be ranked with those narcotics which, after long-continued use, leave behind them permanent and enduring changes in the bodily organs. These changes may not be recognized by the minute anatomist, but they may be known very unequivocally by persistent anomalies of function."* In no direction is this abnormal condition and action so constant and so well marked as in those most delicate and complicated structures, the brain and nerves. The other expressions of a diseased condition in the inebriate may, often with a show of reason, be attributed to other causes than the toxic action of alcohol, but the evidences of the fatal deterioration in these organs are unmistakable.

*Ziemssen's Cyclopaedia, Vol. XVII.

In classifying the cases which have come under my care I have made four divisions, each embracing, beside its representative members, many who presented minor degrees of variation from the type of the class :

Class I. Here an unstable state of the emotions begins to manifest itself. The woman is often depressed in spirits ; weeps easily, and is easily consoled. The most trivial circumstances will annoy and excite her. All the currents of her life are disturbed, and are in inharmonious relations with each other. This is partly from the action of alcohol upon the tissues of the system, partly from the moral protest which is goading the victim with a sense of the ruin in which she is becoming involved.

Class II. In this class we have the psychical disturbances more marked. The woman is apprehensive, believes that she is wronged, and imagines every one to be against her, the temper is irritable, and often uncontrollable ; the moral sense is involved ; the perception of what constitutes right and wrong is blurred and distorted ; purposeless lying, deceitfulness, a general absence of integrity and honesty, characterize this condition ; and the higher the intellect of the woman the greater the divergence from the normal standards. The patient believes that she can easily reform, and resolves to do so without a moment's doubt or hesitation. The capacity for suffering is active, remorse being a prominent factor in the distress which so often possesses her. The eye is unsteady, and the facial muscles often twitch nervously. Gastric and intestinal disturbances are common in this class, and headache an almost constant accompaniment.

Class III. This is a dual class, and one in which, from the long continued use of intoxicants, the vital forces have gradually come to "equilibriate around new centres," and the resultant conditions have assumed a degree of fixity from this persistent abnormal adjustment of the life forces. In this class we find ourselves dealing with persons whose reasoning powers and governing impulses have little in common with our accepted standards. All the higher

qualities have hopelessly deteriorated. If the woman is a criminal she has but little comprehension of the significance and extent of her crimes; if of a phlegmatic temperament, the capacity for suffering is diminished, and the impulses are less active than in either of the preceding classes. The brain and nerves seem to have gone through a stupefying process. The will is weak, and the woman is not troubled with regrets or a sense of her failures. The Divine fire which characterizes our humanity has been almost completely extinguished in her, and she has sunk to the level of the lower animals; in some respects indeed she is below the intelligent brute.

If some intercurrent disease does not end life, the patient will remain in this condition for a long period, finally sinking into a state of complete dementia. The system in these cases seems to have established a tolerance for the poison, and the nutritive functions are less actively disturbed than in patients of either of the other classes.

In the woman of a more highly nervous temperament, we find at this stage a very great divergence from the preceding type.

Here the system is in a state of rebellion against the unnatural and long continued stimulation. The woman is broken, shattered, demoralized. Her condition is one which approaches to a state of permanent intoxication. Her inhibitory centers have become hopelessly impaired in structure and action; she is excitable to the wildest extreme; she weeps at nothing, and blesses and curses in the same breath; her anger is easily aroused, and she becomes ghastly in her rage; the discipline of the prison is irksome and often unendurable to her; she has no control over her passions or her appetites, and she is often aware of this. Said a poor girl of this class to me the other day—she had been returned to the prison after a few weeks of freedom (?)—"I know I told you before I went out that I'd never drink again. I knew then that I could not help myself if I got where the liquor was. Still I am sure I meant to try, but I got drunk

the day I left here, and have kept so nearly all the time since. I never will try again, for it is of no use; I wish I had a ten years' sentence."

This is only one case of scores which I could mention. That they have passed the limits of responsible action and are under the control of a diseased organism, none the less real because self-induced, cannot be doubted. Protection and not punishment is demanded in these cases. Absolute control is necessary, but not with the surroundings of a prison or a mad-house, for to consign them to either is an injustice.

There are usually marked physical disturbances in these cases; headache is a prominent symptom, also a dreadful feeling in the head is complained of—a sensation as though it were opening and shutting at the vertex, spinning around, or as though a tight band were about the forehead; a common expression with them is, "my head is crazy." Fine muscular twitchings and tremblings are observed, also the muscles are relaxed and wanting in tonicity. A prominent and constant accompaniment of this state is the generally lowered tone of the system. The vital forces have been consumed far in advance of the years of the patient, she often having the appearance of being ten or even twenty years older than she really is, and her powers of exertion and endurance partake correspondingly of this prematurely senile condition—gastric catarrh, or gastritis, bronchial catarrh, affections of the heart, liver, and kidneys are frequent but not constant complications. In this stage of her career death often comes to the relief of the wretched patient, and the scene is closed. Otherwise in Class IV we find her parting with the last vestige of her reason, and sinking into the oblivion of hopeless dementia, tossing in her restlessness and wretchedness toward some wilder form of insanity, or revelling in the splendors of untold wealth and boundless possessions, she goes on swiftly and surely, helpless and mindless, to the death which awaits her.

Of the 224 cases under consideration (20 of whom could

give no history), 50 belonged to Class I, 90 to Class II, 49 to Class III, and 20 to Class IV. Fifteen remained unclassified, having not yet reached Class I. Seventy were considered to be dipsomaniacs, in the restricted sense, *i. e.*, of being the victims of a morbid and uncontrollable appetite for stimulants, the result of long indulgence in most cases. When committed, forty-one were suffering from acute alcoholism, and five from delirium tremens; eleven were epileptics; fifteen had heart disease; sixteen disease of the liver; ten disease of the kidneys; nineteen had bronchitis; forty-eight uterine disease; twenty-one rheumatism; five phthisis, and four asthma. In none save the first two conditions mentioned could it be absolutely shown that alcohol produced the disease.

In conclusion, I would call attention to a few prominent facts, foremost of which is this: that in girls of the laboring classes habits of inebriety are most likely to be formed while they are still very young, and that, almost without exception, association is given as the cause. Over and over again the story is repeated: "I got to going with a girl, or a lot of girls, who drank, and so I got to drinking myself. I never should have drank, and I shouldn't drink now, if it wasn't for company." That so many of our young working-girls are becoming drunkards, drinking openly at the bar of a saloon with their companions, is a serious matter, and points to a most degraded state of the social standards among them. When we consider the comparatively large number who were at work in the mills when they began to drink, and that fully two-thirds of all those recorded here were led to the habit by those who were or had been thus employed, we cannot but conclude that mills, the great factories of the State, are the *foci* in which drinking and dissolute habits are formed, and from which extend the influences which are leading so many others to ruin.

Nowhere is there an active work of reform more needed than among the mill population of our State. Those who know only what were the social conditions there twenty or

thirty years ago can form but an imperfect idea of the depravity and disorder which now prevail in these localities.

Many of the married women who, living in their own homes, formed habits of inebriety, did so by "neighboring" with each other, beer being brought in or sent for by some one of their number who drank, and soon the indulgence became general. One old female toper in a neighborhood may be looked upon as a common center of contagion. With those who learned to drink when children, it is the old story; a sip from the tumblers of their elders, hot punch for every cold or colic, and they were drunkards before they knew their danger.

Of the intoxicating beverages first used, beer is by far the most common, yet in but few cases did the tipping stop with its use; for while in but 37 cases did the indulgence begin with whisky, in 181 it had become the favorite drink, and in a few cases oil of peppermint or chloroform was finally added, so maddened had the appetite for some fire hotter than its own fury become.

Any beverage which makes the first step towards inebriety seem easy and trivial, is a public scourge.

With regard to the present condition of these inebriate women, little need be added to what has already been shown. Not one in Classes III and IV but has passed the limits of moral responsibility. Freedom from the walls and bars of a prison means to them but the most abject bondage to their depraved appetites. From the prison to the rum-shop, from the rum-shop to the gutter, and from the gutter back again to the prison, is the desolate orbit to which existence for them has been reduced. At each return the poor victim is a little more hopeless, a little more shattered and shaken. She will recuperate and perhaps become useful in the work of the prison, but with the return of her so-called freedom she will fall again, lower than before, and so on to the sad and bitter ending.

We hope the day may come, when, by a wiser and more humane legislation, these unhappy outcasts may be protected

from themselves by surveillance and control, not penal nor unnecessarily disgraceful, but absolute, without limit, and modified only by positive and continued evidence of reform in the sufferers. In this way only can the degree of usefulness of which they are capable be conserved and their impending ruin averted.

Prevent those influences which lead to inebriety when possible; when not possible, prevent the further self-ruin of the inebriate by wise, humane, but absolute and unremitting control and protection.

Dr. Manning, inspector of insane for New South Wales, Australia, writes to Dr. Tuke of England, "that one of the prolific causes of insanity in these Colonies, is inebriety.

"The inebriety comes very often from the bad quality of food. Salt beef, poor tea, no milk, and indigestible cake of flour and water, without any vegetables, are the common diet of hundreds. The digestive powers are soon ruined, and a terrible craving for drink follows, and from both the mind is rapidly lost.

"The isolation from the comforts of home and society, and the hardships incident to the peculiar life, are the active causes precipitating both inebriety and insanity."

Already truth breaks through the walls of time and superstition. Gradually it draws on the minds of men, that this vast army of inebriates are victims of physical forces and laws, not wicked willful sinners. This fact forces its way over the theories of church and state, and the closed doors of the past open, and the air is filled with the impetus of its power. Like a smouldering fire this truth may be suppressed for a time, it may burst out, then die away, but by and by it will come to the surface and burn more brightly, and become the beacon light of the centuries.

ADJUSTMENT OF INHERITED TENDENCIES IN
INEBRIETY.

BY DR. JOSEPH PARRISH, BURLINGTON, N. J.

I have elsewhere referred to environment as an important force in the discipline of the functions of the human body, and now call attention to the importance of a practical adjustment of individuals with an inherited tendency to alcoholic indulgence, to the conditions and circumstances amid which they find themselves placed.

So far as regards the perpetuation of the human machine, and of all the organs and functions which are essential to its repair, nature has provided within the body itself a sufficiency to reach the end intended—the ultimatum; but it must be remembered that the ultimatum is not uniform; it differs as widely as human constitutions; but, as Dr. Dobell puts it, “there is also included within the functions of the organism a power of *disposing of poisons*, so as to avert their fatal effects, but this power is restricted by certain limits.” . . .

“There is, then, no room to doubt that the same force which protects the organism against the undue influence of poisons generated within itself, protects it also against the poisons introduced from without.” . . .

“Some of the force manifested in development, growth, maintenance, and repair passes on into the germs of new cells and tissues, and again is passed on from the *entire organism* into the germs of a new generation.” . . .

“It is reasonable, therefore, to conclude, and to affirm, if the existence of this force is recognized, with its power of succession and transference, that the constitution of the being possessing it, both in material and force, will be dependent on the conditions of the world in which it exists,

subject to alterations, co-relative with that external world itself." Thus it is evident that the individual who is conscious of an inherited tendency to alcoholic excess, may do much to modify, if not to control its force, by placing himself under such conditions of living as will tend to increase his constitutional vigor in the direction in which it is most needed. A person coming into the world with a tendency to pulmonary consumption will, as soon as he knows it, begin to co-relate himself with the most favorable conditions of climate, occupation, etc., that the progress of the morbid element within him may be arrested if possible, and that the normal forces that are antagonistic to this manifestation of disease may be strengthened.

The same is true of other disorders. It is conspicuously true with the disease of inebriety. The fact of an inherited tendency to it, and the other fact, that by reason of such an inheritance, he is fortified with a potent stimulus to resistance, is an influential factor in the direction of health. It is lamentably true, however, that the popular view of this fact of inherited tendency has influence in the opposite direction. The opponents of the doctrine of disease insist that the knowledge of the fact of inheritance is sufficient to arrest all efforts at recovery, and is equivalent to abandoning the victim to a fatal doom. There is nothing more illogical or irrational in the entire field of polemics, as related to this subject, than the assertion so commonly made by reformers, that the dogma of inheritance leads to fatalism and despair. It is the great conservative truth in relation to other physical conditions, which all men may avail themselves of, who are inheritors of any special predisposing morbid element. If they know of its existence, they are fortified by that very fact with a weapon of resistance. They are on their guard. They fear to be overtaken without watchfulness, and they watch. Knowledge of danger is the guardian power, on which they rely as the inspiration to effort, to harmonize surroundings with internal conditions, and thus avoid the risk consequent upon ignorance or doubt. It is impossible to

approximate the number of inebriates by heredity, and those whose inebriety is due to external causes ; but I am satisfied that among the chief hindrances to recovery from a life of inebriation to a life of sobriety is the false teaching of those who overlook the aspect of disease, and limit their labors and appeals to the domain of morals and ethics. When society comes to learn that the cause of inebriety is primarily in the disturbed relations between different organs and functions of the human system, and especially that children come into the world bearing with them the vestiges of disorders that have lingered through one or more previous generations, light will begin to reflect its brightness upon new and improved practical methods.

When society comes to add to this fact of inheritance the other fact, that by adapting the educational, social, and hygienic surroundings of the growing generation to its physical necessities, much may be done to arrest or counteract the development of the craving for drink, additional luster will be imparted to the recuperative and restorative measures, that will appear as new revelations to the advanced intelligence of such a period.

The functions of the nervous system are not complete at the beginning of life. Various modifications and interferences with the developing organism may take place at this time, which will permanently change its healthy action. It will be organized abnormally, and this first departure from healthy action goes on widening until inebriety develops. This may result from causes that should have been seen, and conditions clearly within our power to prevent.

Crime following excess of drink in inebriates is, in many cases, a great puzzle to courts and juries, simply because a knowledge of the nature of inebriety is wanting. The act is never studied as the outgrowth of physiological changes, or the result of distinct causes, hence the key to unravel the mystery is never used.

PATHOLOGICAL HINTS CONCERNING
INEBRIETY.

BY T. L. WRIGHT, M.D., BELLEFONTAINE, OHIO.

The design is to inquire into the ultimate and final effects of alcohol upon the brain and mind of the deliberate and systematic inebriate.

Alcohol is recognized as the element more prone than any other to excite the proliferation of fibrous tissue, not only in the brain, but throughout the entire system. Few structures escape the trophic influence of alcohol when it is habitually introduced within the body. The kidneys, the stomach, and the liver, all exhibit a hypertrophy of the connective tissue, "and the neuroglia of the brain also undergoes hyperplasia." The peculiarity of the fibroid nature of the adventitious structure produced under the influence of alcohol, is strikingly exhibited in its subsequent changes. In the kidneys, for instance, the alcoholic influence induces interstitial hypertrophy; but subsequently the hypertrophied tissue contracts, just as the scars following a burn contract. This contraction of the hypertrophied tissue produces interstitial nephritis. In the liver a similar contraction of fibrous tissue, confining and squeezing the true gland structure among its meshes, produces hepatic sclerosis, or hob-nail liver. In the brain a similar contraction occurs, and occasions various disasters in the condition of the capillary circulation, and the nerve fibres and nerve cells.

In every case of hyperplasia of the containing or sustaining tissues, the first step toward inducing the inordinate growth, is some impairment of the normal state of the vitality in the part affected. This is true, whether the original source of the trouble is emotional, or specific, or toxic. It is easy to

conceive of the probability of the vital actions becoming depressed under the operation of poisonous agencies ; but it may to some have the appearance of mere guessing, when emotional influences are classed with those of a toxic nature, in the production of morbid changes. But the fact that vital impairment is a necessary precedent to the inauguration of interstitial hyperplasia, affords the key to a rational explanation of the hypothesis. It all lies in the fact that the irksome persistence of mental operations, and particularly mental emotions, induces a condition of debility and exhaustion of the brain power ; and depresses the vital forces operating in brain tissue. This weakened vitality invites congestion. Being brought to a lower state of life, functional activity is impaired ; the blood vessels dilate and the corpuscles of the blood exhibit a tendency to stick together. Subsequent inflammatory and trophic manifestations follow in due order. The depressing influence of alcohol upon living tissue is admitted by all ; while its especially injurious impression upon connective tissue, when introduced into the circulation habitually, and visiting all parts of the organism, is demonstrated by the illustrations already given.

The hypertrophy of the neuroglia of the brain, which it is thought has its starting point, not only in the nuclei of the walls of the blood vessels, but also from the proper nuclei of the brain substance, operates disastrously upon the true nerve element by mechanical displacement and intrusion. As a consequence of the exuberant increase of the hypertrophied tissue, the nerve elements, as well as the delicate capillaries, are injured or destroyed ; atrophy of nerve element takes place, either in consequence of interference with its nutrition, or from the growth of connective tissue.

Of course so serious an intermeddling with the normal condition, and even the existence of the true nerve cells, implies a corresponding decay and disturbance of mental function. It is easy to conceive of the impossibility of mental activity in normal relationship with natural environments, when the structures upon which activity relies for projection,

when the nerve cells are obstructed in function by the mechanical encroachment of an aggressive foreign substance.

But the injury done to the nerve cells does not depend exclusively upon pressure occasioned by the hypertrophy of neighboring structure. The final contraction of the intrusive connective tissue, by a process of strangulation of the smaller blood vessels, induces a failure in the proper nutrition of the nerve element. Consequent upon this defect in nutrition, there often ensue various forms of cell degeneration. Nerve cells, for example, may undergo fatty degeneration. Unfitted thus for physiological action, they may be absorbed, and in the place that was occupied by them, there may be observed certain changes in the interstitial tissue of the part. "The fine elastic fibres contract, get closer and closer together, and remain as the constituent tissue of a cicatrix which sometimes causes considerable deformity; whole sections of nerve substance have been replaced by a relatively small quantity of an unyielding, compact, dry tissue."

When the deterioration in structure of the nerve cells approaches this point, it is impossible that the mental functions should be exhibited in a regular manner.

The nerve fibres can avail nothing in bringing mind into proper relationship with external matter, if the cells which function perceptions are destroyed. But even if these cells should retain any considerable integrity of structure and physiological power, yet, if the nerve fibres are destroyed, or seriously injured, there could be no reciprocal action between the mind and the world exterior to it; because there would be interruption in the continuity of the only means of communication between them. Even should the batteries be in order, they would be useless if the "wires are broken."

It is easy to conceive of the unstable will, the impaired will, and the imbecile will, when the consciousness of personality is weakened, and the feeling of responsibility is lost, in consequence of injury to the fibers of association through the hypertrophy of the interstitial tissue of the brain.

There is a change in the moral nature. This is observed

very early, because the sensibilities are on the surface; they are always on the alert, and any great disturbance of the nerve centers would more readily declare itself through the moral nature than through intellectual defects. It is evident that the finer and more sensitive qualities of the mind would become earlier and more seriously affected by morbid processes than the grosser and more common qualities. A breath will tarnish the polish of refined gold, but it would not sensibly affect the more substantial and practical plowshare. A hint, a look, a shrug will ruin the glorious bloom upon woman's character, but they would glide harmless from the reputation of a man of the world. So a little thing, a slight morbid impression, will work wreck and destruction upon the integrity of the sensibilities, the emotions—upon the moral nature—while it has oftentimes small effect upon the intellectual processes. Besides, the intellectual operations are guided in the end, in a great degree, by automatonism and habit, a thralldom insufferable to the superior and refined characteristics of the elements of morality.

There may arise, after a protracted period of steady drinking, not necessarily carried at any time to strong intoxication, a state of the nervous system characteristic of the chronic effects of alcohol. There is debasement of the moral faculties, with muscular unsteadiness and trembling; not evanescent, but of a lasting nature. But the more striking symptoms relate to delusions and hallucinations. The delusions are such as indicate distress in the nerve centers; as might, indeed, be inferred when it is remembered that the process of proliferation of interstitial tissue is even now taking place in the brain. The delusions indicative of this stage of chronic alcoholism are those of persecution. Dangers are apprehended; robbery or assassination is threatened; while the hallucinations are of a kind to confirm the delusive ideas.

Such a patient came to my office several years ago for consultation. He was moody, abstracted, miserable, earnest, and frowning. He assumed an attitude of listening, and

suddenly said he wished he had his pistol with him; he would see if people would insult him with impunity. He was at the same time looking through the window at the pedestrians upon the street. He evidently thought that the insults and threats that he conceived to be made towards him were uttered by people passing the house. Supposing this person had his pistol at hand, which he declared with emphasis to be a "cavalry weapon with a nine-inch barrel," it is not improbable that he would have gone upon the street and shot down the first man he encountered. It has been but a few months since a man was shot dead upon a passenger train on the Ohio & Mississippi railroad. There had been no quarrel or interchange of language. The parties concerned were total strangers to each other; but the assailant had been drinking deeply for a long time, and was under the influence of the hallucinations which precede and originate the delusions of persecution, and which are always suggestive of the material injury the brain undergoes in chronic alcoholism. My patient was, among other grievances, possessed with the idea that he was under the spell of magnetism, and took great pains to warn me to be on my guard against the malignant powers of certain indefinite personalities lest I might become similarly enslaved with himself. It is singular how completely such patients surrender to the ideal powers they have imposed upon themselves. There seems to be no thought of resistance or escape. One patient had prepared himself for death upon the gibbet, declaring his innocence of the crime imputed to him; he yet seemed incapable of conceiving of any possibility or way of escape. These victims of alcohol are very miserable. In my patient there were great changes of disposition as his disease progressed. He became extremely religious, although an infidel when in health; he was a devout Catholic while sick, but when well he is prone to deride the pope. The progressive disintegration of brain tissue in many cases of chronic alcoholism is of necessity attended with the most distressing mental conditions. The unremitting activity of the brain changes often

prevents any rallying point in mental function; and the resignation of the mind to the most dreadful situations presented through the delusions of persecution, is simply the resignation of hopelessness and utter despair. Oftentimes the mind is so imbued with the horror of its condition that, while it hopes nothing for itself, it entreats others to escape from the place it occupies before they, too, become forever overwhelmed and bound by a pervading malevolent power.

The patient is a professional gentleman of good ability. He has quit drinking, and five years have passed since the occurrence of the sickness just described. He is at this time under my observation, and is perceived by me—not by people in general—to be morbidly impulsive, given to much self-consciousness and vanity, with corresponding contempt for the personal and intellectual pretensions of others. The fact is, that certain changes in the structural mechanism of the brain have most likely taken place which are of a permanent character. It does not follow that these changes shall of necessity assume the *rôle* of progression, and go on unrestrained to the final brain disintegration characteristic of paralytic dementia. Indeed, when we come to consider chronic alcoholism as a factor in the elaboration of the criminal nature, we shall have reason to recognize as true the doctrine that the progress of brain degeneration may be arrested, although a return to pristine health and structure is impossible. It appears that upon the withdrawal of the toxic agency of alcohol the morbid process of cytogenesis ceased in my patient. And now the fact seems to be that while the nerve elements, injured and abused, may partially adapt themselves to the new circumstances and relations in which they are placed, it is impossible for them to overcome entirely the effects of the mechanical intrusion upon the conditions of mental function.

This man is not sound in mind, when considered with respect to his mental powers previously to his alcoholic disease. He would undoubtedly be held responsible for criminal acts by people at large, who are incapable of rightly

interpreting the insignificance of slight breaks in intelligence and morals. Yet the conscientious expert, learned and skilled in mental pathology, would explain the motives underlying the same criminal acts with great caution and doubt. Juries are called upon to decide such questions, however, although they are incapable often even of imagining the mental difficulties and contingencies involved in them. They are cringingly denominated by paid lawyers, "men of plain common sense;" as though that kind of wisdom and feeble knowledge were the best to engage in unraveling the tangled skeins of thought, aided, forsooth, by the "instructions" of the court, founded upon the psychological status of fifty, or perchance, one hundred years ago.

The near advent of the second stage of chronic alcoholism may be suspected oftentimes from surprising exhibitions of moral obliquity. The extreme symptoms of nerve degenerations may not be observed until the patient actually appears in scenes of gross indecency or dishonesty. There is no doubt that kleptomania is sometimes a symptom of approaching dementia. The term kleptomania is more proper than thieving, because the motives causing the appropriation of the property of others are as wide apart as the antipodes in the two cases, as will speedily appear.

There was a person within my knowledge who had been a hard drinker as well as a hard laborer. No stigma of dishonesty blurred his name in a community where he had lived for many years. This man, whose face and head had been very red for a long time from habits of intemperance, suddenly began a career of stealing. It was not like ordinary theft. He would deliberately take, and carry away with him, things notoriously the property of others. A fine gun, belonging to a relative who lived near by, was one of the articles taken by him. He was arrested, and upon my testimony that he was insane, he was sent to an asylum. He made no attempt at concealment, nor did he offer any excuse or explanation. He merely claimed that the articles belonged to him.

This was true kleptomania, and it has the same unreasoning impulsive basis that actuates the child, when it claims the gilded toy or noisy rattle.

It is evident that the functions of the brain, in parts, as well as in its completeness, may be greatly obtunded, impaired, or even suspended by agencies which, while of considerable continuance, are yet temporary only.

It is also evident that suspended brain function thus induced, is liable at times to be attended by the same characteristics, moral and intellectual, that distinguish the suspension of brain function when it is due to structural lesions in the neural tissue itself.

In the light of these facts the possibility of moral insanity, sometimes curable, at others incurable, must be admitted. It is in truth a symptom of a clearly defined lesion of the brain, either structural or functional—as much so as any form of insanity can be. It is doubtful if the morbid anatomy of moral insanity is not as clearly demonstrable as the morbid anatomy of purely intellectual insanity. The suggestion is not unreasonable, therefore, that moral insanity is not the outcome of a mere quirk and juggling with the intellectual powers—that it is not simple wickedness and deceit, but that it is a reality, often with a visible and tangible basis.

Chronic alcoholic indulgence produces more serious disturbance of the moral than of the intellectual faculties, even. The inebriate is quarrelsome, irritable, untruthful, immoral, vicious, and brutal. He displays moral perversions and loses his sense of justice, of honor, and of right and wrong. No inheritance can be worse than vicious propensities, and no qualities are surer to be transmitted to children.—*Dr. Hurd.*

Inebriety is a physical disease. Alcohol is the exciting cause, either by developing a previous defective organization, or by creating actual pathological changes in the nerve centers. In either case an imperfect organization always exists, as a basis from which active disease is generated.

ALCOHOL DRINKING.

BY J. T. SEARCY, M.D., TUSCALOOSA, ALA.

What constitutes "the desire for alcohol drinking," what induces its use in the first place in the individual, and what fixes this desire and entails its catalogue of sequels, all embrace a consideration of the highest functions of the nervous system. An understanding of brain functions, from highest to lowest, especially is involved in such a question.

Although this is as yet to a great extent a "terra incognita," yet I think in the light of much evolved in modern physiology—psychological physiology—we can consider the question in a much more scientific and satisfactory way than ever before.

Whether the statements are correct altogether or not, in all particulars, I feel that the following is the only way to satisfactorily approach the subject:

Every nerve center, every ganglionic nerve structure in the living body, can be said to have as its function to regulate, to control, "to *adjust*" the actions of the organs or parts over which it "presides"; that is, to which it sends "efferent," "centrifugal," "out-going" fibres or fibrils.

This rule holds good in reference to the lowest centers as well as the highest. *Every center "adjusts" the action* of the organ to which it sends efferent fibres, to "its surroundings."

This *equilibrating* action of all centers presiding over "the organic life" in the body, is as much a necessity for the internal "harmony" of the individual, as this function of the very highest brain in adjusting the actions of the individual to his outside relations.

The functional action of every nerve center, of all nerve

centers, can, for convenience, be divided into *three stages*, viz.: *receptive, adjusting, and emissive.*

It very much simplifies all the actions of the brain, or our consideration of them, to classify them under such heads. From the highest to the lowest they can be arranged under such a classification.

The lowest orders or grades of nerve action, that adjust the actions of organic life, have their simpler, less complex, receptive, and adjusting and emissive stages of action. With them the adjustment is so simple that it has acquired the titles of "sympathetic," "reflex," "automatic." The receptive action of these lower centers does not include the high quality of sensation. They are not sensitive, are below consciousness. Yet we can say that if unadjusted, disturbing action occurs in them it is carried or sent higher. The whole nervous system is made a unit by its multiplied connecting fibers. When we reach the sensorium, sensations or feelings appear as receptive acts, and as we go into the consideration of the highest brain acts, intellectual perception and apprehension take that side in the classification.

As the adjustment of the lower actions in the body is in comparison a simple process, these adjusting actions of the high cortex of the brain are, like its structure, immensely varied and complex, ranging through all the grades of thought and reason; and the emissive acts of this high portion of the nervous system are exhibited by all the grades of action that constitute conduct and character, and that acquaint us with the individual—his utterances, his behavior, his motions from highest to lowest.

In this paper such a classification of nerve actions will serve a good purpose.

The physiological action of alcohol in the body serves an excellent purpose to illustrate the fact that the high actions of the topmost brain, notwithstanding all their complexity and inherent obscurity, are nevertheless physical actions. Much harm has been done, I think, in our consideration heretofore of these highest functions of the body by our holding

on to the ancient idea of these actions being the work of an extra-somatic, metaphysical, idealistic entity; and the confusion, exemplified in the definitions relating to these faculties and functions, considered from a metaphysical standpoint, all becomes much simplified by the admission that they are *all* brain acts.

The action of alcohol, or any other anaesthetic, can be explained on no other basis but the physiological basis of all psychical acts.

Its effect on the sensating portion of the brain constitutes the *incentive* to its use, induces "the habit."

The alcohol taken into the circulation of a person imbibing it, is sent equally in every direction, is applied uniformly to all structures, but is usually too much diluted to affect the lower order of structures of the body to any appreciable degree, even the lower nerve centers, but the delicate colloidal structure of the *sensating* brain, in excessively rapid action, is peculiarly open to its contact, and to its "hydrating," "coagulating," "hardening" effect. As a result, the degree of which is in proportion to the amount in the circulation, the sensating faculty, the receptive action of these high structures is lessened, cessated; or, if carried far enough, entirely arrested, paralysed.

The person rightfully says he takes the alcohol "for its effect on his feelings." If, also, we remember which portion of the body has the faculty of "feeling" in all its grades, it is no surprise, but a natural sequence, that we witness a bad "adjusting" action evinced by the same organ in all its "emissive" acts. His conduct, behavior, deportment, utterances, conversation, muscular motions, etc., etc., exhibit varied degrees of ill-adjustment, "bad control."

The physiological condition of "harmony" with the surroundings, whether it is a condition of the lower or higher centers, is a pleasurable one.

In a pleasant, "happy" state of body there is no disturbing receptive action anywhere; all is adjusted. "Pain" is a disturbed condition of brain centers, whose receptive action

and whose adjustment is disarranged from inside or bodily sources: "worry" is an unadjusted condition from outside sources of high centers; or these are disturbances of low or high, simple or complex modes of action of co-brain centers.

We can produce a pleasurable state of feeling, a "happy" condition, *artificially* with many of our medicinal agents (anodynes and anaesthetics), by cessating the receptive faculties of nerve centers with them. If we *harden* the structure of any nerve center with an artificial agent we lessen its receptive faculty and produce a condition of rest, or "harmony with its surroundings," the kind of effect varied with the kind of agent used and the amount taken. There are a number of such agents in popular use, varying in hurtfulness from tea, or coffee, or tobacco to the stronger ones, alcohol, opium, hashish, and the like.

Alcohol produces these effects in a slower way than its more rapidly acting, more dangerous akin anaesthetics, ether or chloroform. A single administration of any such anaesthetic does not usually leave appreciable hurtful effects behind, but repeated doses do.

It is easy under this sort of an understanding of the effect of alcohol to show what constitutes "the habit of alcohol drinking."

A person with a perfectly normal brain in the first place, will, by repeated use of the agent, so injure it that its receptive faculty (and its adjusting and emissive functions also) will become easily disturbed, become "sensitive," be easily pained.

Because of the so general use of such agents in society such a character of brain is frequently transmitted to posterity—a brain easily pained, easily worried. Many a person nowadays is "born tired," never knows what a real comfortable moment is, or is easily put into a condition of brain, of general hypochondria, general malaise. Such persons readily get into the habit of using some such agent, or a number of them, and after continuing their use for a longer or shorter period they are never comfortable unless under their influ-

ence. For a person not given to high orders of action, never practiced or trained to control according to wise or generally accepted high rules of conduct, to abstain from the use of such an agent or to appreciate the questions involved, is almost impossible. Such a person can reason with much adroitness that such an agent does him good. He cannot adjust his high brain acts, his thoughts "well without it," and his irritable conduct, his nervous motions "are staid by it."

In certain conditions of the nervous system, at rare intervals, such agents may be remedies in skilled hands, but their constant and unadvised use does broadcast harm.

With this understanding of the action of alcohol in the body, we have a ready guide to explain the phenomena following its administration, and the worse varieties of its morbid effects.

ALL successful treatment of inebriety depends on a study of the phenomena and laws which govern it. This study must begin from an independent stand point, not influenced by any theory or opinion of its nature and character. It must be conducted by the inductive method, having for its sole object the collection of facts and the study of their meaning. To assume anything true because it has been endorsed by others, or has come down from the past, is often an error that leads to bad results. The inebriate is the result of certain physical conditions and active causes which can be ascertained. He is not the victim of chance or transient moral or immoral impulses, but is what the surroundings and his physical organization have made him. He is controlled by laws and conditions that move in organized channels and are certain in their operations. The same forces which guide the planets, and are seen in the wider operations of nature, are at work here.

According to Dr. Finkelburg, member of the Russian Public Health Commission, alcoholic liquors cause over two-fifths of all the insanity, and five-eighths of all the criminality. As one prominent cause he gives lack of insufficient food, bad nutrition, worse surroundings, and unsanitary habits of living.

ALCOHOLIC INSANITY.*

BY LEWIS D. MASON, M.D., CONSULTING PHYSICIAN TO THE
INEBRIATE ASYLUM, FORT HAMILTON, L. I.

The relation which alcohol bears to insanity is both causative and contributive. This fact was emphasized in a discussion on "The Influence of Alcohol in the Causation of Insanity," held by the Psychological Section of the British Medical Association at its annual meeting in 1880.

Dr. J. Chrichton Browne, President of the Section, in summing up the results of the discussion, and especially certain statistics presented, said: "There were a certain proportion of cases in which intemperance was an expression of a diseased state already established, and had nothing to do with causation; but, on the other hand, there were certainly included in that large mass of cases at the end (of the statistics) in which the causes of the insanity were unknown, a certain proportion in which secret or concealed or unrecognized drinking was really the undiscovered cause."

He offered a physiological explanation of the action of alcohol on the nervous system, maintaining that it first excited and then paralyzed every nerve center in succession, beginning on the highest and ending on the lowest, and that its action was not simple, but doubly and trebly compound. The highest inhibitory and controlling centres upon which its primary action was exercised could not be repeatedly paralyzed without grave danger to mental integrity--to weaken volition was to promote anarchy in mind.

In evidence taken before a select committee of the House of Commons appointed in 1872 "to inquire into the best

* Read before the "American Association for the Cure of Inebriates," at its Annual Meeting held April 26, 1883.

plan for the control and management of habitual drunkards," the leading lunacy experts of England, Scotland, and Ireland testified that cases of insanity were directly traceable to alcohol; all agree that, while alcoholic inebriety may precede, usher in, or accompany the various stages of, and not be directly responsible for the insanity, yet there were cases of insanity due directly to the deteriorating influences of alcohol on the nervous centers, having their own special symptomatology as differentiating them from other forms of insanity, and also requiring special treatment. The authorities differ as to the percentage of cases of insanity from alcohol as compared with cases of insanity from other causes, some placing it as low as ten per cent., others as high as nineteen per cent., the average being about fifteen per cent. In an analysis of one thousand cases of insanity from all causes, Dr. Browne found that fifteen per cent. were directly due to alcohol. Dr. Edgar Shepherd,* of Colney Hatch (an insane retreat in England) is of the opinion that, either directly or indirectly, forty per cent. of British insanity springs from intemperance. In a study of six hundred cases of inebriety treated at the Inebriate Asylum, Fort Hamilton, I found that one hundred and sixty-six persons had three hundred and nine attacks of alcoholic mania in some form at various times during their periods of alcoholic addiction. In the annual report of the New York State Lunatic Asylum for 1883, of the four hundred and twelve cases tabulated, in thirty-two, or in a little less than one in thirteen, "intemperance" was stated as the exciting cause.

Without considering in detail all the different conditions or types of insanity with which alcoholism may be associated, suffice it to say that alcoholism can precede or coexist with most of, if not all, the various phases of insanity either in a causative or contributive relation, and moreover develops forms peculiarly its own of mental alienation. Much confusion results from the misapplication of the various terms used

* *Med. Chirurg. Jour.*, p. 141.

to describe the different abnormal mental conditions to which alcohol may give rise.

It is therefore our purpose, while alluding simply to the more common, and, therefore, better understood forms, to dwell at length on those conditions of "alcoholic insanity," not so well known, and especially the differential diagnosis of these conditions, and we divide them for convenience of consideration into the acute and chronic forms. The acute are:

1. Acute alcoholic mania, or *mania à potu*.
2. Acute alcoholic delirium, or delirium tremens.
3. Alcoholic epileptiform mania.

The chronic forms are:

1. Chronic alcoholic mania—maniacal type—homicidal tendencies.
2. Chronic alcoholic melancholia—suicidal tendencies.
3. Alcoholic dementia.
4. Dipsomania or oinomania. And, finally, we shall consider "chronic alcoholism," a condition that may coexist with any type of "alcoholic insanity," and is analogous to forms of chronic poisoning from other substances, as lead, tobacco, etc.

Acute alcoholic mania. Mania à potu is a common synonym for this condition. It does not occur in habitual drunkards, but in persons who are not, as a rule, intemperate, yet occasionally drink to excess, as a matter of their social environments, or it may manifest itself in the periodic inebriate or occasional drunkard. The paroxysm or frenzy is developed in the midst of a debauch, suddenly, without warning. The subjects of such an attack make assaults on those around them; their will-power is dethroned; they are veritable maniacs; they are violently aggressive; their tendencies are markedly homicidal; "retaining sufficient nervous power to wield their limbs, yet not sufficient to guide their reason, they become dangerous alcoholic criminals."*

Why some persons can drink to excess, and are not thus

* Richardson.

affected, and others cannot do so without becoming maniacal, is probably due to the fact that the latter class, either from their natural temperaments or from some cerebral effect, are readily crazed by alcohol or rendered "liquor mad." Indeed, Anstie affirms that in all the cases of this class that he has seen there was a hereditary predisposition to insanity.

The paroxysm or fit of mania usually passes off in a comparatively short time, a few hours at the furthest. In exceptional instances, the person may remain maniacal for four or five days after a drinking bout; but in these cases, as Anstie has shown, there is a condition of alcoholic phrenitis or inflammatory delirium, with marked vascular excitement and high temperature, requiring prompt antiphlogistic measures. The attack passes off by the occurrence of vomiting and copious diaphoresis, and the stage of excitement may be succeeded by one of stupor and prolonged slumber. Finally the alcohol is sufficiently eliminated from his system to permit his normal cerebral action to be restored. When told of what he has done (for he is unconscious of his acts during the paroxysm), he is usually extremely sorry, ashamed, and repentant. If a periodical inebriate, at some future period he again becomes intoxicated, and the result is the same, and continues to be so until some accident or illness—the result of his debauch—has a fatal termination, or some criminal act places him in the prison or the asylum, if he is adjudged a proper subject for the latter place.

The following case occurred in my experience. The person was a United States contractor and at times received large sums of money from the government. He was an occasional inebriate; during the period of his debauches, he was very violent, dangerous to his wife and those about him, making assaults on every one. After the paroxysms of mania passed off he was repentant, extremely grieved, and did all in his power to amend the evil he had done. After one of his fits of intemperance, in a mood of repentance, he sought to conciliate his wife by the expenditure of a large

sum of money. He rented a villa on the Hudson, furnished it extravagantly, bought horses and carriages, and employed a retinue of servants, and in every way strove to make restitution for his past misdeeds. Some time after this—though not a lengthy period—he received a large sum of money from the government, and again went on one of his debauches, returning home a madman. He procured an axe; his wife fled at his approach and locked herself in a room at the top of the house; the servants escaped to a neighbor's. The maniac had full control of the premises, and proceeded to demolish the furniture. A grand Steinway piano was reduced to splinters, and ruin spread in every direction as his insane fury dictated. Fortunately, he met no one, or homicide would most certainly have been added to his acts of destruction. His wife eventually procured a divorce, and he died in an asylum. His son became an inebriate, and coming under my care, I was enabled to obtain the family history.

The son was a periodical inebriate, and, when under the influence of alcohol, was, like his father, a maniac, aggressive, homicidal, and with exceedingly dangerous and destructive tendencies.

There is no crime in the calendar that these alcoholic maniacs may not commit. Their reason is temporarily dethroned; they are unconscious of not the character of their actions alone, but the acts themselves, and are therefore irresponsible.

One marked characteristic of this form of mania is that it is not preceded or followed by delusions or hallucinations, as other forms of alcoholic insanity are. The assaults are apparently motiveless, the frenzy cyclonic in the shortness of its duration and in its oftentimes terrible results.

The following remarkable case* shows the complete annihilation of all mental and moral responsibility. A young man in Madison county, in this State, in the year 1859 was attacked with alcoholic delirium for the third time. While

* Fourth Annual Report of New York State Ineb. Asylum, 1866, Dr. J. Edward Turner, Superintendent.

under the attack, he killed his father and mother, cut out their hearts, which he roasted and ate. He was arrested, thrown into prison, and indicted for murder. He was brought into court for trial, where Judge Gray, of the Supreme Court, stated that the case could not be tried, as "there was no motive to prompt a man to commit such a crime." The man was sent to an insane asylum.

Another characteristic of alcoholic mania is that the natural strength of the person may be greatly increased, and a man of ordinary physical development may thus become a giant, in his alcoholic fury, and woe be to those who would stand in his way, or thwart his purpose. His tendencies are not in the more cunning forms of lunacy, nor apparently preceded or guided by any motive—they are aggressive and homicidal.

Imbeciles, harmless when uninfluenced by alcohol, become most dangerous maniacs when affected by it. But there is no form of mania more dangerous than that which occurs in the epileptic when influenced by alcohol; it matters not whether his epilepsy be directly due to alcohol or to other causes. According to Magnan, he is one of the most dangerous of patients: "he adds to the impulses, sometimes so terrible, to which he is subject from his disease, those which he draws from his intoxication."

We now pass to the consideration of the more common and generally better understood form of alcoholic mental alienation, acute alcoholic delirium, or delirium tremens, the latter synonym being often a misnomer, as tremor is not infrequently absent.

This condition presents itself in one of three forms.

First, a simple, uncomplicated, non-febrile form, the patient recovering readily after a few days' illness, with little or no treatment, and after a short period of convalescence resuming his usual occupation.

Second, a form similar to that already described, with the exception that the convalescence is slow, delusions persistent, and relapses or recurrences of the attack, at comparatively

short intervals, are common. The tendency of this type of delirium tremens is to drift into the more chronic forms of alcoholic mania.

Third, a febrile form, with a pulse from 100 to 140, a variable and rising temperature, and other symptoms of a grave nature occurring in rapid sequence, a fatal termination not unfrequently resulting in a few days. This condition is known as "Febrile Delirium Tremens."*

The delirium is characterized by hallucinations of sight and hearing, and even those of taste and smell.

Amblyopia, according to Magnan, may exist, and even the chromatic power of the eye, it is asserted by some, may be affected. Hence the conditions for optical delusions are present, and these are readily misconstrued by a disordered intellect into all kinds of forms and fantasies, horrible or grotesque. There is perversion of the hearing, and natural sounds receive undue importance, and are readily misinterpreted by the delirious patient. There is less perversion of taste and smell than of the other senses; but the fact that the former may be perverted is of interest, accounting, in some measure, for the delusion of poisoning so common in the more subacute and chronic forms of alcoholic mania.

The delirium is characterized by great changeableness of delusions, although there is one delusion of fixed prominence to which all others are secondary. The perversion of the various senses form, or change, or direct the character of the delusions, which are accompanied by hallucinations of hearing, vision, and tactile sensation. Ordinary sounds receive undue importance, or are converted into terrible threats, the air is full of voices, visions constantly appear and disappear. Commonplace objects assume the form of demons or other horrid objects. Hyperæsthesia of the skin, perverted tactile sensation, gives the belief that bugs are crawling over the integument. Irregular chilly sensation and formication, or

* Anstie finds that the tracing of the sphygmograph gives forms of pulse-waves similar to forms of a typhoid type, exhibiting that condition known as diastole.

pricking sensations, are easily converted by the delirious patient into snakes, rats, or other vermin. The patient borrows his delusions largely from his surroundings, although all authorities agree that the avocation of the patient, or the last prominent act he may have engaged in, establish the central delusion of his delirium.

The actions of patients are often a perfect piece of pantomime; the tailor will thread an imaginary needle, and stitch an imaginary piece of cloth; and so others will follow their ordinary avocations. There is an incessant monkey-like action; the patient is extremely loquacious, and continually inspecting his room, or bed-clothing, or the dress of those about him.

If his delusion partakes largely of personal danger, he makes repeated attempts to escape, and often effects his purpose with great cunning.

He will assault those about him in his attempts to get away, or if he imagines they are his enemies. These acts of violence are generally seen in the more maniacal form of delirium. Delusions of a melancholic character are not unfrequently present; preparations are being made for his funeral, the table is a bier, the sheets are his shroud; or he is to be drowned, or hung, or terribly abused in some way; he begs for mercy, he prays for deliverance, and in a paroxysm of terror may commit suicide, if not closely watched.

Finally, either from successful medication or the natural termination of the case, the excessive restlessness—the “busy delirium”—the protracted insomnia give place to sleep. If the case ends favorably, a marked improvement follows, the patient awakes refreshed, although not always free from his delusions, and his convalescence is more or less rapid; or he may pass into a semi-comatose condition, and from thence into complete coma, and finally death; the final issue of the case being largely determined beforehand by the fact whether we are dealing with a case of febrile or non-febrile delirium. It is well to be aware that

collapse has occurred suddenly, as the case was in progress, without any premonitory symptoms, a fatal issue resulting rapidly.

I have thus briefly alluded to the more acute forms of alcoholic mania, and more especially dwelling on the mental conditions, that I might more intelligently present and dwell at length upon the more chronic forms of alcoholic mania, and have the advantage which comparison affords.

As far as the clinical history and symptomatology of the more chronic forms of alcoholic mania are concerned, I will quote the description as given by Maudsley :

“Delirium tremens might be described justly as an acute alcoholism, since there is a chronic alcoholism which is characterized by the slow and gradual development of similar symptoms; in truth a chronic delirium tremens which is called the insanity of alcoholism. Premonitory of it is the same sleeplessness, the same motor restlessness, the same nausea and want of appetite, that go before delirium tremens. Instead, however, of the rapidly rising excitement, the changing hallucinations and delirious incoherence then following, there is great mental disquietude with morbid suspicions or actual delusions of wrong intended or done against him, of willful provocations and persecutions by neighbors, of thieves about his premises, of unfaithfulness on the part of his wife, and the like; suspicions which are frequently attended with such hallucinations of hearing, of sight, of tactile sensation, as threatening voices heard, insulting gestures or mysterious signs seen, electrical agencies felt. In this state a violent tempered man, resolved to be even with the scoundrels whom he declares to be persecuting him, sometimes does sad deeds of violence. His hallucinations disappear first in the daytime, being as bad as ever, perhaps, during the night; then they are less vivid at night, being most marked in the stage between sleeping and waking. Next, they are no more than bad dreams or nightmares, and at last they go entirely.” The author continues, “unfortunately the recovery seldom lasts, inasmuch as the patient

goes back to his indulgence as soon as he can, the chances are that he has other attacks, and that in the end his mind is permanently impaired, his memory is so damaged, perhaps, that it has no more hold of recent impressions than that of one who suffers from senile dementia ; his understanding is enfeebled, and even childish ; his moral sense is blunted or destroyed, so that he loses all feeling of moral responsibility, and becomes cunning, cowardly, untruthful, untrustworthy, and his will is so deteriorated, that he has not the least control over himself in respect to indulgence in drink.

“ Muscular unsteadiness and trembling go with these signs of increasing mental debility, and there is oftentimes sensory dullness, or actual sensory and motor paralysis of the limbs, on which account he cannot hold firmly with them, perhaps dropping helplessly what he takes in his hands, or lies in bed because he cannot use his legs to walk. . . .

“ This condition of mental impairment may be brought about gradually by a steadily continued course of excessive drinking, in some persons, especially women, without any of the hallucinations and delusions of persecutions that go before it in other cases. At a later and worse stage, the patient is completely demented, his mind being thoroughly disorganized, as for example that the most extraordinary scenes occur in his room ; that knives and broken glass are coming out of his flesh and skin ; that people cut up his body and carry him away at night, the mental deterioration being so great that he resembles not a little in mental symptoms a person who is in the last stages of senile dementia. . . .

“ The insanity produced by alcohol is instructive, for it exhibits in more rapid sequence a train of symptoms very like those of ordinary idiopathic insanity, so-called, and exhibits them in a case where we can clearly trace the operation of a cause. We know of a certainty that the alcohol is absorbed into the blood ; that it is carried by it to the brain, and that it acts there directly upon the nervous tissues, from which it has been taken in quantity. Its first effect is to stimulate the tissues and cause increase of activity ; but in

the end it produces degeneration of tissues and destruction of functions. Let it be noted, too, that it acts equally perniciously upon the different nervous centres, motor, vaso-motor, sensory, and ideational, the collective symptoms of this impartial action giving its peculiar physiognomy to alcoholic insanity."

We have made this extensive quotation, because it is the testimony of an eminent observer on mental diseases, and because it is the experience not alone of himself, but of Anstie, Magnan, and other experts in this field of medicine. It coincides also with my experience as far as opportunity has been afforded me to study this form of insanity in our asylum.

The predisposing cause of the more chronic forms of alcoholic mania, or "alcoholic insanity," then is found in the degenerative changes which alcohol has produced in cerebral nervous and vascular tissues—a degeneration that is the result of a long-continued and excessive use of alcoholic stimulants. I am aware that cases of insanity have been recorded by Tuke, Magnan, and Bucknill, when the first excess in alcohol was followed by insanity lasting for many months, and in some instances years, but it seems to me that in these cases the alcohol must be regarded as contributive, not causative; under such circumstances, simply the exciting cause of a latent condition.

(To be continued.)

The report of the Commissioners of Lunacy for England for 1882, shows among the causes of insanity in cases admitted during the past year, that fourteen per cent. of all private cases were due to inebriety. Twelve per cent. of all paupers, and twenty-two per cent. of all paralytics were due to the same cause. An English journal, commenting on these figures, affirms that they are misleading and incorrect. That the very same tables, when carefully studied, give evidence that inebriety is the cause of over forty per cent. of all the cases of insanity.

THE CURABILITY OF OPIUM ADDICTION.*

BY DR. J. B. MATTISON.

During the past winter a medical gentleman in Alabama wrote us, "Your causes me to apply to you for some information on a subject in which I am deeply interested. It is opiomania. Do you think it can be cured? Do you believe there is a well-authenticated case of cure on record? Can a case of long standing, say ten years, be cured? If so advise me what course to pursue in order to attain the important privilege of being rationally treated."

Thinking these queries compass a question big with importance to many, both in and out the profession, and that their answer may revive hopes that, perchance, through frequent but futile self effort have been given over to a hapless despair, we have thought they might form the basis of a brief paper, which we trust will not be found altogether devoid of interest or profit.

Getting at once to the initial query, what answer? Most emphatically—Yes.

Repeated experience has proven this beyond question. There is, however, in professional as well as lay circles, an opinion on this point which is both unjust and erroneous—namely, that unless recovery be never followed by relapse it is a failure. This is a mistake. Opium addiction as well as all forms of narcotic disorder being subject to the same genetic law that governs other diseases; that is to say, if a patient recovered from one attack be exposed to like etiological surroundings, he will have a second; indeed he risks an increased liability by virtue of an enlarged susceptibility directly the outcome of his first. Vide "The Treatment of Opium Addiction," *St. Louis Courier of Medicine*, June, 1883. This, however, in nowise invalidates his original

* Read before the Kings Co. Med. Soc., June 15, 1883.

recovery any more than a similar result in other illness, and it would be clearly absurd to assert that recurrence of a malarious disorder proves a primary failure of anti-malarial treatment, and a permanent periodic status. This opinion certainly is untenable, and it is quite desirable that it should be abandoned, both for the welfare of the patient and the credit of the profession.

What of the second query? The same answer. The literature of the subject offers repeated affirmative instances, and before closing this paper we shall cite cases from our own and other records affording ample proof.

Can a case of ten years be cured?

Undoubtedly. Several recent papers by the writer confirm this statement. *Clinical Notes on Opium Addiction, Cincinnati Lancet and Clinic*, March 3, 1883. *Neurotic Pyrexia, with special reference to opium addiction, N. E. Med. Monthly*, June, 1883, and *Opium Addiction Among Medical Men, N. Y. Med. Record*, June 9, 1883—reprints of which may be had if desired. Other cases could be cited. It has been our pleasure to dismiss, recovered, a literary gentleman, ten years a taker of crude opium, thirty-six grs. per diem. A layman, ten years a hypodermic user of morphia, seven to fourteen grs. daily. The wife of an Alabama physician, twelve years addicted to morphia, nine grs. a day, per orem, and we have been consulted by a lady, sixteen years an habitue—beginning with one quarter grain of morphia, and now daily taking thirty grains—whom, if it be her pleasure to honor us with her confidence, we fully expect to see recover.

It seems almost strange that these queries should be offered unless it be that repeated efforts to escape have been so persistently followed by failure as to make the asker skeptic on every phase of the subject, and hopelessly resign himself to a bondage for life.

Why should not opium addiction be curable? It is a functional disorder, rarely causing organic change—in this regard differing widely from alcoholic excess—the possible exception relating to the renal organs and brain. Recently

a foreign writer has advanced the opinion that it may cause fatal Albuminuria, but proof positive that it produces organic lesion is wanting.

Transient, or even constant albuminuria during addiction is quite common, and entire absence may not be noted until several months after the opiate taking is ended.

Insanity from opium figures to some extent in asylum records. We have never seen a case, and while it is not denied, we think instances in which every other cause has been excluded must be rare. Varied factors affect the cure; much depends on individual constitution and environment. Recurrence of the original disease must be watched with sedulous care, lest it be made the pretext for an occasional taking, which will incur large risk of confirmed re-use.

Levenstein declares that one injection will undo a good result "successfully kept up for months together." Occurring in patients with painful incurable disease, relapse is almost inevitable. Such cases are clearly ineligible for treatment. Two instances of this kind have come under our notice—one, locomotor ataxia, the other, morbus coxarius, in which we advised re-use of the morphia.

Strongly marked ancestral neuroses lessens permanence of cure. Acute disease as a genetic factor is more favorable than chronic, and Levenstein asserts that psychical causes are less hopeful than physical. Alcoholic taking greatly lessens the prospect of permanent recovery. The ex-opium habitue must, if he values his future good, *entirely abstain from alcohol*. One gentleman under our care, aged 23, four years addicted to morphia, and who had reached a maximum of 26 grs. per diem, hypodermically, made a good recovery, and was dismissed quite free of any opiate desire. He had been given to brandy, and we are credibly informed that, while still refraining from morphia, he at times takes alcohol to excess. If this be true, relapse is likely in the near future.

Other circumstances being equal, limited addiction, as regards both amount and duration, is the more promising. This, however, is, as Levenstein states, largely "dependent

on the individual constitution, having seen patients remain free from relapse after injecting 25 to 30 grs. of morphia daily."

The longer the time after treatment without relapse, the larger the promise of continued cure.

Through the courtesy of Dr. T. D. Crothers the following cases are offered :

Aug., 1878, Mr. A., aged 28, length of addiction, six years ; amount, 25 grs. morphia, per orem, daily ; also using brandy ; cause, neuralgia, for which brandy, in excess, was taken, and then morphia, which was found to remove the desire for, and enable him to abandon the alcohol. Father was an alcoholic ; mother insane. Effects, business incapacity and mind much enfeebled. A specially prominent symptom was his great fear of dying, and for this reason alone he placed himself under medical care. This morbid dread was fully encouraged throughout treatment. The opiate was gradually reduced until a daily taking of ten grains was reached, when it ended. The resultant irritation was controlled by hot baths, quinine, and the usual remedies. Patient was up and about in a week, convalescence was steady, and he was dismissed at the end of three months. During the next year he used Fowler's Solution daily. Sept., 1882, was well, and had not taken any form of opium or alcohol. Was married and steadily employed. His mind seemed greatly impressed with the narrow escape from death in being relieved of his opiate addiction.

Mr. B., aged 24, three years taking, 28 grs. opium daily, cause, insomnia. Was anxious to recover and return to business. Wished opium removed at once. Was reduced one-half, and the third day entirely withdrawn. The writer's plan of preliminary sedation was used with success. No unpleasant reaction. Was dismissed in six weeks and resumed business. The following year he was anæmic and neuralgic, but improved under good medical care. Jan., 1883, four years after treatment, is well and partner in a business which began several months ago. DR. CROTHERS.

COMMENTS :—"These two cases are given more to bring

out the fact of curability than to illustrate any phase of the disorder. The first was clearly the result of heredity, would be termed chronic, and was more or less hopeless as far as expectation of permanent recovery could be determined.

The second was neurasthenic and not at all promising. In the treatment, the element of mind and will was made a strong factor. In the first case, the fear of death, and in the second, the desire to get well, were powerful motives. Dr. Mattison's plan of preliminary sedation was most effective. The result in each instance, after the lapse of several years, promise permanent recovery. I think these cases may be said to be thoroughly cured, as much so as any other cases that are treated."

Dr. E. H. Van Deusen, in reporting several cases cured, cites that of Mrs. H., aged 52, who was "known to be faithfully holding on as late as six years after;" and he remarks: "As for efforts at reformation voluntarily undertaken and successfully carried through, the cases are so extremely exceptional they are never to be counted on, but when a course of treatment has been submitted to and faithfully prosecuted to the end, the result is directly the other way;" and "our experience has satisfied us that a large share of the cases deemed as having got beyond the reach of medical aid can be successfully conducted; but then on this one condition only, that the physician shall have the entire and exclusive control."

Dr. Albert Day kindly furnishes this case: "Mrs. P., aged 36, thirteen years addicted, maximum taking 60 grs. morphia per orem, daily; cause uterine disorder. Was dismissed, cured, in Feb., 1869. In June following she wrote:—'At no period have I known enjoyment so pure, so placid, as within the last few weeks. I can think but of one thing, only, my happy deliverance from an iron bondage; and I now appreciate and enjoy this bright, this beautiful world, as one who, having long groped in thick darkness, suddenly, on the lifting of the veil, emerges again into the clearer day, to behold anew the joyous earth, fresh mantled in rich and varied beauty. Can you marvel at my enthusiasm?'"

June 16, 1883, Dr. D. wrote us:—"This case was a most deplorable one. She now resides in Iowa, well and happy."

The following cases under our own care afford still further proof:

Dr. A., aged 42, ten years taking, 18 grs. daily, hypodermically, cause, peritonitis. Was dismissed, cured, on the thirty-first day of his treatment, in Feb., 1877. In the summer of 1878 he wrote,—“there is not the least desire for morphia.” He resumed practice and has pursued it steadily since. Directly and indirectly we have been apprised of his condition, and he has remained free from the opiate. In response to special query as to his taking morphia, we, this week, heard from him,—“I’m glad to *most positively reaffirm* what I have before said. *No. No. No.* Not even the most infinitesimal homeopathic dilution could find a representation of that ‘dread narcotic’ within my anatomy. I can say *emphatically* that the cure wrought in *my case* has been *complete and permanent.*”

Mrs. B., aged 62, five years’ addiction, cause neuralgia. Was referred to us by Dr. Geo. M. Beard, in Jan., 1880. She made a good recovery, changed notably for the better, both mind and body, has “kept the faith,” and is well—an assurance of this fact reaching us to-night.

Dr. M., aged 32, addiction one year, five grs. subcutaneously daily, cause headache. Was treated in the autumn of 1876, and dismissed, cured, in less than one month. In the summer of 1878 was doing well. Later he took the rostrum to tell of his bondage and escape. He remained free, and died in 1881 of albuminuria.

What are the conclusions? Opium addiction is curable. It is curable in the sense that other diseases are. Permanence of cure depends largely on favorable temperament and surroundings, freedom from recurrence of primary diseases, a will power able to resist depressing causes acting on mind or body, and a thorough abstaining from every form of alcoholic indulgence—in fine, an absence of those causes which, singly or combined, stood in etiological relation to the initial addiction.

Abstracts and Reviews.

DIPSOMANIA.

The positive denial of the existence of a disease termed dipsomania by several experts of mental disease, is a fact that cannot be explained. Recently I have been referred to in very uncomplimentary terms as the advocate of this term, which "covers a fiction and humbug in true science."

It will be of interest to gather some of the views of leading scientific men abroad, who long ago spoke clearly on this subject. Many of these facts I quote from an able report made to the Ohio State Medical Society in 1873, by Dr. Morse, Superintendent of Insane Asylum at Oxford, Ohio, which is entitled "Dipsomania and Drunkenness."

Salvatorsi of Moscow in 1819, seems to have been the first writer who described dipsomania minutely and gave it its true name. Plutarch, St. John, Chrysostom, and the Roman law giver Ulpian, had referred to this condition as drink, madness, and evidently recognized its existence. *Salvator* wrote very clearly of the insane impulse for alcohol, which dominated over everything else, for a time, then was followed by a period of sobriety and extreme disgust for alcohol. *Dr. Erdman*, a German physician, described this disease in great detail in 1816, and thought it was peculiar to Russia, and the cold climate, poor food, and strong spirits used. *Esquirol* in 1815, wrote of a condition of the nervous system which was surely to be followed by drink madness. *Henke* and *Roeseh*, both German physicians, contributed articles to the *Annals d'Hygiene et de Medicine Legal*, showing that this disease existed all over Europe. *Pierquin* of Montpellier, wrote of this affection, giving illustrative cases.

Tardieu, in his Manual of Pathology and Clinical Medicine. *Marce*, in his practical treatise on mental maladies. *Orfila*, in his work on legal medicine. *Greisinger*, in the treatment of mental diseases. *Casper*, in his great work on legal medicine. *Dagonct*, in a volume on mental diseases, and many other writers, described this disease at length in their works. *Bruhl-Cramer*, another distinguished writer of Germany, claimed for a long time that he was the first to describe dipsomania. *Candillac*, the French philosopher and physician, and *Canbarie* of Paris, urged the authorities to recognize and treat this affection as a distinct insanity.

Forbes, *Winslow*, *Bucknill*, and *Tuke*, *Prof. Christisan*, *Dr. Taylor* in his medico-legal jurisprudence, *Dr. Ray* of this country, and nearly every writer on insanity and medico-legal topics, have fully recognized this disease and discussed its legal relations. *Dr. Roesch* thought there were two varieties, continuous and periodic. *Dr. Hutchinson* of London, divided it into three forms, acute, periodic, and chronic. *Dr. Austie* considers dipsomania a constitutional insanity rather than of alcohol disease. *Marce* thought it an instinctive monomania. *Ray* supposed it to be a moral mania.

Thus many pages might be filled with authorities who have written clearly on this disease.

Salvator wrote thus of this affection in 1817:

"The principal symptoms are in the morning before it appears, nausea, languor, vertigo, trembling of the limbs, and general malaria. . . . Presently the image of the drink preferred presents itself to the mind, and so occupies every thought and moment, that no other subject can come in. He is finally forced by an irresistible impulse to intoxicate himself. This intoxication in some cases must be repeated over and over again, until finally the mania disappears. He then detests the drink he has used, and slowly recovers, the disgust increasing with the returning health." Then a long period of sobriety follows.

Recently *Prof. Lasègue* of Paris, France, has made an exhaustive study of this disease in *Archives Générales de*

Médecine. This has been followed by a still more critical study in the *Revue de Médecine* of Paris, by Dr. Folleville, a distinguished physician. We quote the following as the latest and best authority on this subject, which is especially commended to our opponents:

“Dipsomania is always hereditary, always a spontaneous neurosis, absolutely independent of the habits of the individual.

“Most dipsomaniacs are eccentric, impetuous, often cruel, and sometimes completely insane. Sometimes persons are met with whose intelligence appears absolutely normal, and shows no irregularity in the intervals of the attack. At the approach of these attacks the patient experiences a vague uneasiness, he is subject to motiveless fears, and often shows suicidal tendencies. Muscular vigor becomes weakened, and the patient feels inclined to faint, and he is tormented by dipsomaniac symptoms, which presently renew the morbid impulse.

“Resistance is impossible at the outset, but soon the crisis becomes aggravated, the impulse becomes irresistible, and in order to obtain drink the patient has recourse to the most varied and incredible stratagems. Sometimes dipsomaniacs yield to their impulse cynically, without any self respect; sometimes, on the contrary, they wrap themselves up in mystery and precautions, and seek to keep the secret of their habits. The fit of dipsomania does not last forever; after a variable time, sometimes days, sometimes weeks, sometimes months, the patient awakes. The impulse is calmed, repentance makes itself felt. It is often accompanied by dyspepsia, frequently intense, and by disgust for drink. These intervals of lucidity may be prolonged and last months, but in the majority of cases they become shorter and shorter, till they reach what is known in England as the diurnal type of dipsomania, in which the patient gets drunk every night, and repents every morning. The choice of drinks varies, and some patients intoxicate themselves with ether or with chloroform inhalation.

Various complications are observed, especially in women, such as great excitement, or an irresistible tendency to robbery, murder, anthropophagy, and suicide.

The causes of dipsomania are first hereditary; all of the most various forms of alienation may be found in the history of the ancestors of patients. After this came alcoholism, sexual abuse; then all causes of debility—the puerperal state, abundant hemorrhages, injuries, insolation, excessive labor, troubles, poignant anxieties, the menopause, and parturition.

Dipsomania is often difficult to distinguish from excesses which mark the appearance of insanity, and especially of general paralysis. The prognosis of dipsomania is absolutely hopeless, especially when the case is one of heredity. Such cases are seldom cured in spite of the most varied treatment. In dealing with dipsomania therapeutically, it is advisable at first to attack the paroxysm by means of an appropriate treatment, to employ such remedies as nitrate of silver, revulsions, bitter tonics, hydropathy. Finally, one only method appears to be of certain efficacy, and that is isolation, and lengthened confinement of the individual, almost indefinitely prolonged.”

Life grows more complex with each development of science. New faculties are brought into activity, new forces are called into being, and our knowledge of the relation of these to life and health is wanting. Hence inebriety, insanity, and a host of so-called new diseases, and new forms of old diseases. Our study and knowledge of these causes must be made from a different side and higher up, then prevention can be made practical.

After a paroxysm of intoxication, the sense of hearing is restored first, then the lower attributes of the mind and sensorial instincts reappear. The patient can hear long before he can see or stand uprightly. Like a parrot he repeats the word over and over until the idea emerges out of the confusion and is correctly understood. There is a peculiar mode of recovering consciousness which may be seen and will be of great service in the diagnosis.

ALCOHOL ON THE ELECTRICAL CONDITION
OF THE BODY.

The following is quoted from Dr. Stearns' work on Insanity, its Causes and Prevention, noted in this issue:

"There is reason to believe that alcohol effects the electrical currents of the body, which originate in and proceed from the brain.

"Dr. Mulvaney, Staff Surgeon of the Royal Navy of England, conducted some experiments upon the effects of alcohol on these electrical currents with the following results: He discovered that an ounce of brandy, equal to about half an ounce of alcohol taken by a healthy man, raised the galvanometer in a few minutes, in one case twenty-five degrees, and in another case forty-five degrees. He concluded that the thermo-electric currents of the system were strongly excited by small doses of alcohol, and that this excitement may be profitably employed where there is clear evidence of derangement of function springing from enfeeblement of the organic system of nerves, and that in health, when function, nutrition and blood, and nerve influence are harmonized by structural integrity, such artificially excited currents, by tending to abstract an undue amount of water from the brain-cells must interfere with their normal working."

It has been observed that inebriates under the influence of spirits do not bear the electric current well. In one instance it seemed that delirium was the direct result of a prolonged stimulation from this source.—[ED.]

THE DIPSOMANIA OF POE.

We have the most striking examples in the lives of individuals to prove there is such a disease as dipsomania, and the most marked one now in mind was Edgar A. Poe. I need not repeat the history of his life, for no doubt the community in general is familiar with the name and character of Poe. The author of "The Raven" is well known, and this remarka-

ble production. "The Raven." will live as long as man lives upon the earth. It is the outcome of just such a mind as I should suppose he possessed. Dr. Griswold, in his memoir of Poe, does him injustice, notwithstanding his great faults. He speaks of him as a "strange being," and as "a puzzle—a mystery to the world, and no one who has ever lived is more difficult to understand than Edgar Allen Poe." A writer in the *Nineteenth Century* (A. W. Dillard) has at last given to the world a solution of the character of this "strange being." I give but one sentence of this able review :

"Griswold, in his memoir of Poe, dwells with unctuous relish upon his foibles, parades them before the public with the air with which a showman describes his puppets, expends all his elaboration upon these points. Poe had said at some time that a physician had given it as his opinion that he was 'out of his head'; and Griswold taxes all his acuteness to deprive his conduct of this poor prop. All those acts of Poe which were disreputable, and some of them were of this type, sprang directly out of his intemperance, which we regard as disease." Poe frequently made the usual resolutions to abstain, and adhered to them for months. He even made a few temperance speeches, but a trivial circumstance, or the sudden meeting of an old acquaintance, was sufficient to give the victory to his evil genius. Drunkenness became to him a chronic disease. There has been in the past no correct pathology of inebriety, and consequently the present mode of treatment in general is vicious. Our laws made for the punishment of inebriety are wrong, because the disease theory has never been recognized. Insanity less than two centuries ago was regarded as a species of diabolism. Certain forms of nervous diseases were considered as demonic possessions; and hanging, branding with hot irons, and whipping were the remedies prescribed.—*Dr. Day.*

LEGAL TREATMENT OF INEBRIATES.

Except by overt acts he is not recognized by the State, and yet he is a far more dangerous member of the community than those known to be insane; for they, after a time, usually exhibit their characteristic traits, and hence are recognized, and all are on their guard in dealing with them.

But the victim of intemperance may neglect every moral obligation, abuse and endanger the life of wife, children, or friends, and finally end his own life by suicide, and yet, after all these evident marks of moral insanity, he is looked upon by society and the laws only as a drunkard—to be dragged into a police cell over night, brought before the court in the morning, fined one or two dollars, as the case may be, or sent to herd with criminals from thirty days to three months,—for the vague purpose of reform or punishment. No other provision whatever being made, he is sent to associate with criminals of the most degraded class, and by more “evil communications” he is still further corrupted, and his family and friends suffer additional obloquy. The consequences of such treatment are terrible in the extreme. He graduates with matured ideas of crime, coming forth but to fill our streets and our ears with profanity, vulgarity, and blasphemy, and by persistent violation of every law, human and divine, is justly the terror and abhorrence of all virtuous and law-abiding people.

Such are the results and the tendency of the present treatment of the disease of intemperance after nearly fifty years of public and private agitation of the subject.—*Dr. Niles, New England Medical Monthly.*

BORDER-LAND STUDIES.

Dr. Stearns, of the Hartford Insane Asylum, has lately written a book entitled “Insanity; its Causes and Prevention,” which in a very pleasant way treats of many of the border-land topics, so full of interest to all students of psychology. Under different chapters are discussed the following: Insanity and Civilization, Insane Diathesis, Education, Heredity, Marriage, Alcohol, Tobacco, Sex in Insanity, Poverty, Religion, Insufficient Sleep, and other topics.

To the student of inebriety this book throws many side lights on the obscure early stages of this affection. It also brings out many of the causes which are at work either developing insanity or inebriety, and clearly shows how prevention can be made practical.

The author has most successfully presented a clear, popular discussion of these topics, and the work has a peculiar value, which will be fully appreciated by all scholars and thinking persons.

It is published by Putnam & Sons, New York City.

Dr. Shepherd of Brooklyn Heights has one of the most luxurious Turkish bath hotels in this country.

Dr. Strong's Sanitarium of Saratoga Springs (open all the year), is a capital place to build up, under the best medical care and surroundings.

Dr. Mathison, the well-known specialist of Brooklyn, New York, has lately published some very interesting papers on opium inebriety and its curability. Copies can be had of the author.

The *Journal of Mental and Nervous Diseases*, edited by Dr. Morton of New York City, represents the best literature in this field, and should be in the hands of all students of inebriety and nervous disease.

The *Alienist and Neurologist*, of St. Louis, edited by Dr. Hughes, is indispensable to every student of nervous disease who would keep up with the progress of the times. Many phases of inebriety are here described with great clearness.

The *American Psychological Journal*, edited by Dr. Parrish, and published by P. Blakiston's Son, of Philadelphia, has already taken a high rank among the new journals of the day.

Dr. Parrish's book on *Alcoholic Inebriety*, published by P. Blakiston's Son, has reached a very large sale, and another edition is in preparation. This speaks well for a pioneer book in a new field.

The Opium Habit, treated by Avena Sativa, was first prepared in a paper by Dr. E. H. M. Sell, M.D., of New York, and read before the State Medical Society. Dr. Kane questioned the value of this remedy, and the cases mentioned as proof of it, and Dr. Sell has replied in a thirty-page pamphlet, giving much evidence of its usefulness, and cases showing its value in these cases. We urge our readers to procure a copy of this essay from the author, and decide for themselves.

The Annual Report of the Inebriates' Home, of Fort Hamilton, New York, contains some very suggestive statistics. The average length of time of treatment has increased, with very signal results; and the number of persons who have gone out restored, has been larger than ever. The paying classes and those from the better circles of society have been in excess of last year. The institution is crowded and needs more room—a clear evidence of its popularity and

the high regard in which it is held in the public mind. Four hundred and ninety-five persons have been under treatment during the year, and each one has been thoroughly studied, the results of which we hope to lay before our readers in the future. Under the very able management of Dr. Blanchard, the great problems of this subject are being carefully worked out, above the levels of dogmatism and theory.

The Annual Report of the Superintendent of the New York State Prisons for 1882, presents indisputable evidence in favor of industrial appliances in the treatment of crime. It asserts positively that "illiteracy is not a cause of crime so much as idleness and lack of industrial education."

The good results from prison labor, to both the individuals and the State, are well attested by the year's work.

The success of these self-sustaining prisons shows that inebriate hospitals, with industry as an element of treatment, can be made thoroughly practical. It proves beyond all doubt that the inebriate can be self-sustaining while under treatment with more prospects of success than the low criminal.

The *Medico-Legal Journal*, of New York, under the editorial care of Clark Bell, Esq., contains a large amount of matter which every physician should be familiar with, and which cannot be found elsewhere. We commend this journal to every lawyer and physician, as a necessary part of his working library. The subscription price is \$3 a year, and the office of publication is 128 Broadway, New York.

Dio Lewis Monthly, published in New York City, is a popular health journal full of excellent advice, and should be placed in every family in the country. It is just the journal to be read by young people, and will exercise a very wide influence wherever it goes.

The Semi-Annual Meeting of the Association for the Cure of Inebriates, will be held at Fort Hamilton, New York, Oct. 24th. A large number of papers are promised.

Numerous observations brings us to the conclusion that inebriety does not consist alone of the artificial provoked appetite for alcohol; but that it represents a distinct nervous state with a peculiar and particular symptomology. Also that it may appear any time from unknown exciting causes.

Editorial.

POPULAR TEMPERANCE SENTIMENT.

During the past summer a very significant phase of the temperance work has become prominent, namely, the temperance camp-meetings.

At least thirty-four of these great gatherings have been held in different parts of the country, and have been from two to ten days' duration.

The time was all occupied in sermons, lectures, orations, and prayers, all pertaining to inebriety and the inebriate. Some of these meetings were very enthusiastic and crowded; in all the interest was positive and emphatic in seeking the ways and means to remove this evil.

In several of these gatherings physicians appeared and presented the facts concerning the value and effects of alcohol on the body.

At the Lake Bluff camp-meeting near Chicago, I had the honor to present the disease side of this topic in three lectures, which were listened to with attention. Historically this was a noted event, and was the first presentation of the disease of inebriety and its remedy before a large popular temperance gathering. Eminent physicians from Chicago and other sections gave lectures on alcohol at the same place.

In the East, Dr. Traill Green of Easton, Pa., Prof. Harts-horn of Philadelphia, and others equally noted gave similar lectures with great acceptance to the audience.

This is unmistakable evidence of a change in public opinion, of a great reaction from the indifference of the past. A sense of alarm is filling the public mind; an awakening to the dangers of inebriety, and a seeking for some means or source of relief.

The demand for medical lectures clearly foreshadows a turning of public sentiment to scientific men for the exact facts concerning this topic and its remedy.

Clearly a great wave of agitation has begun, and behind all the noise and confusion of reformers the still small voice of science will be heard. Our duty and work grows more and more important. The views we have urged are accepted by the thinking men of the country, and now comes the question of how to adapt them practically to meet the demands of the age. What shall we do with the inebriate? is the question of the world to-day, and we are expected to answer it practically.

This will come from a wider study, made from a purely physical standpoint of science, where the nature and means of reaching the inebriate will be clear to all.

DANGER FROM MARRIAGE WITH INEBRIATES.

In this case there is a volume of argument, which is more startling from the fact that it is not uncommon in all sections of the country.

The ancestors of A. B. were Irish and inebriates. From the rise in real estate the son was left a fortune. He was a man of talent, and a paroxysmal inebriate at twenty-six years of age. He married a pious woman, who had neurotic ancestors. The family physician advised against the marriage and incurred their hatred ever after.

Seven children was the result of this alliance. Two died in infancy of convulsions. The third became insane at puberty, and is now in an insane asylum, a hopeless incurable. The fourth grew to manhood, and is now an inebriate pauper and criminal, having been in prison five out of the last eight years. The fifth became the wife of a wealthy man, and in a paroxysm of inebriate insanity killed her child, poisoned her husband, and then committed suicide. The sixth is a low dealer in spirits and petty criminal, who has repeatedly been punished for crime. The seventh, after a short life of

great excesses, died in a public hospital. The father became a paralytic, lost his property, and died in an asylum. The mother died of puerperal convulsions at thirty-four.

The result of this marriage was one insane, one inebriate and insane, two criminals, and one who was so demented that he died from general excesses. This should have been prevented. From this source a large part of all the loss and suffering which society is called to bear comes. Will a wider intelligence, sustained by law, apply the proper remedy? Shall we suffer these evils to peril our civilization and life, when the means to remove them are known and practical?

INEBRIETY FROM THE STANDPOINT OF TO-DAY.

The following case differs in no way from many others, but is presented to show the loss to the community from the present methods of treatment.

John Doe inherited from his father an inebriate diathesis. His father was a moderate drinker, his uncles drank to excess, and his grandfather also drank. On his mother's side, moderate drinking and consumption was prominent. He started out in life as a manufacturer, at twenty-two years of age. Had several thousand dollars capital, and married into a large, influential family. He was a nervous, energetic man, and used whisky every day, for its medicinal effects. At thirty-two he failed in business, and drank to excess at times. A year after he started again and five years later failed, involving his father and father-in-law in hopeless bankruptcy.

In these sixteen years he had sunk over five hundred thousand dollars, and made two families besides his own paupers, and largely dependent on the community for support. At this time he signed the pledge, became a church member, and for over a year was a shining example, then he relapsed. During the year following he was sent to jail for inebriety. For the next eight years he was sent thirteen times to jail for drunkenness and assault. In the meantime he was a hostler, bar-keeper, laborer, and hackman, failing in every

occupation. Finally he assaulted his wife fatally, and was tried for murder. The jury disagreed, and two trials followed. He was sentenced to be hung, the case was argued in the higher courts, and finally commuted to life imprisonment. Two years after he fatally assaulted a keeper, and died a year after of consumption. Financially it cost the tax-payers to support and punish him from the time of his first sentence for drunkenness, not less than five hundred dollars, for nine commitments to jail, for periods of from thirty to ninety days' imprisonment.

The expense of two trials for murder, and his final imprisonment was not less than fifteen hundred dollars, in all two thousand dollars, which was the money paid out in an effort to cure him by punishment.

During this time he killed his wife and a prison keeper. His family were practically destroyed, having been neglected and scattered, and at the same time freighted with a frightful heredity, and the contagion of bad impulses and no training. Two families had been made paupers, and four of them died in the alms-house and hospitals. Others had become a burden on their friends.

Had inebriety been fully recognized in his case at the first, and he forced to come under medical care and treatment, there is every reason to believe that all this loss and suffering might have been prevented. At the time of failure in business, when his case became chronic, had he been confined to a work-house hospital, with no other result except housing him, it would have been a great gain to society and the state. Two murders would have been prevented, and all the loss and suffering which followed from them.

To call this a vice until it becomes chronic, and then apply legal methods of restoration and cure, is a system of blunders that is a disgrace to our civilization.

It is these unfortunate methods that are intensifying inebriety, and making it more incurable and dangerous, every day. These are the forces that are actually propagating an army of paupers and criminals, and other defective classes whose presence is a perpetual menace to all healthy progress and civilization.

WHERE INEBRIETY IS NOT RECOGNIZED
MEDICALLY.

In two prominent instances of failures of inebriates lately noted, the most disastrous results have followed financially, socially, and morally. A million of dollars which belonged to many poor people were scattered, causing untold distress; the social and moral condition of the neighborhood suffered a profound shock, from which it will not recover in many years. Both of these men occupied high positions in society and had the confidence of the people. Both were known to drink to excess at times, but on all sides it was regarded as a mere vice, which could be controlled at the will of the victims. The community said they were honorable men, and no matter what their habits might be, would not neglect to do their duty to others. The medical men, when consulted by patrons of these persons about their integrity and capacity, spoke lightly of the danger, and hopefully of their recovery. Thus these two men, suffering from a disease more positive and fatal than insanity, were allowed to go on, to incur risks and responsibilities and guide the interests of others, when they were literally moral lunatics, suffering from an increasing paralysis, which was covered up by delusions. Both medical and non-expert community assumed what would be a miracle in any other condition of life, viz.: That a man could steadily poison himself to stupor by alcohol, and otherwise injure both body and mind, and yet be capable of doing sound brain labor; of controlling large interests, and assuming responsibilities that only the clearest brain power could manage.

Recently a cashier of a bank was found to be a defaulter, and also suffering from paresis, a form of insanity, which had been going on for years unknown to his associates and friends. Soon after a teller in another bank was found to be insane, and his accounts largely deficient. He had been able to appear before his associates in no way different, and they, although knowing his unusual habits, failed to detect

the mental disease. In both of these cases large interests suffered, and losses occurred that could never be repaired. The community blamed the managers for not discovering this form of insanity sooner. Articles have appeared in medical journals, showing the folly of trusting to non-experts to recognize these conditions of disease. Also, the necessity of investigating into the character and habits of men who occupy positions of influence and trust.

Yet there is not a single business center in the country in which can not be found inebriates who are truly insane, and who occupy positions of influence and trust. In one instance that is well known, the president of a large manufacturing concern is often stupid from drink, and yet he controls the interests of a large community. Only his speedy death will save this community from suffering and wreck. Banks, corporations, and societies are often controlled and guided by inebriates, and their failure, in a large proportion of cases is due to failure to recognize the disease and irresponsibility of inebriates. This is the cause of much of the so-called "wickedness in high places," and there can be no relief until inebriety is studied from a medical standpoint, and inebriates are treated rationally. Where this is not done we shall have failure, suffering, and loss, which will be prevented in the future, from a wider knowledge and acquaintance with the subject.

TREATMENT OF INEBRIATES IN SMALL HOMES.

This is essential because of the active and passive natures of different inebriates—one influencing the other—and the presence of a species of mental contagia, by which the ideas of one may be taken up and acted upon by the other. They have a particular passive state of mind which takes on the delusions of others readily, are influenced and governed by the power of those in their company. The presence of large numbers is always dangerous from the presence of this mental contagia. In small places this can be obviated and prevented. The superintendent can give a mental power to each one.

Clinical Notes and Comments.

CAFFEINE AND ALCOHOL.

Dr. Lewis, of the West Riding Asylum of England, has a very suggestive paper in the *Journal of Mental Science* for July, "On caffeine in its relation to animal heat and as contrasted with alcohol."

The object of his experiments were to solve three problems:

1. The heat formation of the animal, expressed in figures, for a quarter of an hour before and after the use of the alkaloid.
2. The diminution, augmentation, or stationary condition of the body temperature.
3. The total heat formation for each interval, expressed in figures, according to the weight of the body.

The result of a large number of experiments on animals pointed out the fact that both caffeine and alcohol alike increase the normal heat formation. In the case of alcohol an excessive and prolonged discharge of heat follows soon after, rapidly lowering the bodily temperature; while the action of caffeine is to equalize and reinstate the normal temperature.

This disturbed body temperature from alcohol is more or less antagonized by caffeine, which, while it raises the temperature, has a decided tendency to retain it in the body.

According to the census for defective classes the increase of idiots for ten years ending in 1880, in this country, was ninety per cent, while the population only increased about thirty-five per cent. One of the causes upon which there is a very general agreement is inebriety, and this is another proof of the steady increase of this disorder.

HISTORICAL NOTE.

The Hon. Otis Clapp, President of the Washingtonian Home, Boston, Mass., makes a very suggestive report, from which we extract the following :

“It is worthy of note that the first movement to concentrate public attention upon intemperance in this country in a form to produce important results seems to have been first conceived at a meeting called the ‘General Association of Massachusetts Proper,’ having been held in 1813, for the express object of checking the progress of intemperance.

The first attempt of the society was to collect facts towards the precise exhibition of the nature and magnitude of the existing evil, with a view of drawing public attention to it, and of directing endeavors for its removal. The reports presented from year to year make out a case of the most appalling magnitude. In 1830 the data showed the number who died annually victims of intemperance was estimated at 37,000; and that seventy-two million gallons of distilled spirits were consumed in the country, being about six gallons consumed, on an average, for every man, woman, and child of the whole population.

“The number of confirmed drunkards was placed at 400,000. At this time (1830) it was believed that it was responsible for four-fifths of the crimes committed in the country, three-quarters of the pauperism, and one-third of the mental derangement.

“The question arises, How can we measure the injuries to man or woman that result from an over-use of alcoholic drinks?

“An eminent physician of New York answered this question in 1870. It is shown thus :

“The life insurance tables show that a temperate person’s chance of living at twenty is 44.2 years, at thirty is 36.5 years, at forty is 28.8. An intemperate person’s chance of living at twenty is 15.6, at thirty is 13.8, at forty is 11.6 years.

"The gain of the temperate man in his chance of living, over his intemperate brother, in the first case is near twenty-nine years. In the second case the gain is over twenty years. And in the third case over nineteen years.

"According to Carroll D. Wright, Esq., chief of the Bureau of Statistics of Labor, it is shown, that sixty per cent. of all sentences for crime in Massachusetts during the last twenty years is for distinctively rum offences, such as the various classes of drunkenness and liquor offences.

"The total sentences in twenty years were 578,458, and the sentences for rum crimes were 340,814. The figures of the courts show but a small proportion of the evils and the poverty that result from an over-use of intoxicating drinks.

A man who is physically sick cannot have spiritual health, only so far as through the power of his spirit he antagonizes his disease. If he is to be rid of it he must first of all cultivate in himself a spiritual dislike to it. All the responsible forces of his nature must war against its existence. If the disease exists by his consent, then he cannot be spiritually on any higher plane of truth than his bodily health indicates.

Tens of thousands of persons are sick when they might be well would they only antagonize their diseases, taking thoroughly opposing ground to them, forming a purpose to overcome them, and resolving to do anything necessary to accomplish this. Thus, when a man is subject to headache, if he wishes to be rid of it, one of the best things he can do toward such riddance is to resolve that he will not have it. Such resolution may demand of him that he alter his bodily standing. He may have to stop eating certain foods, stop drinking certain beverages, stop doing certain things. He may have to break up existing habits as they are in combination, and reorganize them in different forms and relations, in order to conquer his headache. But so long as there is no antagonistic purpose *in his mind* to its existence, so long will his spiritual level exactly correspond to that of his body.

—*Dr. Jackson.*

The *Lactopeptine* advertised in our pages, has become a standard remedy for all forms of indigestion and dyspeptic troubles.

Fellows' Hypophosphites is a remedy of par-excellence in the varied anaemic and neurasthenic conditions following the abuse of alcohol and opium.

Coca and Dogwood, as prepared by Park, Davis & Co., of Detroit, Mich., have already taken the position of standard remedies in the treatment of alcoholic and opium cases

Horsford's Acid Phosphates has a very wide value in all cases of nerve and brain exhaustion from alcohol and narcotics. We use and prescribe it in nearly all cases, with the best results.

Compound Tincture of Avena Sativa, by B. Keith & Co., New York City, is undoubtedly a remedy of much power, and should be tried by every one who is called to treat opium and alcoholic cases.

Vitalized Phosphates, manufactured by F. Crosby & Co., New York City, will always be found of value in the treatment of inebriety and opium eating. It is a brain and nerve tonic of almost specific value in most cases.

Dr. Carl Seiler, late Director of the Microscopical and Biological Section of the Academy of Natural Sciences of Philadelphia—Lecturer on Diseases of the Throat, University of Pennsylvania, Philadelphia, Pa., says: "I have used the preparation called *Iodia*, as manufactured by Battle & Co., of St. Louis, both internally and locally by means of a spray in cases of throat affections, and found it admirably suited to certain cases."

Every paroxysm of intoxication leaves its impress on the organism, the effects of which can be traced in all cases when a wider study of the cases is made. Arrested development, disturbed nutrition in the structure and tissues take place. The toxic storm may pass, but its effects can never be removed, and can be seen as long as life exists.

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Pure Concentrated Medicines,

The Combined Active Principles of Medicinal Plants.

CONCENTRATED TINCTURES, OILS, ETC.

So-called concentrations are in the market, called by the same name as our manufactures, that are made by triturating extracts, etc., with sugar of milk, powdered root, etc.

What are Concentrated Tinctures?

They are not made from the crude material, BUT BY DISSOLVING THE ACTIVE PRINCIPLES IN ALCOHOL IN DEFINITE PROPORTIONS, and invariably represent a uniform amount of therapeutic power.

We are the only concern that make CONCENTRATED TINCTURES by the above method. They are not the same as Fluid Extracts.

Physicians ordering these Tinctures from the Trade will therefore perceive the necessity of designating them as "KEITH'S" in their orders.

A NEW REMEDY.

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Its Properties are as follows:

NERVE STIMULANT, TONIC, LAXATIVE, ETC.

IS EMPLOYED IN THE TREATMENT OF

Paralysis, Epilepsy, St. Vitus Dance,

ALCOHOLISM,

THE MORPHIA OR OPIUM HABIT,

Defective or Deficient Menstruation,

(From Nervous Debility or Anemic condition of the System),

COLDNESS OF THE EXTREMITIES, SLEEPLESSNESS, NERVE EXHAUSTION OWING TO OVERWORK, EITHER PHYSICAL OR MENTAL, CRAMPS, CONSTIPATION, AND IN THE CONVALESCENT STAGES OF ALL ACUTE DISEASES.

For a full description of this remedy, with certificates from different members of the medical profession, citing cases under their charge treated by it,

ESPECIALLY IN MORPHIA AND OPIUM HABIT.

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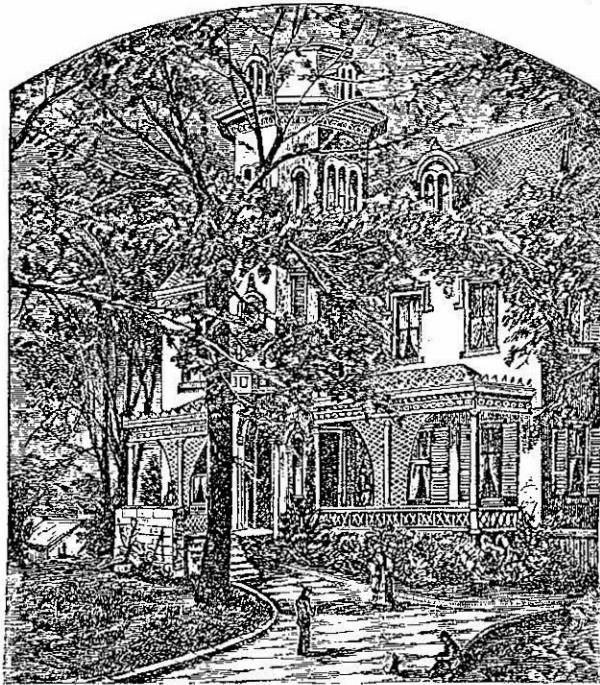
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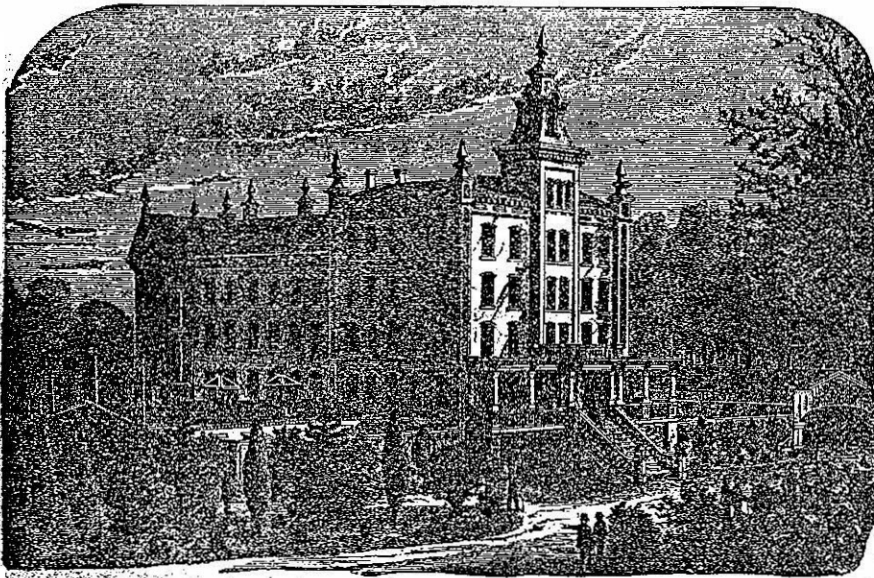
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The properties of this drug have long been familiar to the natives of Bolivia and Peru, to which countries it is indigenous. It is a powerful nervous stimulant, and increases the power of the muscular system to sustain fatigue. It has also a pleasant, general, excitant influence, removing fatigue and languor. Its effect on the brain is to stimulate that organ to greater activity, and to relieve the mind of the depression incident to worry and anxiety. Considerable interest has been excited in this new remedy by the report of Prof. E. R. Palmer, M.D., of the University of Louisville, on its efficacy in the

TREATMENT OF THE OPIUM HABIT.

Prof. Palmer found it of very extraordinary benefit in relieving the bodily and mental misery which follows the withdrawal of opium in the case of those addicted to its use—a misery which drives them again to the drug for temporary relief, only again to be similarly tortured when it is again withheld.

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It was with our preparation of Coca that Prof. Palmer conducted the experiments which led him to make the favorable report on the use of the drug.

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(PISCIDIA ERYTHRINA.)

The extensive investigations of the physiological actions of this valuable narcotic agent which we have been so instrumental in bringing to the notice of the medical profession in the United States, in the hands of that distinguished investigator, Dr. Ott, would seem to point it to a special position as a therapeutic agent of peculiar value. Dr. Ott says that Jamaica Dogwood, like morphia, produces sleep, and that the sleep produced by Piscidia resembles in feeling that produced by bromide of potassium. In his experiment on himself, he took half a teaspoonful of the fluid extract, and soon became drowsy. The pupil was dilated. In about three hours the effect passed off, and he felt as well as ever, having no nausea, or the peculiar shaking up of the nerves that ensue after opium. From his numerous experiments with regard to the physiological action of this drug, Dr. Ott is of the opinion that in Jamaica Dogwood we possess a powerful narcotic agent, without the disagreeable after effects of opium. Like morphia it stimulates the vaso-motor centre, but it does not contract the pupil; and though it possesses with belladonna the power of dilating the pupil, it differs from it materially in its action. It cannot, therefore, be classed with either of these drugs, and must be given a special place of its own.

It is hardly to be supposed that in all cases Jamaica Dogwood will act in the pleasant manner noted in the report of Dr. Ott. It is well known that nearly all drugs under certain conditions of the system produce untoward, or side effects, and disagreeable sequæ. This is true with regard to opium, bromide of potassium, chloral, belladonna, and the rest of the list of narcotics. It is, therefore, a question to be solved by clinical experience, which drug produces the best effect, with the least amount of untoward effect, or unpleasant sequæ. We therefore call the attention of the profession to Jamaica Dogwood, that its true value may be ascertained in this respect. A "Working Bulletin" containing the results of the investigations of Ott and others, has been sent out by our scientific department, and will be forwarded to the address of any one who will apply for the same.

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