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T. D. CROTHERS, M.D., Editor,
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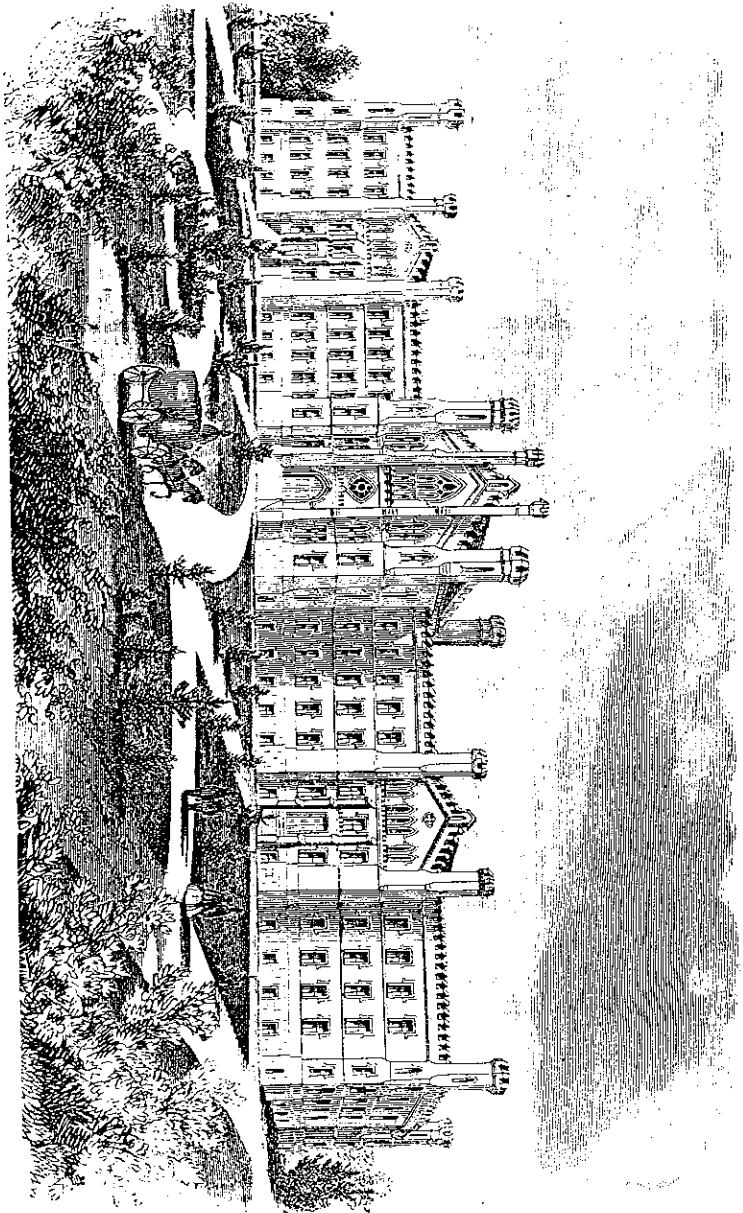
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SKETCH OF THE LATE DR. J. EDWARD TURNER, THE FOUNDER OF INEBRIATE ASYLUMS.

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

"The thing that hath been shall be, and there is nothing new under the sun." Through all the past there have been pioneers and heroes that have led the world's progress far in advance of their day and generation. The forlorn hope of truth has ever been a service of peril. The man who would plant the flags on the ramparts has had to brave the hatred and scorn of his cotemporaries. Every great advance, every great reformation has had to contend with bitter prejudice, misrepresentation, and fierce opposition. The few men who, like picket guards, have been far in the van of the march of science, have died unknown and unrecognized, but another generation has made their names and deeds immortal. Thus the world's benefactors have ever been unknown, unpopular, and unappreciated. "The thing that hath been shall be, and there is nothing new under the sun." The founder of inebriate asylums has had the same experience, has passed over the same thorny road, and been sustained

through the long weary night march of his life by the flashing dawn of a new era bursting up the skies. He died comparatively unknown, as the world's pioneers ever have, but he has left a record of deeds that will carry his name far down into the coming centuries. An outline sketch of his life at present will assist in future and more thorough studies of this very remarkable man and his work.

James Edward Turner was born in Bath, Maine, October 5, 1822. His father was one of the first settlers of that city, and was a successful farmer and ship-builder all his life. His mother was born in Ipswich, Massachusetts, her parents having emigrated from England in 1800. His early life was spent at home, assisting his father in the ship-yard and attending school and the village academy, where he was noted as a very active, proficient scholar, standing at the head of his class. He prepared for college at home, and then gave up the plan of a classical education, and began the study of medicine with a neighboring physician. After attending two courses of lectures in Philadelphia he was licensed to practice by the Maine Medical Society. Later, he opened an office at Trenton, New Jersey, and two years later gave up the general practice and entered upon his life work. During his student life and after he began to practice medicine he had to take care of an inebriate uncle who was a dypsomaniac at intervals of several months. This uncle insisted on having his nephew with him on every drink paroxysm. Out of this experience came the idea of an inebriate asylum, where such cases could be *secluded, housed, and treated*. This idea, wherever mentioned, at first was treated with derision and contempt. The effect of this was to rouse all his energies to a more careful study of this theory, creating a more emphatic conviction of its truthfulness. Finding no one in sympathy with him in this view, he determined to go abroad and present his ideas of an asylum before the leading medical men of the world.

In 1843, he landed in Glasgow, Scotland, and called on all the leading medical men of that city and Edinburgh, and

placed before them his ideas of disease and plans of an asylum. He probably made but little impression, as most of the medical men of that day drank more or less freely. But they were courteous, and showed him their hospitals and gave him many facts concerning such cases. From here he went to London and Paris, and beyond a few facts and a personal acquaintance with leading medical men and visits to many hospitals he seems to have accomplished but little. He spent two years visiting most of the asylums and hospitals of any note and discussing his views with the medical men connected with them. On his return in 1845, he began the first *collective investigation of facts ever made in this country*. A series of circular letters were addressed to physicians, clergymen, judges, and coroners soliciting facts in their experience upon the physical, mental, moral, social, criminal, and economic status of the inebriate. These circulars brought but few replies and excited but little interest. The following is his own statement of this work :

"During the first three years more than three thousand circulars sent to physicians elicited but one hundred and thirty-four replies ; more than seven hundred sent to the clergy, with but seventy-nine replies ; more than five hundred sent to judges, with but one hundred and seven replies ; while to the seventy-four circulars sent to coroners, there were sixty-four replies. The fourth year's labor in this special work brought a better return. Out of fifteen hundred circulars sent out, five hundred and sixty were answered, and every year thereafter there was an increased interest manifested by those addressed upon this subject."

The great enthusiasm and perseverance, which was a marked feature of his life, came out clearly in this work. The persistent inquiries which he made among those who might know facts concerning the inebriate were at last rewarded by a fund of accurate knowledge to sustain the theory of disease and the need of an asylum. He seems to have carried with him to Europe circular blanks, on which the various replies of medical and other men were recorded.

During this period, while sending circular letters, he seems to have spent his time in hospitals in New York and Philadelphia, making notes and observations and enlisting the sympathy of eminent men. Drs. Valentine Mott and John W. Francis, both very eminent physicians, and others, very warmly approved and indorsed his plan of an asylum and the theory of disease. Soon after his return from Europe, in 1845, they became interested in the work, and continued all their lives to be his warmest friends. In an address before a small parlor group of gentlemen, who met to talk over the scheme of an asylum, in the winter of 1847, Dr. Mott used the following language, which Dr. Turner quoted ever after with intense satisfaction: "In my professional life of over forty years, I have accumulated facts enough to prove the disease of inebriety beyond all doubt,—a disease affecting every membrane, tissue, and nerve of the human mechanism, producing in its victim a compound fracture from the crown of his head to the sole of his feet, as well as mental and moral dislocation. The treatment of such a malady with success must come from the legal splint and bandage applied to the sick man, to hold him in place during the process of healing, or the treatment fails and the patient dies."

While a few men became interested, the opposition to the idea of disease and hospital treatment was very bitter, especially among the religious and secular press, and but few men were bold enough to sustain or urge this view. In 1848, Dr. Turner made a second voyage to Europe. He carried letters from the Russian minister at New York to the authorities at St. Petersburg, and was given every facility to study the drink question in hospitals and police courts of St. Petersburg and Moscow.

He then traveled in Germany, Italy, and France, and came home in 1849. He seems to have had an idea that he could get a personal endorsement and full recognition of his theory in the leading capitals of Europe, and with this he could command patronage and attention in this country.

Beyond this, he made a study of all the asylums and hospitals, and of the methods of treatment and views of prison managers bearing on the drink question. His success was apparently no greater than on his former visit. He was always reticent as to exact results of these visits, but talked freely of the warm endorsement his plans received from leading medical men, and their courtesy in giving him all facilities to study hospital plans and methods. It was evident he could get no open or public endorsement, but the private sympathy he enlisted was a great stimulus to him in all after life.

Up to 1850 he had spent about six years in active efforts to create a public sentiment in favor of the hospital treatment of inebriety. This was done in the most elaborate scientific way. It is doubtful if any new truth was ever pressed on the minds of the professional world by means and methods so exact and above all possible suspicion of personal motives.

Dr. Turner's life work had barely begun; the little he had accomplished and stern opposition he had encountered would have, to most men, been evidence of the impossibility of the work. But to him it only roused a greater enthusiasm and energy and positive conviction in ultimate success.

Although he had secured the sympathy and interest of many leading men nothing tangible had been accomplished. Finally he determined to go personally to all the leading men of the country and solicit them to subscribe for the stock of a company to build an inebriate asylum. The stock was fixed at ten dollars a share, and the subscriptions were made on the condition that fifty thousand dollars should be subscribed to its capital stock and that the legislature should grant it a charter. Several subscriptions were received to be paid when the building should be finished, and when the asylum should have twenty patients under treatment, and when the first patient should be discharged cured and remained so for one year. These special contracts show the doubt and uncertainty with which this scheme was regarded.

Three thousand persons were solicited to subscribe, and only sixty-six were found willing to aid it.

An application was drawn up asking the legislature of New York to charter an inebriate asylum in 1852. This was laid on the table as a mere scheme. The next year, 1853, it was pressed at both the regular and extra sessions of the legislature, and was referred to a committee, which gave it a hearing, but referred it to the next legislature. In 1854 a charter was granted to a corporation called the *United States Inebriate Asylum*. Dr. Turner spent his entire time soliciting the members of the legislature and their constituents to grant this charter. When the legislature adjourned he went to the constituents of those members who had been most violent in their opposition, and by personal influence with the leading men sought to neutralize and overcome this opposition. The influential friends of all the leading members were visited and enlisted in the work as far as possible, and each member was seen and made acquainted with all the plans and its needs. This most elaborate plan of creating interest in the charter was met by the most stubborn opposition from clergy, medical men, and others, who pronounced the whole scheme a fraud and disgrace to the intelligence of the country. Finally, the chairman of the legislative committee sent word to Dr. Turner that he would report and urge the passage of a charter for an asylum, and a permanent organization should be made. One hundred and forty persons who had expressed an interest in the work were solicited to allow their names to go on the board of directors, and only twenty had courage enough to consent. A meeting was appointed, and at two P. M., on the fifteenth of May, 1854, in the *Tract Society Building*, on *Nassau Street*, in New York city, eleven men met and adopted articles of incorporation and elected officers of the *United States Inebriate Asylum*, the first ever organized. The rain poured in torrents, and the busy world of New York went on as usual, all unconscious of the vast interests and consequences that were to grow out of that little gather-

ing. It was like the planting of a flag on the hill tops of science half a century ahead of the march of public opinion, or the opening of a door revealing a new era in the progress of humanitarian science.

A few weeks later the charter was granted, and Dr. Turner, who was made treasurer, opened books to receive subscriptions to the capital stock of the company. The summer following this meeting Dr. Turner spent as before, traveling and soliciting subscriptions to the stock. In the second meeting of the board of directors, on Dec. 20, 1854, Dr. Turner delivered an address, which was published and circulated very extensively. The title was *The History and Pathology of Inebriety*. In many respects it was a very notable paper. His description of dypsomania and the allied diseases of inebriety, and his distinction of the insanity of inebriety (the latter being the first reference to this form of inebriety), all indicated a very clear conception of the subject. This was the second of his published papers; the first was a two-page tract, on the morbid anatomy and pathology, published in 1848, of only historic interest at this time.

The next year, 1855, the board of directors issued an appeal to the public to subscribe to the capital stock, and the first public meeting was held to rouse public sympathy. This meeting was very extensively advertised, and all the leading clergymen were requested to read notices of it from their pulpits. Many of them declined, and some of the religious and temperance papers offered serious opposition. Most excellent addresses were made by the Rev. Dr. Bellows and Prof. Hitchcock to a small gathering, which were published in the daily papers, and created a very strong impression. The next year was spent in visiting all parts of the country soliciting subscriptions from eminent men and creating public sentiment. A strong impression prevailed among some of the friends that if it were made a State asylum it would grow much faster. Hence, in 1857, the legislature changed the name of the corporation to the *New York State Inebriate Asylum*. Then it was announced that the

town that would give the most eligible site for the location of the building would have the asylum. The city of Binghamton having offered the finest location, it was accordingly located there.

It was early apparent to Dr. Turner that the subscriptions of ten dollars to the capital stock was too slow a process for raising the money to build an asylum. So, in 1857, he presented a monster petition to the legislature to give one-tenth of the excise money for the purpose of building and maintaining the asylum. This petition found only one adherent in the legislature of that year. This petition he circulated in every section of the State personally, and during three years he obtained over ten thousand names to it, and urged its recognition by the legislature for 1857-58, and finally, in 1859, it became a law. Thus, night and day, year after year, he solicited subscriptions and begged names on the petition, and argued the reality of the disease of inebriety and the need of asylums with all classes in all sections. In May, 1858, the gift of two hundred and fifty acres of land as a building site was accepted by the board of directors from the city of Binghamton. The ground was broken for a building the next month, in June, and the corner-stone was laid on the twenty-fourth of September, the same year, 1858. This was an event of very significant interest, and although the rain poured in torrents, yet the programme was carried out minutely and with great enthusiasm. The Masons laid the corner-stone, and the addresses by Dr. John W. Francis of New York, Rev. Dr. Bellows, Edward Everett, Daniel S. Dickinson, and the president, Hon. B. F. Butler, and a poem by Alfred B. Street, were all great efforts, fully equal to the occasion. They all, in a most pleasing way, recognized the genius and enthusiasm of Dr. Turner, as the great founder and originator of the plan of hospital treatment. After referring to the great novelty of this event, they all dropped into a prophetic strain and predicted that the asylum and Dr. Turner's name and work would go far down into the future, and that this was but the forerunner of many similar

places that would surely follow, in obedience to a necessity which would be recognized everywhere. These addresses were published in a bound volume, and show, in a most significant way, that the speakers had caught the real spirit of the event, and realized that beyond the asylum whose cornerstone they were laying opened up a new field for the salvation of the race, and, beyond the magnetism and energy of Dr. Turner, other men in other times would rise up and carry on the work here begun.

Dr. Valentine Mott, who was later the president of the asylum, secured, with Dr. Turner's aid, a petition to the legislature asking that an appropriation be made to sustain and build the asylum, signed by fifteen hundred physicians, comprising nearly all the eminent men of the State. It is doubtful if ever so general an appeal was made to the legislature by medical men before or since. Then Dr. Turner sent circular letters to all the superintendents of insane asylums in this country, and to all the leading specialists of Europe, soliciting their opinions and advice. The responses were numerous and almost unanimous in warm sympathy for the work. Dr. Gray of Utica was the only one who responded expressing doubts and fear of endorsement. Editors of medical journals in both this country and Europe advocated the need of an asylum with great urgency. The legislature, although they had passed a law appropriating one-tenth of the license fund, were dominated by an ultra temperance and religious element, and so found objections to the enactment of the law. Finally, the petitions grew to such a magnitude that almost fifty per cent. of the property of the State was represented by the petitioners. Dr. Turner traveled night and day begging subscriptions and material for building and the names of leading men on the petition, which at length contained the names of sixty leading judges of the State, six hundred lawyers, two thousand physicians, five thousand leading business men and farmers. This was also a phenomenal petition, which attracted great attention at the time.

Dr. Turner was the active spirit and chief leader of the entire movement. He drew the plans of the building at Binghamton with the aid of a local carpenter, who acted as builder under his care, and purchased or begged all the material, employing and paying all the help, and actively superintending every detail with the aid of this carpenter (who has now become famous as a builder). The plan of the building was Dr. Turner's own creation, and grew out of his studies of European asylums, and in many respects is one of the most beautiful architectural buildings in the country. The president and board of directors were active professional and business men, who, finding Dr. Turner so very energetic and clear as to the details of building and the methods of organization, left the entire business in his hands, and, beyond advice and consultation and monthly meetings of the board, did but little except to write letters and solicit aid from personal friends.

The first president of the board of directors was John D. Wright, elected in 1854. Three years later he resigned, on removal from New York, and Hon. B. F. Butler, a noted lawyer and attorney-general under President Jackson, and secretary of war in Van Buren's administration, succeeded him. He died in 1858, and Dr. John W. Francis was elected to fill his place. He died a few weeks after his election, and Chancellor Walworth succeeded him. He resigned from ill health in 1861, and Dr. Valentine Mott of New York followed him as president. In 1865 he died, and Dr. Willard Parker was elected to fill his place. All these men except Dr. Parker had been on the board of directors and actively acquainted with all the work and the spirit of its founder. They had subscribed liberally to the funds, and three of them left large legacies to the asylum, provisionally, which were never received, owing to the failure of the board to comply with the bequests.

The building of the asylum had progressed so far that it was deemed wise to open it for patients in June, 1864. A number of inebriates were admitted, and Dr. Turner, who

had been made superintendent, continued in charge. The same year a fire occurred in the north part of the building, which did a great deal of damage.

While actively engaged in building the asylum and traveling to all parts of the State collecting moneys and influencing the legislature at Albany, Dr. Turner found time to marry. In October, 1862, he married Miss Gertrude, the daughter of Col. George Middlebrook, one of the oldest and most respected settlers of Wilton, Conn. His life work was at its height. He had created public sentiment, roused an interest in inebriate asylums all over the world, founded the first asylum, begged the money and material to build it. The work was partially completed, the State was aiding in the work by appropriating a part of the excise fund. One wing of the building was completed and opened for patients. The most active interest was manifested all over the State in the work. Dr. Turner was most enthusiastically praised, and recognized as the great presiding genius and founder of this, the latest, most promising charity of the world. The former sharp opposition had grown insignificant and unworthy of notice. Dr. Turner was both the founder and superintendent and manager, and the work went on with an ever-widening interest and expectation. Although he had given over a quarter of a century of continuous enthusiastic work, the success at this point was phenomenal. Pioneers rarely see the result of their labors. The great sowers of truth rarely ever see the reapers or harvest.

The board of directors were in full sympathy and worked unitedly with him in all directions, and his plans for the future of the asylum and its prosperity were far-reaching and broad. A palace building, heavily endowed and complete in every respect, with room for rich and poor, with workshops, farm labor, and every appliance which science has only recently showed to be essential in the treatment. His ideal asylum, as projected at Binghamton, was at least a century ahead of the times, and is not yet understood. It was practically a workhouse hospital on a military basis, restraint and

control being the corner-stone. Each case was regarded as a suicidal mania needing positive restraint and constant care and watching. No one was received for less than one year, and no one was trusted on his honor or word to recover. Extensive Turkish and Russian baths were provided, and each case was required to take two baths a week, and spend so many hours in the gymnasium or in the workshop. Elaborate rules were laid down regulating all the conduct and care of the patient, and a most thorough system of medical and military treatment enforced.

There is not an institution in the world to-day with so complete a system of treatment, and every practical man has recognized this almost wonderful conception of the means and measures necessary for the cure of these cases. Dr. Turner's plan of an asylum and its management has never been fully understood, and should form the subject of a future chapter.

In this brief sketch we have outlined the beginning and growth of the asylum at Binghamton, and the extraordinary energy and enthusiasm of Dr. Turner in creating public sentiment and building the asylum, and this brings us to the storm, region, which every great advance of truth has to encounter.

DR. RICHARDSON says that it constantly happens that persons die of diseases which have their origin solely in the drinking of alcohol, while the cause itself is never for a moment suspected. A man may be considered by his friends and neighbors, as well as by himself, to be a sober and temperate man. He may say quite truthfully that he was never tipsy in the whole course of his life; and yet it is quite possible that such a man may die of disease caused by the alcohol he has taken, and no other cause whatever. This is one of the dreadful evils of alcohol, that it kills insidiously, as if it were doing no harm, or if it were doing good while it is destroying life.

INEBRIETY AND CRIME.

BY PROF. R. J. KINKADE, A.B., M.D., DUBLIN.

Professor Medical Jurisprudence, Queen's College, Galway, Medical officer in Her Majesty's Prison, Galway, etc., etc.

Inebriety, insanity, and crime are unholy trinity, intimately, inseparably bound together as mutual cause and effect. Drunkenness produces insanity, insanity often begets drunkenness, crime is frequently the product of both.

The direct connection between inebriety, insanity, and crime is universally recognized; their indirect relationship is not so clearly perceived. But neither the cost to the community which follows as a natural consequence nor the danger to person and property, the intolerable anxiety, the risk of life, the absolute ruin consequent on the want of power to control the habitual drunkard, have attracted sufficient public attention; if they had, assuredly legislation so imperfect as that at present exists would not be tolerated. Nor has the effect on the race received due consideration. "The best and most prejudiced observers are agreed," writes Dr. Elisha Harris, "that the families of inebriates develop forms of nervous and brain disease which could only be referred to the habits of drinking in the parents."

Dr. Magnus Huss of Stockholm declares that drinking produced partial atrophy of the brain, which was handed down to the children. The brain was then too small for the bony case, and lunacy was the result. The same facts have been observed in lunatics of Massachusetts, Indiana, and France. Dr. Morel had observed the same results of diminished brains through several generations, leading to imbecility, homicidal insanity, idiocy, and final extinction. Posterity has done nothing for me; why should I care for posterity?

would seem to be the popular sentiment with regard to the greivous inheritance transmitted to the offspring by the inebriate and insane.

Nature, however, more provident than man, has decreed that both inebriety and insanity tend from degeneration to extinction ; so, that unless some vigorous healthy strain intervenes, mental decrepitude is followed by physical failurè, and then sterility terminates the family history.

It is impossible to define insanity ; certainly a definition has not yet been found which does not include some who are sane, and exclude others who are insane. It is not, however, attempting a definition to state that a person is insane who has lost that control over thought or action that we call will, or when the passions and emotions, instead of being the subjects, have become the sovereigns of the will, or when some dominant idea controls the reasoning faculties, obscures moral sense, and perverts the action of the will. Those, too, are insane who are led away by illusions, hallucinations, or delusions, for although sane people sometimes suffer from them, yet the sane man knows they are unreal, that is, he is aware that the figures he sees, the noises he hears, or the sensations he feels are the product of his own nervous action, and have no real existence, and therefore his conduct is not guided by them. The insane man, on the contrary, is convinced that they are real, and his thoughts and actions are governed by them.

In acute drunkenness, the passions and emotions are stimulated to excessive activity and the control of the will is weakened or abolished. In chronic or habitual inebriety there is, in addition, a dominant idea established, commonly expressed as a craving for stimulants, so powerful as to be practically irresistible ; the moral sense, also, is almost abolished. In delirium tremens and mania-a-potu, illusions, hallucinations, and delusions are added. That a drunken person is mad, that habitual inebriety is a condition of insanity, that more frequently than is generally supposed inebriety is the consequence of antecedent nervous disorder

either hereditary or acquired, that is, that habitual drunkenness is the product of disease, may appear startling statements, nevertheless they are true.

For the purpose of this memoir, mind may be regarded as a force, the product of nervous action and its elements, perception, intellect, emotions, and the will are dependent for their exercise on the healthy condition of the nervous tissue and of the blood, and are more or less prevented or disturbed in their action, singly or in combination, by morbid modifications of both. If we could imagine the entire body dissolved, with the exception of the blood vessels and nerves, we should see remaining a delicate, most beautiful lacework mould of brain and heart, of every limb and organ, for the arteries commencing at the heart divide and dwindle, getting more numerous and smaller, until they terminate in innumerable minute vessels of delicate texture, which ramify on the surface and penetrate the substance of every portion of the body; from these minute vessels commence the smallest veins which, as they join each other, increase in size, until they end in the large venous trunks which pour the blood back to the heart. To each and every one of these small vessels and all along their extent, fibers from the sympathetic are attached by which their action is regulated, and the circulation controlled. According as the sympathetic centers are stimulated or depressed, so the vessels are contracted or dilated, and the flow of blood within them accelerated or retarded. This action may be produced by nerve influence or the application to the centers of matter held in solution in the blood. Of the former we have an example in the phenomena of blushing under the influence of the emotion of shame, or pallor under the influence of fear — of the latter in the effects of alcohol. When alcohol is introduced into the system it causes dilatation of the capillaries; dilatation of these minute vessels means reduction of the resistance which the normal caliber offers to the passage of the blood. When resistance is reduced the heart acts more rapidly, but at first the heart is stimulated by

the alcohol so there is both increase of pace and power. Thus an increased amount of blood driven at a more rapid rate passes through the brain.

The normal quantity of blood circulating in the brain is estimated at from one-sixth to one-fifth of the entire amount in the body. It is therefore evident that mental processes must be seriously affected by alteration with circulation. After a time the primary stimulus of the heart passes off, its power is reduced, and there is a stasis of blood in the brain. In addition to the effects of altered circulation, the nerve centers are subjected to the action of the blood altered by the direct absorption into it of alcohol itself.

The action of alcohol on the mind depends upon the amount ingested, and is produced partly by alteration in the circulation and partly by the actual application to the nerve centers of the alcohol absorbed by the blood. At first, the effect is stimulating, starting all the mental faculties, but especially the emotional, into increased activity, giving rise to pleasurable feelings of exhilaration, making glad the heart of man. The consumption being continued, excitement increases; there is confusion of ideas, uncertainty of muscular motion, volitional control is weakened; reason, judgment, and memory become feeble, while the passions and emotions become dominant. The mind works automatically, according to the inherited disposition or the mode to which the nerve centers have grown by habit; and so, according to the nature or training of the man are exhibited generous impulses or brutal passions, imperturbable good temper, or intolerable irritability. The coward shows up more craven, the beggar more boastful, the cruel more merciless, the untruthful more false, the carnal more degraded.

The control of the will being overthrown, and excited passions and emotions being left masters of the mind, the man is mad, he is incapable of restraining his impulses of understanding, the nature and quality of his acts, of knowing that what he does is wrong. Finally the higher brain centers yield to the anæsthetic influence, and only those presiding

over the automatic functions of respiration and cardiac motion retain sufficient sensibility to carry on the operation of life, and the man lies an inert, insensible mass, dead drunk, dead to internal impressions, dead to external excitations; the only life left in him being just sufficient, and not always so, to preserve existence, until the poison shall be slowly eliminated.

So wonderful are the natural recuperative powers, that man generally recovers from the effects of a drunken debauch; but if these phenomena be frequently reproduced then grave functional or organic changes must ensue, resulting from irritation of tissue or altered nutrition of structure.

Prior to such structural changes, which we call organic disease, alteration of function arises.

One of the most common symptoms of excessive use of alcohol is what patients describe as a fluttering or sinking about the heart, and his physical sensations seem to be closely allied to physical craving, which is rated a craving so strong that it entirely dominates the will. The will itself being weakened, can neither control the craving nor restrain the actions necessary to its gratification; nay more, the dominant idea exerts such influence over the mind, and perverted reason adduces so many arguments in favor, urges so much in extenuation of the gratification desired, that neither self-respect, family affection, self-interest, nor any consideration of right or wrong, have the least weight in opposition; the unfortunate victim of alcohol will beg, borrow, or steal to obtain it.

One of the most curious features of the perversion of the moral portion of the mind is a total loss of any sense of truth or honor. Inebriates will steal stimulants and endeavor to cast the blame on others; they will buy spirits surreptitiously and persistently deny having done so. They develop a wonderful cunning in concealing their supplies, and will declare in the most solemn manner that they have none; affirm that they have not drunk a drop; nay, kneel down and invoke the Almighty's vengeance on their heads if they are

not telling the truth when denying having tasted stimulants, and this immediately after having taken it.

Independently of or associated with this moral perversion, other evidences of nerve failure appear. Sustained exertion, whether mental or physical, becomes irksome or impossible, emotional variability is marked; the inebriate is readily moved without any sufficient cause to tears, to gushes of affection or gusts of passion; muscular precision is affected, the tongue trembles, the hand shakes, there is a feeling of physical depression; sleep, at first unrefreshing, is followed by wakefulness. These symptoms are, for the time, relieved by renewed doses of alcohol, only to recur more markedly as its stimulating effect wears off, and there is soon added apprehension and excitement. Nothing is seen or heard, only an indefinite feeling of nervousness and fright supervenes; he does not care to be alone, yet is vaguely suspicious of those about him.

This state is one of apparent sanity, but really one of insanity, and is extremely dangerous, for, from the most trivial or without any apparent cause the sufferer is excited to ungovernable fury or acts of violence; yet, so variable, so short-lived are the emotions which sway him, that he may be immediately calmed down by a person who acts authoritatively, yet quietly, and in whom he has confidence. Delirium tremens and mania-a-potu, however, are marked phases of drink madness, in which acts of violence mainly arise from delusions or morbid nerve irritability; but long antecedent to their inception, and while the man is apparently sane, alcoholic abuse has so weakened the will and impaired the powers of reason, judgment, and memory, that there arises confusion and misinterpretation of sensori-motor impressions, so that an idea aroused by a sensori impression becomes dominant, takes command of the mind, and compels to motor acts.

A flood of light has been thrown on the subject by the phenomena of artificial hypnotism.

In this condition there is complete collapse of will-power for the time being; any idea suggested obtains an entire

command of the mind and muscular actions. The idea, which for a time dominates the mind and directs physical action, may be conveyed to the brain through any of the paths of sensation. Similarly with the man whose will is overcome by alcohol, a word, a gesture, a look, a touch, excite ideas which dominate his entire mind, rousing him with a marvelous celerity to fury, depressing to the depths of despair, filling him with friendship, love, scorn, sympathy, or grief.

The effects of intoxication arise partly from perverted mental action—real delusions of the mind, and partly from misinterpretation of sensori-motor impressions—illusions of the senses. Whether drunk, *pro hæc vice*, or an habitual inebriate, the victim is insane, even within legal limits.

From the foregoing account of its consequences, it is plain that the abuse will, or even the daily use of alcohol may, produce a diseased condition of what we call the mind; that is, in consequence of the brain centers growing to the mode in which they are used, alcoholic stimulation becomes a necessity so powerful that it cannot be resisted; but it by no means follows that inebriety is either solely, or even in the majority of instances, the result of the habitual use of alcohol. Granting that inebriety is often caused by the custom of drinking, the habit of excess is more frequently an effect than a cause of alcoholism. In fact, the aptitude for alcohol, the tendency to inebriety, the acquirement of habits of excess depend, in the majority of instances, on physical defects, either inherited or acquired. An unsound physiological state is antecedent to alcoholism, the latter being the product of the former.

The predisposition to drink implying a need in the system for stimulant may depend on hereditary neurotic influence, on nerve exhaustion from excessive prolonged mental or physical exertion, on disease, starvation, sexual excesses, unhealthy surroundings and unsanitary dwellings, depressing influences, sudden mental shock, prolonged emotional excitement. Indeed, if the causes of criminal tendencies and those of insanity, both exciting and predisposing,

be studied, it will be seen how closely they are allied with those of inebriety.

That intemperance leads to crime has become an almost proverbial expression. Judges declare, *ex cathedra*, that a very large percentage of crime is produced by intemperance. The masters of the unions, governors of prisons, superintendents of asylums, many members of the medical profession join with the *vox populi* in attributing both crime and insanity to inebriety. So clear and so direct seems to be the connection that abuse of alcohol is assumed to be the principal cause of criminal acts. That it is a cause the writer admits; that it is the principal cause he denies. Granting a direct connection between certain forms of crime and inebriety, yet it must not be overlooked that inebriety is itself the result of antecedent causes, leading up to both crime and insanity as well. Inebriety is usually an indication of an unbalanced nervous nature, of defective vitality. A successful criminal career, on the contrary, indicates rather both superabundant vitality and energy.

Take, for example, burglary. This crime requires a strong physique, a cool head, and a good judgment, backed by pluck. When he takes to drink the burglar's occupation is gone. There is, however, a distinct connection between intemperance and crimes of violence, as there is also between insanity and similar crimes. Thus, of 233 prisoners examined (by Dugdale), 49, or 23.03 per cent., belonged to a nervously disordered stock, or nearly one in every four. If we compare the crimes against property with those of impulse, placing arson among that category, we shall find that, of the former, there are 16.75 per cent. of neurotic stock, while of the latter there are 40.47 per cent.

Dr. Guy asserts that the ratio of insane to sane criminals is thirty-four times as great as the ratio of lunatics to the whole population of England. Or, if we take half the population to represent the adults which supply the convict prisons, we shall have the criminal lunatics in excess, in the high proportion of 17 to 1. As to intemperance, it was

found that 42.49 per cent. of the total number of criminals examined were of intemperate families, while 39.05 per cent. were habitual drunkards. With the House of Refuge boys the ratio rises to 51 per cent. of intemperate families, and 51 per cent. of habitual drunkards.

An idea may be formed (from the researches of Dugdale into the history of "the Jukes") of how great is the social damage done to the State by intemperance and insanity, with their concomitants, crime, pauperism, and incapacity for sustained exertion. Over a million and a quarter dollars of loss in seventy-five years, caused by a single family, without reckoning the cash paid for whisky, or taking into account the cost of the entailment of pauperism and crime of the survivors in succeeding generations, and the incurable diseases, idiocy, and insanity growing out of debauchery, and reaching farther than we can calculate! It is getting time to ask, Do our courts, our laws, our workhouses, and our prisons deal with this question?

The State acknowledges that crime should be prevented, and endeavors to do so by threats and by enforcing its threats on conviction. If personal suffering and loss of fortune be omitted from consideration, and the cost of criminal prosecutions and of the maintenance of convicts be alone taken into account, it would appear that, as a matter of economy, the State ought to prevent the production of inebriety, insanity, and insantly-disposed offspring. If to the cost of criminal proceedings be added the expenditure for the maintenance of those incapacitated from work through intemperance, insanity, or neurotic inheritance, of those thrown on the rates through such incapacity, or driven by it to a life of vice and crime, and the loss resulting from the non-performance of productive work, the sum total of cost would be found to exceed the revenue resulting from the duties on alcohol, and would furnish our legislators with a powerful stimulus to prevent the conditions which culminate in crime. But if we examine the action of the legislature in reference to inebriety, insanity, and their criminal consequences, we

are compelled to confess that, while it strives to deter by threats and punishment, it has done little to remove their predisposing causes, and absolutely nothing to prevent the perpetuation of crime by the inebriate and insane. Truly, we may exclaim, These things "thou oughtest to have done, and not have left the other undone."

Admitting freely that punishment may be effective in the case of healthy persons acquiring habits of intoxication, or in the case of those of an unstable nervous system, in whom the fear of imprisonment and the moral infamy connected therewith can act as aids to the will, and so enable them to exercise self-control, yet with those inebriates in whom the habit has become dominant, or in whom it depends on the antecedent causes before mentioned, punishment must always fail. No fine that can be imposed could equal the loss that inevitably follows the gratification of the drunkard's desires. No imprisonment can be as great a punishment or degradation as that entailed on the inebriate and insane by their own acts.

To the consequences of yielding to the dominant demon which possesses him, both to himself and family, the inebriate is always, the insane is sometimes, keenly alive. If, then, the greater fails, how can the lesser be expected to be effectual?

The method is radically wrong. It endeavors to cure a condition of disease by enforcing a degrading, depressing discipline, which, while supplying work so simple and mechanical as to be performed automatically, leaves the mind unoccupied, without one elevating or renovating influence, to dwell on its own morbid ideas and to note and magnify every physical sensation. Such treatment cannot be of the least use, because the failing must first and primarily be treated as a medical question before it is approached as a moral one; or, rather, the moral treatment (and, necessarily, the legal) must be accomplished through the channel of physical cure, as an antecedent and essential requisite.

In truth, the criminal law, in its treatment of both the

inebriate and insane, is unjust and exquisitely cruel. A man may, by the abuse of alcohol, either cultivated as a habit or resulting from physical disability, ruin himself and his family, become loathsome and repulsive to his neighbors, an object of terror to his friends, a dangerous criminal. Yet, if he commits no legal offence, the law cannot interfere. The liberty of the subject must be respected unless he is found drunk and disorderly or drunk and incapable in some public place.

That he is insane, with lucid, very short lucid intervals, is a fact; that he is a standing menace, a constant danger, to his unfortunate family is sad; that life is rendered a long, lingering torture to wife or children or father or mother may be deplorable. The law, like Gallio, cares for none of these things. No, the law looks calmly on, and declines to prevent an insane man committing crime. But when, in a paroxysm of insane fury, or when acting under the impulse of an insane delusion, he kills some one—his wife, for choice—then, having permitted the acquirement of the diseased condition, the consequence of which is crime, the law tries him for his life, putting the insane, the inebriate, and the sane criminal on the same basis.

The law, indeed, allows a plea of insanity to be received, provided that undoubted evidence be produced that the accused is of diseased mind. But this is not sufficient; for, although insane, he is held to be criminally responsible for his actions, unless it be also proved that, at the same time he committed the crime, he did not know the nature and quality of the act, or that the thing he did was wrong.

If he suffered from delusions, he is equally liable with a person of sound mind, unless the delusion be of such a nature as, if it had been true, would have justified his act. In the case of a drunkard, although undoubtedly insane at the time, the law holds that, as the insanity is the result of his own acts, it is no excuse.

This conclusion is illogical. It is also doubtful policy for the criminal law in such matters to set up a standard of

moral acts, to exempt from the consequences of his deeds the man whose insanity has resulted from his own acts — *e. g.*, over brain-work, political excitement, speculation on change, gambling, etc., and condemn the man who also has produced insanity by his own acts — *e. g.*, abuse of alcohol, opium, etc.

The judgment lately delivered by Mr. Justice Day deserves attention; for, although directly contrary to the hitherto received legal doctrine, it seems to be the logical outcome of the law as to the plea of insanity.

On Friday, the twenty-second of January, 1886, Joseph Barnes, fish-hawker, aged 41, was tried at Lancaster, before Mr. Justice Day, for the murder of his wife. In charging the jury, he is reported to have said that he could not follow the ruling of Mr. Justice Manisty, in *Reg. v. McGowan*, that a state of disease brought on by a person's own act — *e. g.*, delirium tremens brought on by excessive drinking, was no excuse for committing crime, unless the disease so produced were permanent. He could not agree to this. The question was, whether there were insanity or not. That it was quite immaterial whether it were caused by the person himself or by the vices of his ancestors, and that it was immaterial whether the insanity were permanent or temporary.

I have ruled that if a man were in such a state of intoxication that he did not know the nature of his act, or that his act was wrongful, his act would be excusable.

It may be urged as an objection, if a drunken person — more especially if a life has been taken — be held irresponsible, that a direct incentive would be given to malicious men to get drunk in order to murder with impunity; and it may be added with truth, that it is very frequently proved that alcohol is taken by murderers prior to, and as an aid to, the commission of the crime.

It is a singular but instructive fact, that the victims to drunken violence are usually those best loved when the criminal is sober. The testimony daily given in the courts by some half-killed wife or child is that, when sober, he was a kind husband or loving father.

Although the writer is of the opinion that capital punishment ought not to be inflicted in the case of the inebriate and insane, he does not consider that the drunkard ought to be beyond the pale of punishment. It would be intolerable that a man should be permitted to render himself a source of danger and terror to the community, or to inflict injury, or to take life with impunity. But he also holds that it is unjust to permit a man to make himself mad, and then punish him for the acts that are occasioned by insanity.

If, through cupidity or carelessness, the owner of a factory works a defective boiler, knowing it to be unsound, if that boiler bursts, and one or more of his employees are killed by the explosion, the owner is justly held responsible, not alone in pecuniary damages, but for such criminal negligence as may amount to manslaughter. Similarly healthy men, knowing that dangerous—nay, fatal, explosion of passions frequently follow excess in drink, should also be held responsible for criminal negligence.

But the case is very different when dealing with habitual drunkards. In them the brain functions are perverted; punishment is powerless. In them drunkenness is a disease; disease can neither be deterred nor cured by punishment. Experience proves this to be true. Considering the cost in money, in lives, in human suffering, in the deterioration of the race, is it not time to try whether more good may not be effected by adopting the old maxim, "Prevention is better than cure"? To provide proper preventive methods, the causes, both immediate and predisposing, producing the effects to be prevented, must be ascertained.

At the risk of repetition, it is well to state the principal predisposing causes:

I. Inherited tendencies.—The result of vicious habits, physical depression, neurotic constitution, or actual morbid defects in the parents.

II. In the young.—Always bearing in mind that heredity is affected, for better or worse, by the environment, physical disabilities produce arrest of development and of that

orderly growth which is essential to a full and vigorous discharge of the bodily and mental functions. As the mind depends on the development of the brain and the latter's ready response to the sensori-motor impressions, as its functional activity is the resultant of habits—*e. g.*, its nerve centers growing to the mode in which they are used—and of molecular changes depending upon nutrition, circulation and purity of blood, so physical disabilities in time produce "a fitful character, partaking of the defects of the constitutional temperament, which, because it is temperamental, dominates the habits of thought, of action, and sensation, and gives to the moral nature a vacillating form, identical to its own spasmodic development."

III.—In the adult.—Over-work, mental worry, unsanitary surroundings, improper and deficient food and clothing, prolonged or too frequently repeated emotional excitement, sexual excesses, or acquired disease, may and often do produce such conditions of nerve exhaustion and irritation, such defects of nutrition, that continuous bodily or mental work becomes irksome or impossible, that a demand for stimulants to produce sleep or spur the jaded system springs up as mental alienation comes on. Hence the histories, so frequently repeated, of steady, sober men suddenly breaking out into debauchery, sinking into sloth, or passing into an asylum.

To combat the moral and social disasters arising from inebriety, there are two methods—the voluntary and the legal. The voluntary seeks to prevent and reclaim, by inducing the sober and the inebriate to take a pledge to abstain from all alcoholic drinks; it also endeavors to induce the legislature to give power to prohibit opening of public houses, and to close those at present existing if the majority of the inhabitants of a district shall so decide.

Granting that total abstinence for robust healthy persons is a good thing, that for those with a tendency to excess it is essential, that for the inebriate there is no middle course, he must either abstain altogether or drink to excess, yet there are most serious objections to it as a universal panacea.

It is not needed to keep the vast majority of the population sober—they are so without being teetotallers—it is powerless as a punishment in the most urgent cases; and necessarily so far it depends for success on the will, and power of self-restraint of the subject; that is, on just those properties of the mind that are weakest. It assumes that inebriates who have not will power enough to keep sober either from sense of right or fear of consequences will be able to do so by taking a solemn pledge. "If a vow once taken," as Beale remarks, "was certain not to be broken, the conferring and diffusion of goodness would be easy indeed." But the breaking of a solemn vow does not leave the man as it found him; he is lowered and degraded, and his moral sense has received a shock from which it will not easily recover.

The field for total abstinence is, however, a large one, and the writer ventures to express the opinion that if it was urged as a means of physical cure, and not so much as a moral remedy, it would be more efficacious. Whatever is physiologically right is morally right, and the converse is no less true, that whatever is physiologically unsound is morally unsound. Alcohol produces a condition of physiological unsoundness; if that condition be cured the moral sense of the sin and shame of drunkenness will awake and strengthen the resolution to abstain; before this has been affected, acting on the moral sense is only placing a destructive weight on an already morbidly enfebled mind.

Voluntary seclusion in a retreat is doubtless a step in the right direction, but imperfect in that it is voluntary and can only be carried out with the consent and at the request of the inebriate. It is further defective because the expense places it beyond the reach of the poorer classes. It has however this great advantage over total abstinence, pure and simple, that it removes the patient from alcohol and breaks up the old environment.

A most marked effect on the physical career and mental habits is produced by the environment. If it remains permanent improvement can hardly be hoped for, because hered-

itary tendencies become accentuated and acquired disabilities exaggerated. A change in the environment, however, produces a change in the career, and in time an actual change in the character of the individual. In fact, the environment furnishes the elements of mental nutrition, and hence largely determines the mental, moral, and physical growth.

Certain acts of Parliament, though not adopted with the direct object of preventing the tendency towards alcoholic abuse, have a very important influence on both inebriety and crime, partly by removing the predisposing causes, and partly by changing the environment.

Such are the various factory acts, and those giving power to local bodies, to break up unsanitary areas, to close unhealthy houses, to provide sewerage, pure water and ventilation, to erect artisans' and laborers' dwellings, and to open up air spaces in towns, etc.

More direct, but quite as efficacious if judiciously exercised, are the education of the reformatory and the industrial schools acts.

But to be of service education must be real. It must be of such a nature as to develop the faculties and train the intellect to think while the mind is compelled to cultivate the habit of acquiring facts. The educational methods of the present day tend more towards turning the mind into a storehouse of useful or ornamental information; towards developing the faculty of memory alone at the expense of observation, reason, and judgment. The mind can only be maintained intact by its own energy, no mere movement from without will suffice to infuse it with life or enable it to withstand the forces that strive for its destruction. Just as the presence of somatic life is the safeguard of interstitial life in the physical organism, so energy, purpose of soul, is the only sufficient preservative of the integrity of mind.

These measures, the more completely they are carried out, will do much to prevent that want of full development which predisposes to inebriety, and by cultivating a taste for, as well as securing, an organization and force capable of steady work,

will provide the best safeguard against unbridled indulgence of the passions, which culminate in inebriety, insanity, and crime.

Imprisonment is detrimental to both the inebriate and insane. The association, the routine discipline, the purely mechanical work, the solitude, are all physically depressing; the stigma and taint of crime connected therewith injuriously react on the moral sense. Moreover, it generally comes too late. It is applied as a consequence of illegal acts, or it is not applicable so long as the inebriate drinks in his own house, or is kindly brought home by friends.

A very slight experience of the utter uselessness of imprisonment for purposes of reform, and the positive aggravation of his condition caused thereby, soon satisfy the inebriate's family that punishment is no remedy. Instead of the inebriate being practically outside the pale of the law, and at liberty to render himself a criminal lunatic, power should be given to place him "*noletis volens*" under suitable restraint. "That men can't be made sober by act of Parliament" has become an almost proverbial saying; but though true in one respect it is incorrect in another. No act of Parliament can keep alcohol from men, but it is perfectly practicable to keep the inebriates from alcohol.

Recognizing that alcoholism is a disease, either inherited or acquired, that it is one that private treatment fails to cure, that its consequences extend far beyond injury to the individual, and that it entails grievous damage, both pecuniary and social, to the State, it is obvious that it is the interest of the State to cure the disease and to prevent the committal of criminal offences. The only way in which this can be effectually done is by secluding habitual inebriates.

The State ought to establish institutions for the confinement of inebriates and for their intelligent treatment; for, as their physiological condition is unsound, and hence their moral state rotten, so their moral condition cannot be improved or brought up to a healthy level till their physiological status shall have been restored. Not only should there

be power to confine inebriates, with or without their own consent, in such State institutions, or in private retreats licensed by and under State supervision, but the relatives or guardians of both inebriates and insane should be held responsible for damage done by them while under their care or control. As long as no responsibility attaches to the parents or relatives of such persons, so long, from mistaken affection or fear of compromising the respectability of the family, will they hesitate to place them under proper restraint and treatment, unless absolutely compelled to do so by fear of personal injury, or until some crime has been committed. But, if held responsible for their acts, self-interest would compel them to act promptly, to the great benefit of society and of the afflicted individuals themselves; for the earlier the treatment is commenced the more certain is the cure of the disease and the greater the probability of the cure being permanent.

Treatment of bodily disease and mental culture, not imprisonment or neglect, is what is essential for both the inebriate and insane. The nerve centers growing to the mode in which they are used, any treatment, to be effective, must not alone restore bodily function and keep the inebriate from alcohol until his physical health shall have been so far re-established that the depression demanding it shall have departed, but it must provide such mental training that the power of the will shall be restored, the moral sense renewed in vigor, habits of self-denial formed, and the entire mind roused to activity and interest in the work.

Work is not an education, in the proper sense, unless it enlists the interest of the mind, awakens and keeps alive the attention while it is being performed, and occupies both the physical and mental powers cheerfully and earnestly to accomplish a determined result.

While believing firmly that there is a large field in which an enormous amount of work may be and is daily being done by the total abstinence movement, in preventing drunken habits being acquired by those on the verge of the decline,

the writer is convinced once the habit is acquired, and in those cases where there exist strong antecedent predisposing causes compelling to inebriety, that the only hope of real reform and prevention of crime is to be found in forced seclusion and treatment, not in punishment with the taint of criminality for what is really a disease. Until the law, recognizing that it has to deal with a diseased condition, removes the inebriate from alcohol and his old surroundings and provides for his cure, inebriety, insanity, and crime, mutually reproducing each other, will continue their destructive career, to the detriment of the State and suffering of the subject.

COCAINE EPILEPSY. — A morphia habitue, æt. 37 years, endeavored to break himself of his habit. To do this he began the use of cocaine, which he took in rapidly-increasing doses, without, at the same time, diminishing the quantity of morphia. Finally he took two grammes of morphia and eight grammes of cocaine daily. The latter drug was not well borne at first, but he soon became used to it. Six months after beginning the use of the cocaine in conjunction with the morphia his memory began to fail, and maniacal fits set in. In one of these he fell down unconscious, and remained in a tetanic condition for five minutes, and then began to fight and kick about the floor. His eyes were opened and looked directly forward; he made efforts to bite others; perspiration was profuse. These attacks repeated themselves sometimes as often as two in a day. Some lasted for ten minutes, others for over an hour. After an attack he slept for from eight to ten hours. After fruitless attempts to wean him from his habits he was placed in an asylum, where he was deprived entirely of the use of the drugs which he had so abused. In three months' time he was discharged cured. On his return home he again began the use of the cocaine. The fits returned; in one of these he died. — *Deutsche Med. Wochenschr., Hahnemannian Monthly.*

NATURE AND CONSEQUENCES OF INEBRIETY.

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

When a considerable portion of alcohol is consumed at one time by a person perfectly sober, certain characteristic appearances will usually be observed to follow immediately.

There is a decided shock throughout the whole system. The face will often be very pale. This will be more noticeable in nervous and sensitive persons. The muscles of the face will be drawn, and fixed in position. The eyes will be bright and glittering, while their movements will be quick and constrained. The mouth will be firmly shut; but when an effort is made to speak, the lips will be spasmodically affected. The breath will be short and panting, the pulse accelerated, and the articulation interrupted and difficult. The entire body will be affected by a trembling movement, and a sensation of shivering. In fact, there will be a brief nervous chill. All these features appear at one and the same time. The period of their duration is very short, however. After the lapse of five or ten minutes at most, the second stage, characteristic of heavy drinking, will come into view. Movements will appear unnatural, and very quickly will seem absolutely distorted and staggering. Intellectual activity, also, will speedily appear both irregular and unsteady. The voice very likely will be elevated, and an incessant chatter of speech, laden with absurd boasting, will din the ear. The brim of the hat will perhaps be thrown upward, or the hat itself placed upon the side of the head, or thrown backward, revealing the noble forehead. Indeed, the conditions are now all present for a full display of aggressive vulgarity and foolishness.

The ruffianly instincts being aroused by alcohol, the garb of the ruffian is put on. For truly it is a fact, that when a man, being sober himself, arranges his attire like that of a

rowdy, as thrusting his pantaloons inside his boot tops, turning upward the brim of his hat both in front and behind, and tying a handkerchief loosely about his neck — he will begin to feel like a rowdy, and to act like one. He will, perchance, stick his fists down deep into his pockets, while, possibly, he pours forth profanity and tobacco juice in equal volumes.

This description, of course, is not of universal application. In different persons there are considerable modifications in these particulars, owing partly to peculiarities of individual constitutions, and partly to the kind of alcohol contained in the liquor that has been taken. But, let the constitutional disposition be what it may, the full drink of alcoholic liquor will induce displays in movement, mind, and morals, that are unworthy of the individual; and, the liquor being the same, these displays will, in a given individual, always be practically the same.

Differences in the kind of alcohol will doubtless occasion considerable difference in the conduct of those who indulge in the alcoholic habit. Dr. Norman Kerr, in his very able work on Inebriety, says: "All alcohols are poisonous. The least poisonous are the alcohols of wine. More poisonous are the alcohols of beet root. Still more deadly are the alcohols of corn (all kinds of grain); and the most potent and pestiferous are the alcohols from potatoes. Cider inebriates are usually more heavy and stupid than alert and offensive. Amylic alcohol is nearly four times as poisonous as ethylic." Amylic alcohol quickly brings on muscular tremors and delirium tremens — whereas the ethylic does not readily produce such effects, if it does at all. It is therefore perceived that while there is a sameness in the physiognomy of conduct under the influence of alcohol, there is likewise a certain difference in details, in accordance with the particular kind of alcohol that is taken. A drunken man will not be of so unruly and satanic temper after partaking of wine, or of stronger drink derived from wine, as he will after partaking of beet or potato whisky; and he will come out of his drunken state more quickly, and with less distress, in the former than in the latter contingency.

There are many persons who drink alcoholic liquors without any driving impulse to intoxication. They drink, not for intoxication itself, but for intoxication as a means to some other — some ulterior object. It is a common belief that alcohol adds to the natural powers of the organism; and hence, alcohol is frequently taken in order that, through an intensified capacity, ends may be secured that would otherwise be impossible. In this respect, the occasional drunkard is to be distinguished from the spasmodic or impulsive drunkard, whose whole aim is to secure intoxication for its own sake, and also to secure it quickly and completely.

Drinking from association. — There are many persons who drink alcoholic liquors only as accidental contingencies and opportunities offer. They do not purposely seek the means of intoxication. The motives which actuate them in drinking are wholly derived from circumstances external to themselves and which are truly fortuitous. Yet the occasional drinker cannot be said to be devoid of even strong motives for his indulgence. Sometimes a man will drink alcoholic liquor simply because he happens to be in company with others who are drinking. The natural, but occasionally idle sympathy, which is so apt to bind men together in a common course of conduct, is sufficiently powerful to lead to a community of action, even in the matter of drinking liquors. Such cause for drinking may be operative on public days, or in companies that are engaged in enterprises wherein there is unity of feeling and purpose — and of course good fellowship — as, at log-rollings, barn-raising, and the like.

Drinking from this cause is not apt to lead to very serious consequences. It is true, however, that if there is any considerable constitutional irritability of nerve in an individual, even an accidental indulgence may ignite a flame that can never be extinguished; and in this way the occasional drinker may become an habitual drunkard.

The pleasurable sensations of early drunkenness are not so pronounced in the occasional drinker as they are apt to

be in the spasmodic inebriate. This might be expected when it is remembered that an exquisite sense of mental and physical delight is one of the ruling inducements to frequent intoxication — that is, to intoxication for its own sake. In a stolid mind, rage and hate are not unlikely to be aroused by alcohol, instead of generosity and good temper.

Misfortunes, either domestic or in business, often lead to drinking. The benumbing influence of the alcoholic potion renders callous the distressed mind and quivering nerve. It is not always for excitement that alcohol is taken into the system. It is sometimes taken to secure repose; and this repose is simply paralysis, more or less complete. In the paralysis of sensation, pain is abated; in the paralysis of the co-ordinating nerve centers, moral and sympathetic afflictions no longer harass the mind. Alcohol is a complete remedy; for the paralysis of alcohol extends throughout the whole body. It is seen in the motor system through the staggering gait, the imperfect articulations, the distorted countenance. It is perceived in the organs of sensation through the general numbness, and the absence of the sense of feeling. The intellectual powers exhibit the paralyzing properties of alcohol, through confusion of mind, distortions in ideas, and in the irregular operations of the imagination. The same paralysis is seen in the moral sense through the loss of that sense, and the inflow of untruthfulness, deceit, and prevarication.

A death in the family is followed sometimes by deep potations on the part of the survivors, with the object of inducing a forgetfulness or partial unconsciousness of trouble. Yet the time thus consumed is expended in vain. It cannot serve to shorten the period which truly is requisite to assuage the intensity of sorrow. In truth, when this drunkenness has passed away, the poisoned nerves are in a pitiable state of excitement and tremor, much greater than oppressed them in the first place. With renewed distress and intensified grief, the mind is compelled to await all the longer for consolation and repose. It is in this condition of mind and

nerve — after drinking is abated — when sometimes suicide is invoked to vanquish once for all the combined horrors of grief and intemperance.

Alcohol invoked to increase the power of physical endurance. — The casual drinker takes alcoholic liquors often times with the view of increasing the powers of bodily endurance. The acuteness of the feelings being subdued by the nervous torpor superinduced by alcohol, the sensations of cold and heat are not keenly presented to the mind. Yet this fact does not give the physical organism any immunity from the extreme effects of changes in the temperature. Experience has shown that persons exposed to cold, wet, and fatigue, sustain themselves much better without alcohol than with it. The truth is, that alcohol reduces the temperature of the human body, as the thermometer fully demonstrates. Therefore, the drunken man perishes from cold more readily than the sober man. For, not only does alcohol obstruct oxygen, the source of heat, from the blood, and thus reduce the fires of ordinary physiological combustion, but it benumbs and paralyzes certain nerve centers, whose office it is to preside over the regulation of animal heat. As a remedy in violent fevers, alcohol is extensively used for reducing the dangerous heat of the blood. As a trickster and fraud nothing can exceed alcohol, if indeed, it can be equaled. He who relies upon alcohol to warm him when cold is cheated and deceived.

Alcohol as sustaining muscular efficiency. — Men frequently take ardent spirits with the notion that it will increase the bodily strength. The professional athlete, however, who understands the subject, will carefully avoid alcohol when upon the verge of action. There are several sound reasons for this. (a) The benumbing effect of alcohol upon the nervous powers is universal. It includes the muscular system in common with all others. The readiness of muscular contraction — its exact concord of action throughout the whole of its substance, and the completeness of its movement, all depend upon the natural strength, quickness, and sharpness of the

nervous influence which is brought into play. But this influence is dwarfed and minimized by the paralyzing impression of alcohol. (b) The heart in intoxication is thrown into increased action to the extent that the additional duties which very great muscular effort would impose upon it, are too great for its capacity. (c) The lungs refuse the breath requisite to extraordinary muscular effort, when a man is drunk; for in drunkenness they have a double duty to perform. They are busy, not only in exhaling the alcoholic poison, but also in disposing of the deleterious material ordinarily thrown out by them. Consequently, when uncommon muscular effort throws upon them an excessive volume of blood, they are unable properly to dispose of it. The man speedily gets out of breath, and is compelled to moderate his efforts.

The base ball player is sadly deficient when under the influence of liquor. He cannot judge correctly with respect to distance, nor tell the true direction or velocity of a flying ball. He can neither catch nor throw with his usual accuracy. His eyes are wanting in alertness of action, if not in correctness of vision. His movements and his judgment are equally at fault. The disabling powers of the alcoholic poison are plainly displayed in the destruction of the normal relationship which should exist between the great divisions of human nature — mind and body. The perceptive faculties, as observed through the operations of common sensation and the sense of sight, are benumbed, while the muscular alacrity answering the calls of volition and judgment is absent. In brief, the athlete has not voluntary control of his muscular powers when under the dominion of alcohol, for paralysis, in whatever degree it exists, withdraws function in a corresponding degree from volition. Yet alcohol is wonderfully complicated as well as positive in its activities — volition itself being dull and paralyzed, as well as the muscular system.

Similar considerations are applicable to almost all athletic or muscular exercises. The swordsman and the pugilist

must possess not only a steady but a correct nerve. It is indispensable to success that the eye and the hand be untrammelled and alert, but they should also be in exact harmony with each other in quickness of perception and movement. The details should be right, and the great movements of the system which combine the details should be unimpeded. The prize fighter knows the fact that the universal dullness of nerve wrought upon the organism by alcohol is fatal to his efforts for victory. It is amazing to see the absolute confidence with which a person under alcoholic influence views his powers, when the knowledge of the disabilities imposed by it are not recognized. In him, all the nagging asperities of nervous activity have disappeared. Nothing seems impossible to the transcendent egoism of a drunken man. The very suggestion of unfitness or mistake is scouted by him. Equally unable to foresee, or appreciate difficulties, he has no faith in their existence. One A—, a physician of ability, while considerably intoxicated, was handling a pistol, and accidentally discharged it. The ball flew near his wife's head, and shattered a looking-glass behind her. He was astonished exceedingly, and, with respect to this matter, he remains so to this day. His confidence in the absolute infallibility of his care and caution was simply impregnable—as it is, indeed, in every man who is drunk. Yet in this very thing he was terribly deceived and beguiled by alcohol. The sense of feeling in his hand was benumbed. He grasped the pistol with more force, and pressed upon the trigger more firmly than he had any idea of, by reason of his impaired sense of feeling. The truth is, the confident approach of a drunken man is always amazing. His sense of feeling is dulled, and he seizes the person of another in a rude manner. His grasp is painful because it is violent. The inebriate unconsciously exerts considerable force in his movements, in order to feel that he is really in contact with things or persons exterior to him. In the case of A—, in whose hands the pistol was discharged, the harmony of action between the eye and hand was deranged, through deadening of

the nervous sensibility. The consequence was that, what he supposed was a normal community of action between distant, but auxiliary parts, was an unnatural and inharmonious relationship. It was in obedience to that unrecognized condition, affecting alike mind and sensation, that the explosion took place, and not from a condition thoroughly regular, and under the control of volition.

How often has a drunken man had cause to bless his "good luck," when a gun went off without dealing death, while in his hands; and how often again, has regret and remorse followed him through life, because some weapon has been accidentally fired by his awkward and trembling movements — maiming, or possibly killing some friend or companion.

A young man, Samuel L —, recently shot a female companion through the head, killing her instantly. They were both partially intoxicated. The pistol was of cheap pattern, and was very unreliable about the trigger. The shooting was claimed to be an accident. The young man was no doubt in a state of more or less muscular incapacity. Testimony was given that in handling a pistol by a person drunk, it would more likely to be accidentally discharged than it would be in the hands of the same person when sober. Although in this case other facts pointed to murder, yet such a plea in defense might have been perfectly good and proper.

A drunken man cannot dance. It does not require a very considerable degree of intoxication to disable a person for dancing. Anything which requires a community of action amongst a number of muscles — anything which is in the line of auxiliary aid, or help in muscular actions, is an utter impossibility for the individual who is intoxicated. Yet, if there is a person in the world who thinks he can exhibit the consummation of grace, ease, and eclat in dancing, it is the man who is drunk.

In consequence of the inequality of alcoholic paralysis, even on the muscular system itself, the really drunken individual moves as though he was about to fall in pieces. The

inebriate dancer would probably move off in sections or separate parts, were it not that his physical body is securely fastened together in spite of himself. The want of harmony between mind and body, often present, also, no doubt, disables the drunken dancer. Sometimes the muscles act tolerably well in the intoxicated individual, while his mind and will may be in a state of sad confusion. At other times his mind may be fairly clear, while he is limp and helpless on his legs.

The musician and the actor likewise fail in the exercise of their callings when intoxicated. The actor is totally unable to depict character by facial expression. The muscles of his countenance are withdrawn from voluntary control. The feature he wants to supply will not come at his bidding,—it is something else, something quite different, and yet he is not conscious of the fact. He is deceived by the power of alcohol, and resents the obtuseness and unfairness of his critics.

The effects of alcohol upon the body of even the casual drinker are always those of a traitor—they always betray. The steadiness and tone of nerve which seem to follow from its use are only indications of paralysis and insensibility, which, deceiving the mind, lure the unwary drinker into danger and disgrace.

GOD made and meant us to be well, not sick. His Health Decalogue is as binding as the Ten Commandments. When a human being is not well and strong, the only question in order is, "Who did sin, this man or his parents?" There is no more common sense in the invalidism of men and women than there would be in that of birds and buffaloes. The fact that domestic animals are ever sick results wholly from their keeping the bad company of man. We are a poisoned race—poisoned by tobacco and alcohol and drugs; by bad air bad food, bad raiment.

FRANCES E. WILLARD.

MEDICO-LEGAL PROBLEMS OF INEBRIETY—
ILLUSTRATED BY THE SWIFT CASE.*

BY T. D. CROTHERS, M.D.,

Supt. Walnut Lodge, etc., etc.

The startling revelations in the scientific world are repeated in some degree in the sudden opening up of a new territory of medico-legal science, the jurisprudence of Inebriety. Within five years the question of the mental soundness of the inebriate and his capacity to act or reason normally has been raised with increasing frequency in a great variety of criminal and civil cases. The rapid advances in psychological studies fully sustain the wisdom and necessity of scientific inquiry in this field. The medical profession have been suddenly called to determine facts and their meaning, and give advice along this new line of inquiry, without precedent, and opposed by public opinion and deep-rooted prejudice, and hence are often plunged into great doubt and confusion. As a result the strangest theories prevail as to what inebriety is and is not, theories of moral and legal accountability and responsibility, that presupposes a degree of psychological knowledge that can only be obtained after centuries of farther study.

To-day there are hundreds of persons awaiting trial or sentence for crime committed when poisoned by alcohol. There are hundreds of business contracts disputed and contested by law, made when the parties were intoxicated. There are hundreds of wills whose validity is questioned for the same reason. There are hundreds of divorce suits where the inebriety of the parties is the vital question on which the issue of the case turns. Grave questions of social science concerning pauperism, idiocy, and criminality, turn on an exact knowledge of inebriety.

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The great problems of the sale of alcohol, and its place in the world, will never be solved until this subject is studied exhaustively, both scientifically and medico-legally.

These are some of the topics in this new field of medico-legal science that cannot be ignored by the profession, or be answered by vague theories or dogmatic assertions. Every year these questions come to us for solution with greater urgency and importunity.

Although these topics have so recently come into medico-legal notice, and are so complicated with theories and superstitions, yet they have already divided into three distinct theories or points of view:

1st. The *ethical* and *moral* view, which seeks an explanation of inebriety from the teaching of scripture and the opinions of theologians and metaphysicians. This view asserts that inebriety is only a phase of moral depravity innate in every life, and one that is susceptible of great growth and development, by willful neglect, and gratification of all the animal instincts. Medico-legally the remedy is severe punishment, increased responsibility, prayer, conversion, and the application of moral suasion. A man holding these views on the witness stand believes the inebriate, in all cases, fully conscious, and doubly responsible for all his acts.

The *second* is the *legal* view, which is practically an outcome or result of the moral theory. It assumes that inebriety is a phase of savagery or the inborn tendency to lawlessness, and giving up of all control and restraint; or the indulgence of the lower passions regardless of society, law, and order. The legal remedy is severe punishment, increased penalties, and suffering. The theory is to develop the higher nature of man by causing pain and suffering in the lower nature. In this way to rouse up the brain and will power to regain control of the animal part. Three hundred years ago Lord Coke of England held that inebriety always aggravated the offense, and the punishment should rather be increased. This has been the corner-stone of the legal view of inebriety up to very recent times.

The third theory is the scientific and medical view. This affirms inebriety to be a physical condition, the tendency of which is often inherited and also acquired. That this physical condition is always a disease, a modified or pronounced form of insanity. In other cases it is a positive symptom of insanity, and also that insanity is often a symptom of inebriety. It is a form of brain degeneration that like other diseases have distinct causes, development, progress, and decline. It is also urged that the continuous use of alcohol always causes disturbances of brain circulation, and is followed by brain congestion, brain paralysis, and impaired senses. The result of which is incapacity to realize the nature and character of acts, the judgment is defective, and the control is lessened and is not normal. Medico-legally this theory regards the inebriate as diseased and incapacitated to act sanely, to be treated as a sick man and placed under medical and legal care and control, until recovery or for life.

The two first theories assume perfect sanity in all cases of inebriety, and assert that the remedy is to be more severe punishment, and accountability to law and society.

The third theory recognizes a physical condition, and demands a scientific study of each case before the remedy or treatment can be determined.

Another theory has been asserted, that in some cases inebriety was a vice at first, then later a disease. That in some cases punishment is the remedy, and in others medical care and treatment.

Practically and medico-legally this view assumes a degree of psychological knowledge, and power of discernment, as to where vice and disease join, that is absurd and impossible from any present knowledge. Such a theory defended on the witness stand is a sad reflection on the intelligence of the witness. Such are some of the theories and standpoints from which the subject of inebriety is approached medico-legally.

The urgency and pressing character of these cases bring these different views into greater prominence daily.

While the confusion and doubt of the exact nature of inebriety is evident to every new advance of thought, it is obvious that it is due in a large part to the failure of physicians to study these cases independently. The dictum of judges, the teachings of theologians, newspaper views, and public opinion, are too often the sources from which medical men derive their views. This was very apparent in a contested will case at Trenton, New Jersey, where five medical men testified to the mental capacity of a chronic inebriate who willed his property to a mistress. The judge declared he should act on his own judgment, and decide the man unsound and incapable. In a recent case at Scranton, Pa., a man set fire to a church without apparent motive. Three physicians swore to his sanity, although he had delirium tremens repeatedly and was a chronic inebriate. The jury decided otherwise.

Questions involving the capacity or incapacity of inebriates can never be determined by any metaphysical theory of mind or morals.

It is an error for medical men to regard inebriety in any other except from a physical point of view. It is a question of facts and their meaning. Facts of heredity, of growth, of culture, and training. Facts of diseases, of injuries, of degenerations both local and general, of surroundings, and mentality, and of the entire history of the case, both physiological, psychological, and pathological. From these facts only can any clear conception of inebriety be obtained.

The general problems which are presented in these medico-legal cases are, first: Was the person an inebriate, or one who drank spirits to excess at all times or at intervals? If this fact is established beyond question, his sanity and mental capacity may be most reasonably and naturally doubted.

Second. What was the mental condition and the circumstances of the person at the time of the commission of the act in question. Was he sane? Was the act reasonable and just in its effects and consequences? If not, the first

suspicion is strengthened, and the insanity of the person must be assumed, and the legal theory must be reversed; the sanity must be proven, not the insanity.

Third. The medical man has only to gather the facts, and have the reasonable assurance of their accuracy. From this he can point out the most probable conclusions which are sustained by such facts. The question is one of preponderance of evidence, which, if it points to defective consciousness of act and conduct, and inability of control, is far more likely to indicate impaired mind or insanity than any other condition. The limits of scientific study will not sustain any theories of the exact degree of health and disease, and will not support assumptions of boundary lines of responsibility and irresponsibility.

Recently a notable case has illustrated this mediæval spirit of public opinion which insists on judging every inebriate as fully sane and competent to determine the nature of his thoughts and acts. The following is an outline of the case:

John H. Swift shot his wife, July 7, 1887, at Hartford, Conn. In December of the same year he was tried and sentenced to be hung a year later, April 5, 1889. The legislature was appealed to for commutation of sentence to life imprisonment. The judiciary committee made an exhaustive examination of all evidence and new testimony offered, and reported in favor of commutation. Both houses of the legislature voted to sustain the report, and commute the sentence to life imprisonment. An adverse wave of public sentiment caused the Governor to veto the action of the legislature, and so influenced the members of one body that they failed to sustain their former vote. Hence Swift was hung April 18, 1889. Swift was a chronic inebriate and had been drinking to great excess for weeks before the murder. The defense claimed that Swift was incapable of deliberation and premeditation at the time of the crime, from the effect of continuous intoxication. No medical testimony was called. The prosecution claimed premeditation, malice,

and full comprehension of what he was doing. The judge reiterated the legal fiction that an unsound or insane mind is always one that cannot determine between right and wrong. Popular opinion voiced by the press insisted on sharp accountability, irrespective of every fact and circumstance, and clamored for Swift's death in the same unreasoning spirit that urged the execution of witches less than two centuries ago.

A review of the facts in this case will show the judicial blunder and injustice in the execution of Swift. Beginning with the heredity: Swift's father had an apoplectic seizure when twenty-four years of age. From this time up to death at forty (from pneumonia) he was a strange, erratic man. There are many reasons for supposing that he had used alcohol to excess in early life, although he was a total abstainer, and excepting the excessive use of tobacco at times, lived a temperate life. He married when about twenty-eight years of age, and was a school teacher, and finally an organist and music teacher. He suffered from intense paroxysmal headaches, and attacks of insomnia. These headaches were always preceded by intense irritation and emotional disturbance. Dr. O'Flaherty, who was called to see him frequently, writes: "That the elder Swift was a peculiar man, either excessively elated or morbidly depressed. For years he was buoyed up with the hope of writing a work on music that would revolutionize the science, and talked excessively about it. He was abstract and suspicious, and magnified trifling oppositions into deep plots to break up his interests." His father died in early life, and his mother (Swift's grandmother) died of asthma. Swift's grandfather on his mother's side was a drinking man, but became a total abstainer in middle life, and is still living. His only son, a chronic inebriate for over twenty years duration, is also living. Of the other children all were daughters. Swift's mother was the second child. The other three were excessively nervous, two of whom had hysteria, and one is now a nervous invalid. Swift's mother was always excessively

nervous, but in fair general health up to the time of the sudden death of her second son (a great favorite), who died of convulsions at eleven years of age. The shock and grief of this event brought on what was called nerve prostration, which continued over seven months until the birth of John H., the prisoner. During this time she was in bed and under the care of the physician. She was unable to sit up, complaining of great exhaustion, with faintness and inability to move. At the birth of John H. she became better, and seemed to regain her usual health again. Two years later another child was born, who died some months after of convulsions. A year or more after another child was born, who died from convulsions in a few days. In brief, the hereditary history showed that Swift's grandfather was an inebriate, his father was mentally defective, and his mother suffered from nervous shock for months before he was born.

John H., the prisoner, was a weakly child, and when one year of age, fell out of a chair, striking on his head, and became unconscious. He was under a doctor's care for brain fever for some time, then recovered. When about three years of age he began to suffer from nasal hemorrhages, which came on at irregular periods. At six years of age he had an attack of scarlatina, and these hemorrhages greatly increased from this period. At times they were so severe as to require the aid of a physician; the attacks lasting from an hour or more to half a day. When eight years of age they grew less frequent and of shorter duration, and finally disappeared. After puberty they returned and came on at intervals until death. While in jail two severe attacks occurred. Somewhere about five years of age, he suffered from severe night sweats, which continued up to puberty; frequently they followed the nasal hemorrhages, and generally they appeared after any excitement or special exhaustion. At puberty they disappeared, and severe headaches came on. He complained of the latter all his life, but the excessive use of spirits for the last two years seems to have covered up this symptom. These headaches often preceded

the nasal hemorrhages, and in many instances followed them. He would go to bed and have a fever, be excessively irritable, and next morning would wake up well. At times these headaches would last a day or more, and he called them bilious attacks. Dr. O'Flaherty, who was called, recognized their constitutional character and intimate relation to the nasal hemorrhages and night sweats.

As a boy Swift was dull, delicate, and rather stupid; when he grew older he was excessively nervous, and active in some respects. He was the companion of his father, and seemed very devoted to him. When sixteen his father died, and from this time he drifted rapidly into bad company and low associates, and after a year of unsuccessful effort to restrain him, his mother had him sent to the Reform School at Meriden, Conn. From the statement of friends he at this time showed a strong fascination for low society, and disinclination to work. He seemed weak and childish, more than willful and headstrong.

A year later he came back from the Reform School greatly improved, and went to work.

The next year he went on a visit to Cold Spring on the Hudson, where he was upset from a boat on the river. With two other companions he clung to the boat for a long time, until he was rescued. The chill and excitement brought on unconsciousness and fever, with some delirium for a time. From this event he seemed disinclined to work, was restless and irritable in his manner when advised by his mother and others, and spent his time away from home, occasionally working a short time, then idling about saloons. He was eighteen when he formed the acquaintance of the girl who was afterwards his wife. From this time to the homicide, there is much conflicting testimony of Swift's history. He seems to have been forced to marry his wife by her parents, then driven away from the house. He then became infatuated with a desire to live with her, which was repelled by her parents and herself. This idea continued, and her refusal was the cause of the homicide. He began to drink to great

excess at this time, and was intoxicated as often as he could get money to pay for spirits. Dr. O'Flaherty treated him for syphilis without any results, and noted his impulsive, reckless conduct, without motive or purpose, and expressed an opinion that he was not right mentally.

For a period of three years ending in the murder of his wife, Swift led a life of great irregularity; working from time to time, and being discharged for intoxication and incompetence; then spending his time at low saloons, playing the piano for spirits. He grew more and more incompetent and was unable to keep any place long. For four months before the murder he drank to great excess, and was discharged as crazy and on the borders of delirium tremens. He spent several nights in the woods drinking with boon companions. During the year before the murder, the drink paroxysms were followed by three distinct suicidal attempts; one a few days before the murder, in which he swallowed laudanum. After these drink paroxysms he suffered from acute headache, for the relief of which medical aid was called. When stupid from intoxication he would strike his head violently against the floor, and show signs of brain pain and distress. Sometimes he came home at night, but always intoxicated. Then he would not be seen for weeks. During the three weeks immediately preceding the crime he was stupidly intoxicated, going from one concert saloon to another, and occasionally coming home at night and going away early in the morning. On the night before and day of the murder, he was wildly excited from drink, and seemed suicidal and on the borders of delirium tremens. The evening of the murder he watched for his wife to pass a certain point in the street where he could see her. From her ante-mortem statement, Swift met her and inquired if she would forgive and live with him; to this she replied "no." He then said "you must die," and shot her fatally. He then ran up an alley and tried to shoot himself, without success, the lock of the revolver failing to work. He was arrested, and later denied all recollection of the event. He reiterated this statement up

to death, and claimed he could not realize why he had killed the woman of all others he loved so dearly. Exactly what he did or said before the crime is disputed. The prosecution claimed that Swift bought a pistol and affirmed that he was going to kill his wife if she did not live with him. The defense showed that he was wild and suicidal, also intensely excited for days before, and acted and talked like an insane man. When arrested he was suffering from well-marked syphilitic eruptions, and for a long time his mind was like one recovering from alcoholic excess. From this time to the execution he was cool and indifferent, expressed no fear of death, and showed no special interest in the efforts to save him. In jail and at the gallows he manifested a strange unconsciousness of his situation and surroundings, and although his health greatly improved, he remained stolidly indifferent to the last.

A summary of the facts would indicate the following :

1st. Swift inherited a degree of mental degeneration and tendency to neurotic disease that would naturally develop from the slightest exciting causes. An alcoholic diathesis was present, and nerve and brain enfeeblement that would find in alcohol a most seductive relief. His ancestral history showed the impossibility of Swift's having a sound mind in a sound body.

2d. The early and later history of Swift's physical condition and growth showed clearly this degeneration. The nasal hemorrhages, the night sweats, the headaches, were strong additional evidence.

3d. His sudden lapse into low company at the death of his father, and his subsequent dissolute life, were the natural events in the history of the failure of the higher brain centers to control.

4th. The excessive use of alcohol continuously and at intervals, adding paralysis to the latent degeneration, would inevitably fix disease and disease conditions, incapacitating the brain to act normally ; and hence the crime would follow

as a natural sequence, depending on chance conditions and surroundings.

Here was a combination of physical conditions, such as inherited tendencies and diathesis, neurotic feebleness, instability with alcoholic and syphilitic degeneration; the brain soil, the conditions, the environment were all present, and inebriety or more pronounced forms of insanity was the almost certain result. John H. Swift was crippled from birth, freighted down with inherited defects and tendencies, with a feeble, unstable mentality, which under the most favorable circumstances could hardly expect to lead a normal, natural life. Such a brain was incapable of adjusting itself to the environment and the strains incident to life. That he would use alcohol to excess for its effects was a certainty that could have been predicted. That suicide or homicide or other crime would follow was equally certain, governed by special conditions that might occur any moment. The excessive use of spirits would develop delusions and all forms of morbid impulses, which might materialize into acts at once. Such a life would be a continuous round of disreputable acts, and low, selfish, unnatural conduct.

Medico-legally the question would occur, could any one with this inheritance and neurotic history use alcohol to excess for years, and be of sound mind or capable of planning and executing any crime? Is it possible for one with this history, who was intoxicated for days before and on the day of the crime, to sanely premeditate and carry out a fixed rational plan of action of any kind? The court and jury in this case supposed this possible. An assumption contradicted by all study and experience.

Swift was an alcoholic maniac, and incapable of sane reasoning, and of control of his acts. Hanging such a man was judicial barbarism. Science protests everywhere against the delusion of judging criminals by theories of responsibility that are unsupported by facts. To hang such men is going back in humanity and civilization. It is the revival of barbarism. Society gains nothing, justice and civilization gains

nothing, crime is not checked by the punishment of defects and imbeciles as sound and responsible. The superstition of supposing inebriety to be a moral condition, and the liberty of the victim protected so he can poison himself for years and become insane, then when he commits crime punish him as sane and accountable, is a strange reflection on the intelligence of our times.

I conclude this very general study with a summary of the facts which seem supported by the strongest evidence presented up to this time.

1st. In all cases of inebriate criminals, there is literally mental defect, and more or less incapacity to reason sanely or control their acts. An inebriate who does criminal acts cannot be of sound mind. No criminal who is an inebriate is sane, and no inebriate is fully sane, and no criminal can be of sound mind long.

2d. The question for the medical witness to decide is, How far was the prisoner conscious of the nature of his acts? and how far did he have control over his acts, in a certain condition when crime was committed?

3d. In a case where crime was committed under the influence of alcohol, the law asks what was the prisoner's mental condition at this time? and insists on fixing the boundaries of responsibility and accountability. The law demands that science should go into this penumbra region of sanity and insanity, and point out where vice and disease join, and where human justice should punish, and where it should excuse as irresponsible.

4th. The scientific man demands that this question of mental condition at the time of the crime should be studied independent of all theories or legal rulings, seeking the facts and their meaning, with no hesitation as to effects of such conclusions on the court or public. The scientific man refuses to draw boundary lines of disease and accountability, but insists on minute study and general conclusions based on the probable facts.

5th. If the facts in the history of the prisoner and the

crime indicate a degree of unconsciousness of the act or its consequences, also an inability of control of his acts and conduct, the irresponsibility of the prisoner should be assumed as a fact far more likely to be true, than his sanity and responsibility.

6th. When the fact of the inebriety of the prisoner is clearly established, his sanity and responsibility in a given case must be proven beyond all question or possible doubt, proven from the circumstances and conditions of the life and crime. The fact of the presence of inebriety reverses the order; his insanity must be assumed and his sanity proven.

7th. Finally in all these cases the medical witness is called to determine the physiological, pathological, and psychological facts and their meaning. The application of these facts must be made by the court, jury, and law.

The medical expert and student of to-day must go beyond the theories of yesterday, or the facts on which yesterday's views were based. A newer, larger field opens up to-day, and the facts are more numerous, and indicate a clearer, wider view to-morrow.

THE continuous use of spirits in any person is now recognized as evidence of the mental incapacity of the person, by the German Medical Associations.

OF the fourteen hundred and ninety-seven persons confined in the Hartford Jail during the year 1888, only seven were temperate persons. Thirteen hundred and seventy claimed to drink in moderation, and one hundred and twenty were excessive users.

IN the Grangegorman Prison of Ireland, a woman was committed thirty-four times in 1888 for inebriety. The terms of commitment varied from one to ten days each. This form of legal treatment goes on all over the country, and is literally a species of exquisite barbarism that is a disgrace to civilization.

Abstracts and Reviews.

HOMICIDAL CHLORAL POISONING, WITH ITS MEDICO-LEGAL RELATIONS; BY ERNEST REYNOLDS, M. D., LOND., M. R. C. P., RESIDENT MEDICAL OFFICER OF THE ROYAL INFIRMARY, MANCHESTER.

The so-called "Manchester Cab Mystery" being so far as I know the first case on record of homicidal chloral poisoning, a detailed account may be of some interest. Mr. J. F., a wealthy and well-known manufacturer living at Southport, came to Manchester on Tuesday, Feb. 26, 1889, on business. He met several friends during the course of the day, and imbibed such an amount of alcohol that at about 4.30 P. M. his usual genial disposition had changed to one of bad temper, but although not thoroughly drunk, he was certainly partially so. At 6.20 he entered a cab with a young man named Parton, and they were driven to a public house called "The Three Arrows," where they each had a glass of beer. They re-entered the cab about 7.10, and, according to the cabman, Mr. J. F. walked quite steadily, and, in his opinion, was quite sober. At about 7.25 the cabman found the cab door wide open and inside was Mr. J. F. alone, with his head fallen forward on to the front seat, and unconscious, but able to be aroused, and could then just speak. All his valuables were found to be missing. He was driven to the Manchester Royal Infirmary, but died just before entering the building, at 8.05 P. M. He was examined by Mr. Barker, the house physician, who found him quite pale, death having evidently been immediately due to syncope. There was a smell of chloroform and prussic acid, and the breath expressed from the lungs gave no reaction with silver nitrate, but smelt strongly of alcohol.

I made the post-mortem examination at 3 P. M., on Wednesday, February 27th, assisted by Mr. Barker, and found as follows: The body was that of a heavy man weighing about fifteen stone, and was well covered with fat. There were no external marks of violence. Rigormortis general, post-mortem staining dorsal. Face quite pale. On opening the body there was a strong smell of alcohol. There were old pleuritic adhesions on the right side. Lungs slightly congested, otherwise normal. The heart weighed seventeen ounces and was covered over with a fair layer of fat, which to a slight extent, but especially at the apex, had extended into the muscular wall. The muscle was contracted, and the cavities of the heart, which were very slightly dilated, contained a little fluid blood, dark in color. The muscular substance appeared quite normal to the naked eye, but a microscopic examination showed a few fat granules infiltrating the muscular fibers, the striation of which, however, was well marked. There were a few patches of atheroma on the mitral valve, and also in the aorta, but all the valves were in good working order. The mouth and cesophagus were normal, showing no signs of irritation. The stomach was slightly congested and showed a few small sub-mucous ecchymoses. It contained about ten ounces of yellowish fluid, like gruel, smelling strongly of beer. The intestines, as far down as the sigmoid flexure, contained semi-fluid material, smelling strongly of alcohol. A small quantity of semi-solid fæces was found in the rectum. There was much fat in the omentum, and also around the kidneys. The latter were normal; the liver was very large and weighed seventeen pounds, and was marked fatty and cirrhotic. There was no ascites. The bladder contained only a few drops of urine. The brain was congested, but otherwise normal.

The immediate cause of death was evidently syncope, which was obviously, taking into account the mode of death and the changes found after death, not due to disease. I concluded that it must be due to some poison, either alcohol,

chloral, or some vegetable alkaloid. All other common poisons could practically be eliminated, and knowing that chloral had been used by thieves to drug their victims, I determined to have the stomach and intestines analyzed for this body. The stomach and contents were put into one jar, the contents of the upper three yards of the small intestines into a second jar, and about fifteen ounces of the bloody fluid from the body cavity into a third jar; were handed over to Mr. Estcourt, the analyst for the city of Manchester, who found traces of chloral in the first two jars but not in the third.

The subsequent history of the case is interesting. It was proved that Parton had robbed the deceased, that he had stolen a bottle containing a pound of chloral from a Liverpool chemist, about a fortnight before, and also that he had been seen putting a liquid out of a small bottle into one of the glasses of beer at "The Arrows." Moreover, two other cases of drugging and robbing of exactly a similar kind to that of Mr. J. F. were proved against Parton. He was tried at the Liverpool Assizes on March 20th, found guilty, and condemned to death, this sentence being subsequently commuted to penal servitude for life.

Several important questions arise in this case: First, was the death due merely to alcohol? Alcohol may cause death in one of three ways: (a) If taken in a very large dose—such as a pint of brandy drunk off at once—death may result in a very few minutes from shock; (b) when taken in a large total amount, but its administration spread over several hours, it may cause death from syncope, preceded by prolonged coma; or (c) the patient having passed through a comatose state may rarely suddenly relapse and die after apparent recovery. Obviously Mr. J. F. died in none of these three ways. For death to occur after only such a short period of coma as three-quarters of an hour, as in this case, must be extremely rare. I have seen considerably over two hundred cases of alcoholic coma, but none in which death even threatened within so short a time of the patient

becoming comatose, except in two or three cases where large quantities of alcohol had been taken just before coma setting in, which was not the case here. Moreover, to imagine that in a person already only so far poisoned by alcohol that he could walk straight and appear perfectly sober, the administration of the additional amount of alcohol contained in a glass of beer would cause rapid coma and death, would appear almost impossible to most medical men, and certainly so to a jury. Lastly the most constant post-mortem sign of acute alcoholic poisoning—namely, a deep cherry-red color of the gullet, stomach, and intestines was not present.

Secondly, would the previous administration of alcohol tend to lessen or to increase the chances of death by syncope from chloral? This is entirely a matter of dosage. A small quantity of alcohol, say an ounce of brandy, is very frequently given with chloral with good effect, as tending to lessen the depressing influence of the latter on the heart. But the case is different with large doses of alcohol previously administered, as here the heart would be much weakened, as evidenced by the very feeble and rapid pulse, so commonly seen in cases of alcoholic coma. Whether this cardiac depression from alcohol had occurred in this case before the chloral was administered it is impossible to say, but it is quite probable that it was so.

As regards the taste of chloral: When dissolved in water it has a most pungent, burning taste, which, however, is almost entirely absent when taken in beer, all that is perceived, being an acrid sensation at the back of the throat, occurring after the beer has been swallowed. When prescribing for the insane I found that sherry was a most excellent medium for disguising the taste of chloral. The dose given in this case is unknown, but it must be remembered that thirty grains are reported to have caused death in a woman, and it is also said to be an uncertain drug. Personally I have always found chloral to be very regular in its action, and very safe, having frequently given thirty or forty grains in a single dose without any bad effects. I have always, however, used it

with great care, never giving it when there was feeble cardiac action, or when the patient is very cold.

The fatal period of chloral poisoning is given as from fifteen minutes to ten or more hours. Twenty grains given with twenty grains of bromide of potash cause sleep, as a rule, within half an hour, and in many people sleep comes on within fifteen minutes.

The symptoms and post-mortem appearances in this case exactly corresponded with all that we know of this drug. The fluidity of the blood found has been before noticed by Richardson, and Dr. Dreschfield tells me that it was a marked feature in a case of fatal chloral poisoning observed by himself. Of course it is not pathognomic, but one merely of detail.

Action of chloral in the body.—It was, as is well known, first imagined by Liebreich that chloral was decomposed into chloroform by the alkaline blood, and so produced its effects. This theory has now, however, been thoroughly disproved. It is partially excreted undecomposed in the urine, which should therefore be carefully preserved (if any can be found) in all medico-legal cases.

Musculus states that a certain quantity is excreted as urochloral acid, which occurs in color groups of needles similar to tyrosine, is soluble in alcohol and water, insoluble in ether, turns the ray of polarized light to the left, colors yellow an indigo solution rendered alkaline with soda, and does not react with the aniline and soda test. In small doses chloral stimulates the vagus center and the motor cardiac ganglia. In larger doses, however, there is a paralysis of the vagus center, and more especially of the motor cardiac ganglia, and of the vaso-motor-center, causing the cutaneous vessels to dilate and the temperature to fall, the pulse becoming very feeble, and the heart finally stops from this paralysis. The cause of death is thus cardiac failure, and not asphyxia. In a heart already weakened by slight fatty degeneration, and by a large dose of alcohol, the tendency of even moderate doses of chloral will be undoubtedly to cause

death more rapidly by heart failure. In addition to the usual test for chloral, namely, that in which the chloral, being first extracted from the contents of the stomach is then decomposed into chloroform by the addition of an alkali, there are two others perhaps not so well known. The first is the soda and aniline test, in which aniline and caustic soda are mixed with the suspected fluid, when either immediately or on heating a peculiar and penetrating smell of benzo-iso-nitrile (C_7H_5N) is given off. A similar reaction, however, is also given with chloroform, trichloroacetic acid, bromoform, and iodoform. The second test is one first proposed by Ogston in 1879; the contents of the stomach are filtered or dialyzed, and sulphide of ammonium is added to the clear fluid thus obtained.

If chloral is present an orange yellow color is formed which gradually becomes more and more brown, then turbid, and finally an amorphous precipitate falls, and a peculiar odor is developed. Ten milligrammes in one cubic centimeter of water give a marked reaction, and a precipitate, one milligramme in one cubic centimeter a yellow color, and odor, but no precipitate, and one-tenth milligramme in one cubic centimeter a slight pale straw color, but no odor. This reaction may be distinguished from that of antimony by adding an acid, when the latter falls as an orange-yellow precipitate, but if chloral alone is present there is only a light whitish precipitate of sulphur.

One apparent flaw in this case is the fact that the analyst said he only found a "trace" of chloral. But it must be remarked that he did not try to estimate the actual amount present, but merely showed its presence by decomposing and obtaining the reaction for chloride and hydrochloric acid. Now, as he got each of these tests three times, it is perhaps hardly accurate to speak of a "trace." But taking it for granted for a moment that only a trace was found, this does not in the least alter the arguments in favor of chloral having caused death, for it must be remembered as a fundamental principle in all analyses of the contents of the stomach in

poisoning cases, the portion of poison found is only the residue of what has been administered, and is not the actual part that has caused death, this of course having been absorbed. This principle is well pointed out by Guy and Ferrier, who state, when poison is found in very small quantity the objection is sure to be advanced that it was not enough to account for death; but to this the reply is obvious, that the quantity found must needs fall short of that actually taken, and that the quantity found in the stomach is only the surplus of what may have been sufficient to cause death by absorption.

The discovery, therefore, of a quantity of poison insufficient to destroy life is scarcely even a presumption that the substance was not administered in a poisonous dose. Woodman and Tidy also state that the discovery of a very small portion in the stomach is no criterion of the quantity taken. With a body so rapidly absorbed as chloral this principle is all the more important to remember.

Finally, all the symptoms, the post-mortem examination, and the analyses, coincided with the fact that chloral had been administered. Taking this for granted, no one can for a moment doubt that the administration of this body to a man whose heart was already enfeebled with alcohol and slight fatty degeneration most certainly hastened the death if it did not actually cause it. Now if in this manner death was accelerated even by a single minute, then it is perfectly correct to say that the administration of the chloral caused the death.—*British Medical Journal*.

LECTURES ON NERVOUS DISEASES. BY AMBROSE L. RANNEY, A.M., M.D., Professor of Anatomy and Physiology of the Nervous System. Post-graduate school and Hospital, New York City, etc., etc. F. A. Davis, Publisher, Philadelphia, Pa., 1889.

In the last number of the *JOURNAL* we reviewed Dr. Ranney's *Applied Anatomy of the Nervous System*, which had been published for some time. This work is the latest

production of an excellent anatomist and teacher, but is not so clear and practical as the former book. The arrangement of topics, and disproportional space given to some of them, with very minute descriptions of unimportant and unusual forms of disease, and many bad illustrations, may be put down as defects. In a volume of over seven hundred pages, the subject of alcoholism is limited to a brief chapter of six pages, and this is very unsatisfactory. The author is evidently not familiar with recent studies in this field. This work is an elaboration of a course of lectures on nervous disease, and contains a great amount of valuable material arranged in a most pleasing way for ready reference. Much of this matter is new, particularly the bearings of eye defects on functional nervous disease, and the questions of cerebral and spinal localization and the methods employed in the diagnosis and treatment of these affections. Dr. Ranney is a thoroughly scientific teacher, and his work has a practical cast that is very pleasing to the active physician. We commend this book as a very valuable contribution to the literature of nervous diseases, and one that will repay a close study. Dr. Ranney is one of the very few teachers in this country whose works we should be familiar with, if we would keep up with the march of science in the field of nervous disease.

The publisher has brought out a very attractive volume.

ALCOHOL INSIDE AND OUT.

Our opinion of Dr. Chenery's book with the above title has caused some unhappiness. A clergyman, a pious, good man, who seems to lack charity and forbearance, thinks we have done Dr. Chenery and the world great injustice in our review of his work. Another good man who signs himself as an apostle thinks we are controlled by the "rum power," in our condemnation of Dr. Chenery's book. Dr. De Armand, a very good physician of LeClaire, Iowa, protests very courteously against the sweeping statements of the review in a seven-page article. Then comes Dr. Brown of

Chicago, who expresses a great contempt for such works, and supports his views in a four-page paper. Finally a Worcester physician sends us a second review of this book, in which he can find nothing good, and he takes this occasion to condemn in a rather bitter spirit all efforts to make popular the facts about alcohol. Fortunately for us Dr. Chenery's book is on trial before a larger court than the JOURNAL OF INEBRIETY, and if our judgment is wrong it will be quickly set aside. To all of our friends who are distressed at our decision, we can only say, appeal to a higher court, and argue the case before a better tribunal.

PUNISHMENT OF INEBRIATES IN FRANCE.

The *Temperance Record* quotes from *Le Soleil* of Paris an article in which strong protests are made against severity of sentences for crime committed when intoxicated.

Referring to a case where the inebriate had been hanged, he says :

It was a question of a proved drunkard who, without pretext, simply because he had drunk more than usual, and the alcohol had inspired him with more sanguinary ideas, killed in the public street a young artilleryman who was returning to his barracks in company with some companions. This crime naturally roused the population of Caen. All sympathy, as was natural, was expressed for this unfortunate young man, who died within a few hours at the hospital, because it had pleased an inveterate drunkard to kill him. It is very difficult—and the law against public drunkenness, which has fallen into desuetude, moreover, proves it—to be severe against drunkards, but how can free circulation in the public streets be kept up when it turns upon known drunkards who are nothing but madmen, and madmen who nearly require supervision?

The drunkard, when under the influence of alcohol, and that is of daily occurrence, is not responsible for his acts; I admit it. He finds himself under the despotism of an in-

vincible influence which dictates to him the most absurd manifestations and sometimes the most redoubtable resolutions. But is this a reason for not preserving ourselves, as much as possible, against the hallucinations of these madmen?

Well, would one believe that under these conditions the defense has dared to demand an acquittal pure and simple, or the setting at immediate liberty in the public street of an individual who was suffering from an excess, and who may, to-day even, furnish a pendant to the sanguinary scene for which he has appeared before the jury? The mental state of the accused has not been contested by the defense, and it is precisely on account of this mental state that a purely negative verdict was asked. I do not incriminate the defense, and I have, as much as any one, respect for its rights and privileges.

The Assize Court of Caen sentenced this drunken assassin to ten years' penal servitude. Taking the death of this young man, caused by an alcoholized brute, and other circumstances into consideration, it is very little; and this mitigated condemnation the murderer owes to the medical legists. They are, therefore, not for pitiless condemnation in every case. And, since we are on this dispiriting tale of alcoholism, how is it there are no precautions against it in France? Crimes due to alcohol are more and more numerous, and all those who have committed them have hitherto benefited by extenuating circumstances, the idea of which was suggested to the juries by their unhealthy state.

But would it not be more natural and useful to consider alcoholism itself, not as a crime, but as a state of predisposition to crime, which it is urgent to consider? In the United States there are establishments in which individuals who are prey to the terrible alcohol malady are looked after, pitilessly and so tyrannically that the most energetically-taken resolutions disappear at the first temptation. Why, then, should we not endeavor to cure? The hospital is not a prison, and it would not be an attempt on individual liberty to watch over, despite themselves, men whose special malady condemns them

to crime, almost fatally. As to claiming, on account of irresponsibility, their acquittal pure and simple, after a murder like that of Caen, that is to say, setting them at liberty immediately, is to have little care for the security of passers-by.

INTERNATIONAL CONGRESS FOR THE STUDY AND SUPPRESSION OF ALCOHOLISM.

This congress met in Paris July 29th, 30th, and 31st, then resumed its sessions three days in August. Some of the questions discussed were of unusual interest to prohibitionists. It was shown that crime and insanity increased in the same ratio with the increased use of spirits, and also the increase in the number of places for the sale of spirits. The conclusion that a suppression of the sale of spirits, or diminution of the number of places for its sale was the remedy, was sharply opposed. A physician from Holland presented an array of statistics proving that diminishing the number of saloons had not been followed by lessened inebriety, insanity, and criminality. This was confirmed by the director of the statistical board of the *Swiss Confederation*, and by other authorities. It was stated as a fact that in many countries and provinces, where the government had reduced the number of drink-shops, there had been no sensible abatement of inebriety and its evils. Actual suppression and prohibition in many provinces had been equally useless; the same crime, insanity, and drinking, had been noticed, only more secret, and hence more dangerous to the community. It was finally agreed that restriction and government supervision of the drink-shops was the most practical measure that could at present be adopted. Some very suggestive figures were presented, showing that criminality and insanity appeared wherever strong spirits were used in the place of wine as a beverage. Places where wine had been formerly used as a common drink were now used for the sale of strong spirits.

The insanity and criminality had more than doubled, and the infant mortality had reached frightful proportions. Deaths from suicide and accident had increased, and the enfeeblement of the people was, beyond all question, due to the change and introduction of strong liquors.

In the second and third sitting of the congress the question was discussed of the legal means to prevent the misfortunes caused by alcoholism, such as murders and suicides. One of the greatest and most difficult problems of legal medicine consists in determining the responsibility of a man who has committed a crime or offense in a state of drink. In reality, each case must receive its own particular interpretation.

Dr. Motet sought to establish categories before the congress, and he set forth "simple drunkenness," in which the individual preserved sufficient power over himself for a criminal act to be imputable to him; pathological drunkenness, in which, on account of incomplete cerebral development, an individual offers less resistance than another to the action of alcohol; and, finally, chronic alcoholism, in which mental troubles are henceforth constant.

This is how we must interpret, according to Dr. Motet, the responsibility of individuals comprising these three groups. Drunkenness is punishable as well as offenses or crimes committed under its influence when it is simple and it was in the power of the offender to avoid it. Drunkenness is punishable, but with a degree of mitigation which it is for the magistrates to determine in individuals weak in intellect, for whom tolerance for alcoholic drink is diminished by the condition of inferiority of their cerebral organization. It would not be excusable when these individuals know that they cannot drink without danger, and this case is more frequent than is supposed. Offenses or crimes cannot be punished when they have been committed during the acute delirious period of an alcoholic attack. It is the same in chronic alcoholism at the time when definite cerebral lesions have compromised the integrity of the organ and determined

the durable trouble of its functions. But should a drunkard, indemnified from a penal point of view on that account, be set at liberty? Dr. Motet thinks not, and he finds the French law incomplete, as it has no intermediary for alcoholics between condemnation and incarceration, or acquittal and setting at liberty. In order to fill up this hiatus in our legislation, M. Duverger, professor at the Paris Faculty of Law, wishes the powers of the public ministry could bring about the interdiction of a drunkard when he was in a habitual state of madness, even when his family do not demand it. In a case in which the drunkard is still in possession of a portion of his faculties, the tribunal always, on the request of the public ministry, would name a judiciary council and order the placing in an asylum. This would be an element of security for the drunkard himself and for the whole society.

M. Petitham wished that once confined the drunkard should be forced to work according to his capacity. He proposed the erection of special establishments where drunkards should be shut up and distracted from their fatal passion. He had much respect for liberty, said M. Petitham, but for the liberty of men who are free; now drunkards are not free. As to expense, many asylums could be maintained and kept with the money which is lost in hospitals and the costs of justice for drunkards. Moreover, the rich would maintain their own, and as to the poor, theirs should be maintained by the communes, who, by their inaction, do so much for the extension of alcoholism.

Despite the fears of M. Cauderlin, who predicted that these asylums would be a kind of bounty accorded to alcoholism, and that a few glasses more would be drunk in order to be confined therein, M. Bouchereau, physician to St. Anne Asylum, strongly supported the foundation in the provinces of these penitentiary colonies. Among other advantages, they would relieve the department of the Seine, which had to go to considerable expense in order to main-

tain the drunkards in their asylum, who figure in the proportion of 44 per cent. on the register of admissions.

The following are some of the conclusions which were voted by the congress :

The congress, in presence of the dangers with which alcoholism menaces society, the family, and the individual ; recognizing that there is a need to establish distinctions between simple drunkenness, pathological drunkenness, and its varieties and chronic alcoholism, express the wish :

That in an interest of social defense, judiciary measures on the one hand, and durable administrative measures on the other, be taken against drunkards, according to the categories to which they belong ;

That the legislative powers sanction the works of Claude and MM. Theophile Roussel and Leon Say ;

That there be provided one of several special establishments belonging to the State for the confinement of drunkards having committed crimes or offenses, and having benefited, by an ordinance state there was not sufficient ground to give rise to an action of law on account of their mental state ;

That the duration of this confinement be determined by the courts after a medico-legal inquiry ; that the release, even on the expiration of the fixed term, may be postponed if the drunkard be legitimately suspected of a relapse ;

(Chronic drunkards may be kept in lunatic asylums.)

That these establishments having the character of homes for treatment and not homes for repression be organized with a severe discipline, and that labor be imposed therein ;

That judiciary and administrative statistics be produced, so as to show the results of these measures.

The congress of Paris, like the congress of Brussels in 1880, express the wish that the chronic drunkard, who has partially or wholly lost free will, may, on a prosecution by the public ministry, be partly or wholly interdicted, and placed by the justice in a special establishment.

NATURAL INHERITANCE. BY FRANCIS GALTON, F.R.S., author of *Hereditary Genius, Inquiry into Human Faculties, etc.* MacMillan & Co., New York City, Publishers, 1889.

This is the latest work by the most distinguished authority on Heredity living. It is a scientific study of a collection of facts, in which it is assumed that any population that is in harmony with its environment may remain statistically identical during successive generations. A large part of the book is occupied with preparations for putting this equation into a working form. Of the mental peculiarities in persons he shows that this term describes the difference between the amount of any faculty possessed by a man, and the average of that possessed by the population at large. Also that each peculiarity in a man is shared by his kinsmen, but on the average in a less degree. Circumstances and accidents in life are considered, also marriage selection and latent elements, which enter into each life. The first chapter describes the processes of heredity. The second the organic stability of heredity. The normal variability and the influence of disease in the problem, the external forms, eye, color, artistic faculties, the distribution of fraternities, and populations, and breeds, and the mathematical certainty of the laws on which the facts depend, are all discussed with great clearness. The author's most commendable purpose is to reduce all the observable facts to some great principles, and show the most probable laws which govern them. This subject at present is a mass of more or less confessed facts, from which, eventually, some great truths will be discovered. Dr. Galton's work is in this direction, and all our readers have a vital interest in this subject, and we commend this book for both its intense practical and "suggestive value. Every student of mind and mental disease should have a copy of this work as an indispensable addition to his working library.

Send to the publisher, MacMillan & Co., New York City, for a copy.

JOHN SEVIER AS A COMMONWEALTH BUILDER.

BY JAMES R. GILMORE (Edmund Kirk), Author of the *Rear Guard of the Revolution*, *Among the Pines*, etc. D. Appleton & Co., Publishers, New York City, 1888.

This is one of those rare books giving a history of the early pioneers of Tennessee in a most charming candid way. John Sevier was an American hero of a grand type, and the study of his character is of intense interest to the psychological student. A physician's life is always a study of diseased and defective types of manhood. Nothing can be more helpful and of more value than a knowledge of the strong, vigorous leaders of the race. John Sevier was a pioneer whose life and work has been but little known until this volume appeared. He was both a statesman and military man, and genius, who almost intuitively divined the march of events and the influence of acts in history. He lived far beyond his day and generation, and was one of those heroic men about whose life time leaves a glowing halo that is ever new and fresh. We commend this book to all our readers as one of the most instructive and pleasing volumes they can place in their libraries.

The Appletons publish two other single volumes, one, "The Rear Guard of the Revolution," the other "The Advance Guard of Western Civilization," by the same author, giving a continuous history of cotemporaneous events and men of this period. All most charming works. Each work is sold at \$1.50.

RELATIONS OF THE STATE TO INEBRIETY.

Dr. Quimby of Jersey City made the following very suggestive remarks at the recent medico-legal congress in New York city :

Some may consider the papers of Drs. Kerr and Crothers as speculative or extravagant, yet as time advances and investigations are made it will be found that these

savants are correct in their deductions—are living a little in advance of their generation; that we to-day are making mistakes in our treatment of inebriety and the inebriate. We do not punish the insane or the idiot for crimes committed, because mentally defective, yet the *inebriate*, who is *equally defective*, through disease for the *time being*, and entirely incapable of self-control, is convicted, punished, or hung. I think the whole legal and judicial system of this country ought to be reorganized on a more intelligent and higher plane of Christian civilization, more in harmony with the recent investigations of science. Our present treatment and punishment of the inebriate represents the era in which “an eye for an eye, a tooth for a tooth,” was the rule and two wrongs made a right; the cold application of the letter of the law while the spirit of humanity and justice was disregarded. This is not in accord with the advances of the nineteenth century.

It is an outrage that society is so organized that instead of putting out of reach the principal cause of crime, it rather permits and protects it. After teaching them, thousands of our fellow citizens, to become inebriates, and leading them into criminal paths, we punish them for the very things we have taught them. Does not the State by license-law enable her agents (the saloon keepers) to establish themselves in every city, town, and hamlet, through which means intemperance is encouraged and promoted, thus becoming *particeps criminis* in drunkenness and its consequences, by those who have lost their self-control? I hold, Mr. President, that it is contrary to the civilization of the nineteenth century that such proceedings should be tolerated, and I never go before a court and see a criminal tried who has committed a crime in a state of inebriety but that I feel that the State should be punished whenever a drunken murderer is convicted. I feel sometimes that the State and the jury should be punished rather than the inebriate who committed the offense.

It is the first duty of government to protect society,

therefore government should do all in its power to stop the manufacturing of inebriates by stopping the sale of alcohol as a beverage.

The establishment of saloons all over this great land of ours is antagonistic to the genius and spirit of our government. This great country was established upon the broad principle of the greatest good to the greatest number, and we should never forget the fact that the saloons are nothing but pit-falls in which the weak and the thoughtless are entrapped, and we must remember the further fact that we *are* our brothers' keepers.

Mr. President, this is a subject worthy of thought, and should not be lightly passed. I am sorry that so many speak in reference to the matter without having taken pains to investigate it. I am sorry that the lawyers and judges, mechanically, as it were, apply the law in following strictly its letter, and that they cannot dispel the illusion that the inebriate is a person who merits the same application of the law as the criminal not addicted to intoxicants. They apply the law, but they forget the true spirit and intent of justice.

In regard to the subject of brain-lesion, I fully agree with Dr. Crothers that it is very difficult to find. I have, during an experience of thirty years, made many *post mortem* examinations, and have often tried, by the closest inspection, to locate the lesion, but often failed. This peculiarity is well stated by Dr. Crothers in the case of the horse thief. The explosive impulse to steal seemed to be second nature to the man. He was the offspring of drunken parents, yet the grand jury which tried him paid no attention to his previous history or condition, and he was barbarously and unmercifully hung. But it is said that such men are dangerous to society, and if they commit crime they must be punished — if murder, they must be hung. There is something in this that needs answering, but I hold that this class of persons should not be dealt with as was the horse thief. As long as society willingly promotes drunkenness, by and

through its license laws, the State should make some provision other than the prison, the jail, and the almshouse, to take care of its wards, by enacting laws and establishing inebriate asylums, through and by which the inebriate could be arrested, confined, and *treated* for his disease.

That is all I have to say, except that I believe most heartily that this paralysis which takes place in the mind is as certain and as sure as that any narcotic can paralyze any organized tissue. We can just as easily destroy the faculty of man by alcohol as we can put him to sleep with an anæsthetic. Now, that being so, what is the use of denying the fact that a man is a mere automaton, and is not responsible for the crime he commits, while under the influence of alcohol?

I hope that these papers and the principles they enunciate will be read and discussed throughout the civilized world, as they are of great importance to mankind. I think if this congress has done nothing else but bring out these two papers, it has good cause for assembling.

The annual address before the Illinois State Medical Society by the President, Dr. Earle, *on the responsibilities and duties of the medical profession regarding alcohol and opium inebriety*, reads like Brother Jasper's conclusions, "*The world he do move, and the sun him do stand still.*"

The doctor affirms that there are no physical causes which compel men to become slaves to alcohol or opium; that ninety-five out of every one hundred men who are inebriates can reform if they desire; that the appetite for alcohol is not inherited in any way; these statements and the arguments he uses to sustain them are fully half a century behind the march of scientific progress. The supposition that all the advocates of the disease of inebriety are mercenary, with no other object but personal gain, is a most natural inference in one whose ideas are so far belated. Such ideas and protests, no matter how loudly uttered, are never heard

on the front lines of advance. Dr. Earl is a most excellent man, but this address makes it evident that he has lost his "grip" of this subject.

The second edition of Dr. Kerr's book on *Inebriety, its pathology, etiology, and treatment*, etc., has been published, and this fact is a most significant hint of its increasing value and popularity. The first edition of this work, as a pioneer effort in a new field, was of unusual excellence and clearness. This edition is a still better work, and shows a marked evolution, and a wider and more scientific cast of thought. This is the most complete work published at present, and we congratulate the author in having given the world the first and only text-book in this new and most fascinating field of science—a field that in the next century will attract the best minds of scientists. P. Blakiston, Son & Co., are the American publishers of Philadelphia, Pa.

STUDIES IN THE OUTLYING FIELDS OF
PSYCHIC SCIENCE. BY HUDSON TUTTLE. M. T.
Holbrook & Co., Publishers, New York City.

This work of two hundred and fifty pages gives the evidence of *psychic ether*, thought-atmosphere, thought-transference, sensitiveness, the relations of body and spirit, the physical and psychic evolution, and other kindred topics. The tone and spirit of the work is scientific, and the grouping of the facts are clear and convincing. As a new view of this mysterious realm of mind and matter it is charming and suggestive, and will well repay a careful reading. We commend the book to all students of psychology.

We especially call the attention of our readers to the Humboldt Library of Science advertised in this number. The volumes issued every month are of increasing interest

and value to every physician. They are both the cheapest and most valuable works of science published. The last number, "*On Hypnotism, its History and present Development,*" is one of the most timely works of the hour. No physician who would keep up with the times can afford to be without this work.

THE National Temperance League of Great Britain are to hold a national congress at Birmingham of a week's duration in October. Cardinal Manning, Canon Farrar, Drs. Kerr, Richardson, and others will take part.

The *Popular Science Monthly*, D. Appleton & Co., publishers, New York city, will be found more essential and valuable than the daily paper. The popular discussions of all scientific subjects by the leading authorities in these fields gives the reader a clear view of the scientific advances of the age. This monthly should go into the libraries of all medical men; of equal importance with the medical journal.

The *Homiletic Review*, published by Funk & Wagnals of New York city, grows more and more valuable each month. Some of the best theological thought appears in its pages by the most practical writers and preachers of the day. This magazine is invaluable to all scientific and thinking men.

That most excellent magazine, the *Wide Awake*, D. Lothrop & Co., publishers, Boston, Mass., becomes more and more interesting each month. Although a young people's journal, it is as much of a literary treat to all classes as *Harper's* or the *Century*.

The *Scientific American* is essential to physicians as a weekly picture of the march of science in the world of mechanics, and should be on the office tables of all physicians.

Editorial.

INEBRIATE HOSPITALS AND HOMES.

Where are the best places for the care and treatment of inebriates? Is such a home or asylum capable of restoring desperate cases? Where are the homes that make prayer the corner-stone of treatment? Where are the asylums from which no patient can escape or get spirits? Can you send me a list of the asylums in this country, with statistics of the cures?

These are some of the many inquiries that come to this office, with increasing frequency, every year. Often these inquiries refer to some home we have never heard of, and in many cases our letters of inquiry to these places are unanswered. We have tried to know every asylum and home in this country for the care and treatment of inebriates, and whenever the managers of such homes have refused to communicate with us, we have satisfied ourselves that they were unworthy of public confidence.

These inquiries indicate that the general public are not aware that the care and treatment of inebriety has not yet passed the age of experiment. Excepting a half a dozen institutions that have been organized for years where inebriety is studied as a disease, all the others are empirical, experimental, and in their infancy. The best asylums are the oldest and those managed by scientific men, who do not trust to moral means for cure, and who do not expect to restore every case, and who use all remedies and methods that science and experience have found useful. Such asylums never promise that patients cannot escape or relapse while under treatment, or that absolute cure will follow their efforts. But they are prepared to make it difficult to escape, and more difficult to relapse. They are prepared to use all

the means known to science to build up and restore the entire man. They are prepared to apply medical, psychical, and hygienic remedies, based on experience, and thus make permanent restoration more of a certainty than in any other way.

Permanent cures follow from the work of such asylums, but the exact statistics are difficult to determine, for the reason that the data does not extend back but a few years, and the number of cases are yet too limited. Each of these asylums fully recognize the preliminary character of their work and are far more confident of future success in treatment than in any present attainments.

Opinions as to this or that asylum, and what they can or cannot do, cannot be given, often for the reason that some of these places claim unusual success and make unusual pretensions, when both the institution and its management are of recent origin.

The homes where prayer is the chief remedy are practically unknown to science and rational common sense. And the homes where the pledge and appeals to the moral nature of man are equally unknown except by their extraordinary claims of permanent cures.

The care and treatment of inebriety is one of the most difficult fields of medical science, requiring the greatest talent. Scientific, medical, and psychological training, with excellent judgment and executive ability and long experience, are the absolute essentials for all managers of asylums. The asylum itself must have surroundings and appliances adapted to this particular work for success in the treatment.

Homes that are opened in all sorts of places and with all sorts of surroundings, and managed by clergymen, reformers, and laymen of all ranks, and even women, and all without experience or comprehension of what inebriety is, are of necessity failures. No personal enthusiasm or money can prevent their certain death.

Homes that are opened to cure the lowest incurable of this class on the street, without anything but moral ap-

pliances, are always failures. Homes that are opened and managed by saintly men and women, without knowledge, and with only zeal, are failures. Homes that boast of a great number of cures, homes that claim some specific plan of treatment, or some special secret remedy, or some form of diet, or some kind of special moral force or culture, are all suspicious and open to grave doubts.

A list of places where inebriety is treated in this country would include a curious group, beginning in the lowest form of empiric effort, and extending through all the gradations up to the best scientific asylum work.

To all our correspondents we would say, that the homes and asylums of this country are prepared to furnish all kinds of treatment for the inebriate. Faiths, isms, specifics, diets, mind cures, pledges, and everything known and guessed at, are on trial in the different so called asylums. There are probably nearly a hundred such places open to-day in this country. To the more thoughtful, all this confusion of effort is a certain promise of a larger, better knowledge of inebriety and the real methods and remedies for accurate treatment. The stage of empiricism will be soon followed by one of scientific inquiry, and the few scientific asylums will then have the warmest support of the profession and public.

AN INEBRIATE COLONY.

In a recent history of Botany Bay and Van Dieman's Land, some very curious facts appear. In 1787, England found that hanging men for theft failed to diminish that crime, but rather increased it; so it was determined to export them to some far away country. The first importation to Botany Bay contained over a thousand persons, who, after they were landed, were given a large ration of spirits. From this time, a demand for spirits was created, and for years the supply was equal to it, until the government grew ashamed, and forbade the importation and sale of spirits to these people. This was not carried out, and for thirty years

both the penal colonists of Botany Bay and Van Dieman's Land were notorious inebriates. These criminals became inebriates, and the history of their acts is a sad record of morbid and insane impulses, uncontrolled and unregulated. All the degenerations which sprung from crime or were the basis of crime were intensified into inebriety. In a few years the old criminals were exterminated, and their descendants all died. The penal emigrants also died early. And finally severe legal restriction was put on the sale of spirits, and a better class of emigrants came in, who aided in the enforcement of the law, and thus saved the community. Thus, for nearly half a century a colony of inebriates were fostered by the government. The very curious experiment was seen of criminality merging into inebriety and final extinction.

John Smith shot and killed Peter Brown. Smith was a physician, a man of excellent character and reputation. Four years before the crime, his wife was killed by a runaway accident. From that time he had drunk occasionally to excess. On this occasion Brown, a quack doctor, had threatened to have him arrested for procuring abortion, unless he paid him a certain sum. In a state of alcoholic frenzy he killed Brown. The question of the mental condition of Smith at the time of the crime was affirmed by the judge to be one for the jury alone to decide, and not for medical witnesses. A jury of three farmers, one blacksmith, two carpenters, four laboring men, and two merchants, all declared they had not formed an opinion of the guilt or innocence of the prisoner, and were accepted to decide one of the most difficult questions in psychological science. The medical witnesses called were not permitted to give all the facts bearing on the condition of the brain of men who drank, or to state the teaching of science as to the soundness or capacity of such cases to realize or control their acts. The state's attorney had only one motive, and that was to convict the prisoner at all hazards. The lawyer for

the defense set up the claim of insanity and entire innocence, and doubt of his shooting Brown in any way. The testimony of witnesses was twisted, suppressed, exaggerated, and obscured in such a way that even the judge could not give a clear summary of the actual facts that had been sworn to. The local press commented each day on the guilt or innocence of the prisoner with the greatest presumption and dogmatism. Public opinion followed these comments with warm sympathy. The jury was out two days trying to agree, and twice the judge was called on for advice, then in despair they returned a verdict of guilty. The sentence of death was finally carried out, and the farce ended. If crime following inebriety is a moral state that can be determined by metaphysics, then the jury of farmers and tradesmen can decide upon it. But even then the *farce* of only allowing a few half expressed truths, bearing on this or that phase of the history to come out, and conducting the examination in a bitter partizan spirit is a travesty on justice. The new light on the functions and operations of the brain demands an adjustment of our laws and practices to conform with it. The man who, while poisoned by alcohol, commits crime, should be the subject of scientific inquiry. His case should be examined by persons acquainted with such cases. Then the conclusions would approximate to real justice.

It is one of the curious errors that alcohol stimulates the imagination, and gives a clearer, more practical insight into the relation of events of life. The whirl of thought, roused up by the increased circulation of the blood in the brain, is not imagination; it is not a superior insight or conception of the relation of events, but is a rapid reproduction of previous thoughts, soon merging into confusion. The inebriate never creates any new ideas or new views; all his fancies are tumultuous, blurred, and barren. The apparent brilliancy is only the flash of mania, quickly followed by dementia.

Alcohol always lowers the brain capacity, and lowers the power of discriminating the relation of ideas and events. After a few periods of intoxication, the mind under the influence of spirits is a blank, blurred page. The poets and orators who are popularly supposed to make great efforts under the influence of alcohol, only repeated what had been said before in a tangled delirium of expression. The physicians who are supposed to have greater skill when using spirits, have paralyzed their higher brain centers, and have lost all sense of fear or appreciation of the consequences of their acts, and hence act more automatically, simply doing what they have done before without any clear appreciation or discrimination of the results. The inebriate is the best of all imaginative persons, and the one in whom the higher brain forces of judgment, reason, and conception are the first to give way. The man who uses spirits to give mental force and clearness is doing the very worst thing possible to destroy this effect. Alcohol is ever and always a paralyzant. It never creates anything; it never gives strength or force that did not exist before; it never gives a clearer conception, and power of execution, but always lowers, destroys, and breaks down.

THE LEGAL RECOGNITION OF INEBRIETY IN COURT.

Every year it has been more and more apparent that inebriety must be recognized as a degree of insanity, and the legal responsibility lessened or removed entirely. The more accurately these cases are studied, the more apparent the physical conditions which cause inebriety and lead to crime become. Every scientific advance of our knowledge of the brain and its functions throws more and more doubt of the correctness of the legal and metaphysical view of inebriety. The efforts to apply these theories practically are such lamentable failures that this doubt is further strengthened. The treatment of inebriates by courts as sane and fully conscious

of their acts, in all cases, is an error that reflects on the intelligence of the legal and public sentiment which controls. Some judges have recognized this, and permitted a degree of irresponsibility to be proven in certain cases. Others hold tenaciously to the old law, and are of course applauded by a public sentiment which dreads change and new views, no matter how correct. A recent decision by Lord Young in the Glasgow Circuit in the case of *Crown vs. Elizabeth Short*, shows clearly the coming change in the legal treatment of these cases.

The facts were as follows: Elizabeth Short gave birth to a child on June 2d. On June 6th she was drunk, and she continued drunk constantly until the 8th of July, when she had delirium tremens. Her husband was absent. On July 11th, the child died of debility and ulceration of the bowels caused by starvation and neglect.

Lord Young refused to allow a charge of culpable homicide, based on the foregoing facts, to go to the jury.

Affirming that he must entirely negative the theory that it was murder or culpable homicide, or any crime punishable by law in that court, for a woman or a man either to take too much whisky or to get delirium tremens, which was insanity, . . .

"He could not say there was crime unless there was intention to injure."

On this the talented editor of the *Medico-Legal Journal*, Mr. Clark Bell, comments as follows:

"This dicta of Lord Young will be, doubtless, made the subject of assault by those who hold that drunkenness is an aggravation of the offense, because produced by the act of the accused, and by those who have been prone to say that 'drunkenness does not excuse crime.'

"It is a straw that indicates that judges are beginning to inquire how far the inebriate is responsible for acts committed in the drunken frenzy. If the *intent* is the important and controlling element in crime, why shall it be eliminated against the inebriate who has no consciousness of his acts

when committed, and be enforced against the forger, the thief, the murderer, and, indeed, the whole catalogue of crimes, when the question of intoxication or inebriety is out of the case?"

It is clearly evident that a new jurisprudence of inebriety has come, and that in the next century the real facts will be recognized, and practical measures based on them used.

It is a source of much pleasure to note that Dr. D. D. Mason's papers on statistical studies of inebriates, published in this JOURNAL and elsewhere, are very extensively copied in European journals, and have formed the basis of some interesting articles, which are appearing from time to time. Prof. Kavalevsky's work on inebriety quotes from Dr. Mason in a very flattering way, and also Dr. Bare's work on alcoholism mentions his studies as the best of any yet published.

The *Sanitarian* is a very able journal in its special field, but like many great men it has some great and deplorable weaknesses. When it says "that the true criminal is one who gets drunk, and when drunkards are made odious, and pampering them as unfortunates ceases, getting drunk will speedily go out of fashion," we turn away in sadness. The spirit of Rev. Cotton Mather, the great witch hunter, still lives in such sentiments. These are fatal symptoms of devolution in a progressive journal, which undoubtedly is functional, and hence in better conditions will pass away.

The English Society for the Study of Inebriety gave Hon. Clark Bell of New York, a fine reception in London in July. Dr. Kerr moved some very congratulatory resolutions, acknowledging the interest Mr. Bell had created in inebriety as president of the Medico-Legal Society, and his valuable services in clearing up the confusion about this sub-

ject legally. This was seconded by some very flattering speeches, after which Mr. Bell replied in a very graceful speech, referring to Dr. Kerr's work in this new land of the study of inebriety.

The Washingtonian Home of Boston, Mass., under the care of the veteran Dr. Day (so well-known to our readers), has lately received the ten thousandth patient. This is the largest number ever treated by any asylum in the world. The statistics of this army of inebriates will be invaluable, and throw great light on some hotly disputed points of controversy. We congratulate Dr. Day and the Washingtonian Home for this rare experience, and feel stronger for the fact that we have at last a mass of clinical experience that fully sustains the position we have taken regarding inebriety as a disease and its treatment.

We have given the first chapter of a biographical sketch of Dr. Turner's life and work in this number, and will complete it in the next. It will be evident to the reader that no general history can do justice to this subject. It has been thought best to give at present an outline sketch, and in the future gather the facts and data for a thorough study of this very remarkable man and the great work he has accomplished.

The last report of the English commissioner of lunacy gives the statistics of one hundred and thirty-six thousand persons who have been admitted to insane asylums during a period of ten years. Of this number over eighteen thousand became insane from drink, and twenty-eight thousand inherited insanity either directly or indirectly, and the causes in twenty-eight thousand were unknown. Thus alcohol and heredity are the most active promoters of insanity.

Clinical Notes and Comments.

THE HEREDITARY FACTOR IN ALCOHOLISM.

The *Temperance Record* gives a large part of Dr. Sollier's prize essay on the above subject, which has created unusual interest in Paris and been published in the *Progress Medical*:

THE ROLE OF HEREDITY IN ALCOHOLISM.

Thus put, the question comprises three terms: 1. Can alcoholism be hereditary? 2. If it be hereditary (similar heredity), in what measure and in what way does the heredity act? 3. Is similar heredity the only one which intervenes in the genesis of alcoholism, or may there, on the contrary, be dissimilar heredity; and in this case what are the affections to which the descendants of alcoholism are most predisposed? Can alcoholism be hereditary? The title itself of the subject would almost permit of the question being resolved affirmatively and to leave that for examining the other questions which spring therefrom. We could do so the more as the answer to this first question disengages itself quite naturally from the remainder of our work. Still, we prefer to establish in the first place on what base we rely for admitting once for all the heredity of alcoholism.

HISTORY.

All the ancient authors, doctors, or philosophers, who have had occasion to speak of the penchant for drink, have noted its frequent transmissibility from parents to children. But they did not attach great importance thereto, and their remark had only an interest of curiosity. They only saw in it the transmission of a similar taste from one generation to the following. They did not foresee the different factors which favor in its descent the increase of this taste. Especially, they did not see the difference there was between vice and

disease. To them the drunkard was a vicious fellow, not a diseased one. And, besides, how would they have been able to make this difference? Alcoholism did not exist then, or, to put it better, they did not know it, and if they discerned the effects of drunkenness on the individual, they ignored almost completely its influence on the species, and consequently the intimate origin. We must come to the works of Magnus Huss to find alcoholism become a morbid entity and take its place in the nosological list. But before coming to this period let us look back and see how the doctors at the beginning of the century judged the question of heredity of taste for drink. Without wishing to make here a detailed history of the question of heredity of alcoholism, we shall seek especially to see through what phases it has passed in order to arrive at its present state. It is only in passing, in studying the particular points which this complex question includes, that we shall examine the opinions and works of authors who have more especially written on this subject. Gall admits the transmissibility of the penchant for drink, and mentions a Russian family in which the father and grandfather died prematurely victims to their passion for strong liquors. The grandson from the age of five manifested the most pronounced taste for the same liquors. Girou de Buzareingue, in his book on generation, says that he knew a family in which this unfortunate taste was transmitted by the mothers. Esquirol the first thinks that drunkenness is sometimes the result of unhealthy training, and remarks that drunkards are often predisposed to nervous affections. Is there not in this in germ the idea of mental degeneration involving alcoholism? Louis, in his dissertation on hereditary diseases, refuses to admit this species of heredity, and, by a singular contradiction, he cites two cases in which the heredity of alcoholism is manifest. The first is that of the family of Voiture, whose father and one of whose brothers was passionately fond of good living and wine, contrary to Voiture, who only drank water. The second case is that of a family whom Louis knew personally, and in which

the father and some of the children inherited the gout with drunkenness from their father. This is a very interesting observation if one thinks that gout belongs to the arthritic family and has very close affinity with the neuropathic family. Prosper Lucas, in "Herédité Naturelle," is of an opposite opinion to Louis, and completely admits that drunkenness may be transmitted hereditarily. The works of Bruhl, Cramer, and Carpenter, do not throw much light on the subject before us. It is Magnus Huss's work which definitely created the term *alcoholism* at the same time that he made known the physical and psychical disorders which the abuse of alcohol produced. Thenceforth alcoholism appeared in its true character, as a morbid entity, with well defined symptoms. But up till then there was only kept in view the influence of alcoholism on the individual taken separately. Morel, with his grand idea of degeneration, took up this study and had no trouble in showing that alcoholism was one of the gravest and most rapid causes of the degeneration of descendants, either physical or mental. At the same time, it was remarked that many alcoholics were degenerate, mad, or epileptic. Thus, it was necessary to go beyond the individual and seek in preceding generations the cause of this degeneration, immediate cause of alcoholism. Alcoholism then became the manifest result of the degeneration of the individual, and this degeneration was itself the consequence of heredity at least in the majority of cases. But as among the hereditary antecedents, among the blemishes of the ascendants, one often found only alcoholism, one has been naturally led to think that alcoholism could be transmitted by similar heredity. In the first case, heredity creates among the descendants a feeble ground, incapable of resisting, and which consequently is favorable from all points of view to the breeding of alcoholism. In the second case, it is alcoholism itself which creates at the first onset the predisposition to alcoholism in the descent in the same way as dipsomania, kleptomania, and neuropathic affections may be transmitted hereditarily. Since, all writers have recognized

this double influence in the genesis of alcoholism; on the one hand similar heredity, on the other dissimilar heredity. But the latter has been little studied. In effect, most authors have examined especially the lineage of alcoholics. Now in this we find on the one side alcoholics — that is to say, from alcoholism by similar heredity, and on the other all the rapid physical, intellectual, or moral degeneration which afflicts the descendants of alcoholism. The study of lineage, pushed far enough, shows us, then, similar heredity, but it does not show us dissimilar heredity. In order to see its influence one must search the ancestry of alcoholics. It is by analyzing this that we may find out whether alcoholics alone can produce alcoholics, or whether, on the contrary, the neuro-pathic diathesis in general is not susceptible of engendering it. This said in passing, we now arrive at the opinions of contemporary or modern authors, to whom applies the remark we have made on the question of the heredity of alcoholism. Thomeuf (thesis 1859), Contesse (thesis 1882), and Marcé, perfectly admit this heredity, but without insisting on it. Lasègue establishes it clearly, and gives in the development of alcoholism the greater part to the individual subject. Lancereaux and Fournier think that in certain cases the tendency to alcoholic excesses is the result of unhealthy innate dispositions, and that drunkenness is certainly occasionally the fact of a transmission. M. Lancereaux distinguishes two forms of alcoholism: acquired alcoholism and hereditary alcoholism. But under the name of hereditary alcoholism he designates all the accidents which may arise among the descendants of alcoholics from the single fact of the alcoholism of the parents. We think that, taken in this general sense, this term can only establish a regrettable confusion. If it be preserved, this would be, it seems to us, to designate solely the alcoholism which results from hereditary antecedents, either similar or dissimilar, of the individual. Thus, in the hereditary alcoholism of M. Lancereaux we find everything — epilepsy, mental debility, idiocy, perversion of instincts, etc. — everything except perhaps alcoholism, which

only figures for a small part in the heritage of alcoholics. If, then, these different states were specifics of alcoholism like the varied accidents of hereditary syphilis, there would be no great evil. But there is nothing of this. Thus do we claim the name of hereditary alcoholism for the alcoholism which has its source in the pathological state of the ascendants. Or, rather, we would propose to suppress it purely and simply, for that would only seem to create still more confusion. Let it suffice us to have indicated in what sense we understand it. The important point does not lie in the words, but in the facts; and how much clearer science would often be if it were lightened of a crowd of synonyms which every one pretends to interpret in his own way, and which most often serve to lead to obscurity so near to error. Mr. Ball, in his article on "Delirium Tremens," also gives a large part to hereditary predisposition in the development of alcoholism in the first place, and afterwards delirium. M. Déjerine, in his thesis on heredity in diseases of the nervous system, after having remarked on the analogy which exists between the different deliriums due to intoxication by alcohol, chloral, morphine, adds: "If there be analogy of manifestations, it is quite rational to conclude that there is analogy of subject, and that our alcoholics are so, thanks especially to their delicate, excitable personal temperament. Heredity in sum is still there." Moreau, of Tours, has well set forth the fact when he proved that haschich only acts on subjects eminently predisposed. Taguet ("Heredity in Alcoholism") admits in alcoholism, as in all the affections which are transmitted to the ascendants, a heredity of similitude, and a heredity by metamorphosis, and insists especially on the unhealthy manifestations produced by alcoholism of the parents in the children. Despite the title of his work, he examines — for which we reproach the majority of authors mentioned above — alcoholism in its whole, that is to say, at one and the same time, in its ascendancy and especially in its descendancy, more interesting, perhaps, from a social point. We have been more than once deceived in this way in verify-

ing the complete absence of information as to the hereditary antecedents of alcoholics in a number of theses or papers where one had the right to expect to find them. M. Féré ("Les Alcoolisables") shows by two very clear examples the inference of heredity in the predisposition to alcoholization. Here intervenes new data previously noticed: it is no longer alone the tendency to alcoholism, it is the susceptibility to intoxication which is meant. Lasègue has particularly insisted on the different degrees of aptitude to intoxication presented by the different individuals, and he has remarked, if there are some powerless to alcohol, there are others on the contrary who suffer from the influence with an extreme sensibility and rapidity. These are the *alcoholizables*. Mr. Ball and the majority of authors think also that the son of an alcoholic or a madman is infinitely more sensible to the physiological effects of spirituous drink than any other individual. We have found some very interesting data on the question which is before us in two recent theses: that of M. Grenier and that of M. Legrain. M. Grenier, studying the degeneracy of alcoholics (thesis 1887), shows by numerous observations that those of weak mind are very much inclined to excesses of drink, and how, hereditary alcoholics, they become themselves alcoholics by the same processes as their ancestors. We see alcoholics not only beget weaklings, but also alcoholics. Drinkers beget drinkers, and that in a notable proportion—about half the cases. M. Legrain (thesis 1886), summarizing the opinions of M. Magnan and his school, thus expresses himself: If there are in effect two propositions which one has the right to express to-day, they are the following—cerebral inferiority, direct cause of excess of drink, finds its origin most often in heredity, in other terms drinkers are degenerates; and this other, alcoholism is one of the most powerful causes of mental degeneration, in other terms the sons of alcoholics are degenerates. The connection which exists between alcoholism and mental degeneration resolves itself then into this terribly vicious circle which to-day finds its confirmation in

an infinity of medical observations which are most eloquent. And further: There are few observations of degenerates in which one does not find noted somewhere the excess of drink; inversely, it is notorious, at least as far as regards downright alcoholics, that their descendants number idiots, imbeciles, debilitates, and neuropaths, of whom the most common are epileptics. Opinion, then, appears to us to be fixed in France on the question of heredity of alcoholism and answered by all affirmatively, if not for every case of alcoholism, at least for a large number, perhaps the greater part. But what is thought abroad? The Belgian Academy of Medicine has twice had a competition on "the effects of drunkenness on degeneracy." If it be permissible to consider the reports made in these competitions as the expression of current general opinion, we may say, there also heredity is regarded as one of the most powerful causes of alcoholism, and that similar heredity and the heredity of transformation are also admitted. "Heredity in drunkenness," says one of the reports, "is subject to the laws of psycho and neuropathic transmission." Such is also the opinion in Germany. But it is especially in England and America that alcoholism is regarded as a hereditary disease. In America it is specially Crothers who has made himself the defender of these ideas, sufficiently adopted, moreover, in order to lead in 1871 to a sort of congress of the various temperance societies which exist in that country, at which the following resolutions were passed: 1. Alcoholism is a disease; 2. It has as its prime cause a constitutional susceptibility in regard to alcoholic drink; 3. This constitutional tendency may be hereditary or required. Crothers, well placed for studying all questions relating to alcoholism since he is at the head of a drunkards' hospital, thinks there is no disease more intimately connected with the physical and mental conditions of the race. Drunkenness, he says, is positively transmitted from one generation to the following one, and this diathesis or predisposition may be met with in two or three generations. He goes also so far as to

consider drunkenness as epidemic, similar in that to certain neuroses, and obeying a great psychological law as yet unknown, drunkenness appearing at certain times with great intensity, at others dying out and returning at the end of a certain period. Thus everywhere public opinion is the same; alcoholism may be hereditary. This is only a question of more or less. But this idea is of more or less recent date, and if we look at the places through which we have passed to arrive there, we shall find three great ones. In the first place, and it is the longest period, alcoholism, in the acceptance in which we understand it to-day, is not known. What is known is drunkenness. Its transmission from generation to generation is well marked, but only an affair of resemblance is seen therein, which is nothing astonishing, between the character of parents and children. The second period is a period of transition. It corresponds to the great movement which arose in the study of mental alienation in France at the beginning of this century. The frequent connection which exists between madness, weakness of mind, and drunkenness, was perceived. It was proved that frequently alcoholism only preceded madness. The penchant for drink came to be no longer considered as a vice, but as often allied to an unhealthy disposition. But a stop was made there. One did not dare to say it was a disease, and still less a disease which was often hereditary. Lastly, the third period commences with Magnus Huss and Morel, who sprang into notice almost at the same time by a coincidence which presents itself often enough in the history of the evolution of ideas. The works of the first furnish the second the base in some way of his study, so elevated and exact, of degeneration in the human species; for the part which he gives to alcoholism in his book is known. Since, this movement commenced by Morel has done nothing but grow.

SIMILAR HEREDITY.

In the historic birdseye view above we have seen that it is of similar heredity that most of the authors have spoken

in describing the heredity of alcoholism. It is by verifying this heredity in the first place that we have come to ask ourselves whether alcoholism itself, which could be transmitted under the same form, did not have its origin in something higher, and if, instead of being spontaneous as it appeared in certain cases, it was not necessary to see in it the result of a hereditary predisposing influence, sometimes different. It is thus that from the notion of similar heredity we have passed to that of dissimilar heredity, less common however, which explains in part how it has attracted so little attention. Doubtless it is not without interest to know the principal opinions of authors on this particular point of heredity of alcoholism, opinions on which we have not wished to insist in our general historic sketch. We shall pass in review those who have a special opinion either for or against similar heredity. Davis, for example, says (*Chicago Journal of Nervous and Mental Diseases*): "Statistics, it is true, show that children born of alcoholized parents have a special tendency to the abuse of strong drink. But before considering this tendency as hereditary it is necessary to know: 1. Whether the mother during the time she suckled her child did not make a more or less habitual use of alcoholic drinks which, passing into her milk, would have been able to leave an impression on the child and give it the taste; 2. Whether parents addicted to an excess of drink did not often give their children alcoholic drink in the hope of curing their indispositions—an object which they themselves in similar cases seek to attain by the same means." The very extended experience of the author permits him to affirm that nineteen times out of twenty, alcoholism, called hereditary, was simply acquired in one of the ways he had indicated. He nevertheless recognized that the state of alcoholism of one of the ancestors might render the descendants more nervous and impressionable to the action of alcohol. Doubtless that is a most exaggerated assertion, and which would not be upheld. In the first place, it would be necessary that the mother should be an alcoholic, even momentarily. Now,

the contrary is most often the case, and alcoholism comes from the father. It is not, then, in the milk of the mother that the child gets the taste for alcohol. As to the fact that parents addicted to alcohol cause their children to acquire a taste for alcohol by giving them alcohol for one object or another, it is undeniable. But how is that, in countries where the habit of giving children *cau-de-vie* to help dentition and strengthen them, or for other causes, it is precisely the children of alcoholics who contract this habit with most facility? Is it not more rational to admit that opportunity has only developed in a precocious manner a latent disposition due to heredity? Moreover, the theory invoked by Davis would be at the most applicable in only an infinite minority of cases. Thomson de Kappeln, in a work on alcoholism and its transmission by heredity, gives some interesting facts. As in so many other maladies transmissible by heredity, the hereditary predisposition in alcoholism often only passes into a state of disease till an advanced age. Sometimes those predestined have no taste, and have even an aversion for alcoholic drinks. Ordinarily robust and intelligent, it is with age, to renew their powers, that they become alcoholics. It is a sort of latent heredity, which is clearly pointed out by Taguet (of "Heredity and Alcoholism") when he says: "The heredity of similitude presents itself under two aspects—in the latent or slumber state, when it demands for its production, example or imitation, or else it breaks out suddenly and quite unexpectedly without its being possible to seize any relation of cause to effect. Some people come into the world drunkards as others do criminals." According to Thompson again, alcoholism presents also this trait common to hereditary affections, namely, that they are not transmitted only from father to son; heredity is not solely direct, it may spare one generation and attack the following ones. This fact, which he indicates simply as possible, the author of one of the memoirs on the heredity of alcoholism to the Belgian Academy of Medicine, gives as constant. "The author," says the report, "has

been able to verify in alcoholic heredity the remarkable fact as to the immunity of the direct descendants and the revelation of alcoholic manifestations in the second generation." It is not so frequent, as we know, to see scrofula and rheumatism skip a generation and attack the second, and as to alcoholism we do not fear to affirm from now that the opinion of the author is at least much exaggerated, if not quite erroneous, as we shall examine afterwards. The same author distinguishes three varieties in similar homo-type heredity: 1. A variety which he says is not discussible; this is the transmission of a defect or vice of the parents to the children; 2. A second variety consists in the transmission of the symptoms of chronic alcoholism to a lineage which has never abused drink; 3. A third manifestation of hereditary alcoholism is impulsive madness. Strange precocities are observed, perversions of the moral sense of the instinctive monomania. This division is not exempt from criticism. If the remark of Crothers: "Drunkenness is a vice or a disease, it cannot be both," be true, the first variety of the author is nothing less than discussible. As to the second variety, it is, if we are not mistaken, with the hereditary alcoholism of Lancereaux, as M. Gendron has described it in his thesis, that we have to deal. We have seen above that it was necessary to think of this deceiving denomination of hereditary alcoholism, and what it covers. The accidents described in this form should be placed alongside those which form part of the hereditary baggage of the sons of drunkards — namely, idiocy, epilepsy, mental debility, etc. In a word, this second variety described by the author concerns only the lineage and not the ancestors of hereditary alcoholics. It should not, therefore, find a place here. His third variety may be retained. It sets forth, in effect, cases where hereditary influence is not doubtful — namely, the precocity, sometimes astonishing, of taste for strong liquors presented by some descendants of alcoholics. Crothers (*Medical Record*) professes on the subject of latent heredity in alcoholism an opinion which agrees with those of Thompson and Taguet quoted above.

In many cases, he says, alcoholism has a preliminary period more or less long before the usage of certain alcohols develops itself, and in some cases before the appearance of the first alcoholic accident. Alcoholism appears then under the influence either of the wear and tear of age, of a nervous shock, or of a disease. A commencement is made by drinking to assuage pain, then more is taken, and then it cannot be dispensed with. In this case the subject was a drunkard in the latent state. Is not this drunkenness in the latent state, which thus develops under the influence of a habit which has become an irresistible need, what the English designate as dipsomania, and what Mr. Ball distinguishes as an acquired form of dipsomania? Of all the opinions we will not and must not retain only the fact superabundantly proved of the real existence of similar heredity in alcoholism. Little does it matter to us how it has been desired to explain it and what influences have been invoked for its development. It is our business to study precisely in what condition heredity shows itself in alcohol, and what place it occupies in its genesis. But before entering upon this study it seems important to us to establish the proportion of hereditary alcoholics to those who are not so, or, to state it better, who do not appear such. As far as concerns hereditary alcoholics, we will divide them into two categories, answering to the two forms of similar and dissimilar heredity. We have found in the authors no precise indication in this respect, as well for heredity in general as for the two varieties which it includes. M. Grenier is alone, to our knowledge, in touching upon it in a few words when he says: "The hereditaries of alcoholics themselves become alcoholics in notable proportions, about half the cases." Lancereaux says also that nothing is more common than to see the sons of drunkards deliver themselves at an early age to an excess of drink. But hitherto, we believe, no statistics have been established on a solid base, and we are limited to approximations which are doubtless nearly true, since the majority of authors seem to agree, but which would certainly gain by being replaced by

the brutality of figures. It is a hiatus we have endeavored to fill, and here are the results at which we have arrived. We have sought the origin of alcoholism in 350 families of which one or several members were attacked. Out of these 350 families we have been unable to find any avowed hereditary antecedent capable of explaining alcoholism, and we have, therefore, been forced to admit its non-heredity in 209 cases, or 59.71 per cent. In 141 cases, on the contrary, alcohol was united to conditions of heredity. Similar heredity was observed 106 times, dissimilar heredity thirty-five.

If we analyze these cases of similar heredity we find: Transmission between two generations, ninety-three times; between twice, ten; between four, three. In certain cases we have observed that alcoholism, after being transmitted directly between two generations in one branch of the family, was transmitted indirectly in skipping from the first to the third generation to a member of another branch of the same family. In one case, alcoholism, after being transmitted directly between the two first generations was transmitted collaterally for the third and fourth between which it was again transmitted directly. These leaps in the march of the heredity of alcoholism are very rare, and in the immense majority of cases alcoholism is transmitted direct from one generation to the following one. In short, alcoholism is hereditary in 40.29 per cent. only of the cases, and is not so in 59.71 per cent.

We cannot be satisfied with these figures, for they are tarnished by errors, and certainly on this side of the truth. This is why: Those who were affected in the families in which we have sought and met alcoholism, and in which we have endeavored to discern the causes, were all inferior degenerates — idiots, epileptic, etc. It is very certain that in a large number of our observations in which we have encountered any cause of alcoholism, the avowed antecedents have been very attenuated, either voluntarily, involuntarily, or by ignorance. We cannot invoke a greater or less susceptibility

to physical and psychical decay, it is precisely heredity which creates it. When, therefore, we see a very profound degeneration the consequence of an inconsiderable heredity we are nearly right in thinking that we are not completely taught, there are things which escape us. It is very evident that we only speak here for the majority of the facts, because we believe that under the influence of a particular circumstance alcoholism may assume a character of such gravity, from the hereditary point of view, that it almost fatally entails a complete decay of the race. Let us mention first conception during drunkenness, then the cerebral traumatism and all the conditions capable of making alcoholics from acquired cerebrals, with whom nervous disorders which intervene suddenly add by their intensity to the slow and progressive action of heredity. Moreover, a negative fact always lends itself to disputation and proves nothing. Our statistics show us the minimum per cent. of hereditary alcoholism. There is here a positive fact which does not admit of discussion. That which is no less evident to us is that the figures are much below the truth. Such as they are, however, they supply us with a sufficiently firm basis for affirming that in nearly half the cases alcoholism is hereditary, and that not only is it subject to heredity in general, but especially to heredity of similitude, which presents itself in 75.70 per cent. of the cases against 24.30 per cent. in which dissimilar heredity is met. This datum once established, our statistics enable us to establish a second in order to answer the question which naturally arises: In how many consecutive degrees can similar heredity in alcoholism be observed? According to Darwin, alcoholism is transmissible up to the third generation, and drunkards' families become extinct in the fourth after having descended the scale of physical and intellectual degradation. This is also the opinion of Morel as to the course which the most habitual of the successive transformations which the families of drunkards undergo. First generation: Alcoholic excesses, depravity, moral brutalization. Second generation: Drunkenness, maniacal

fits, general paralysis. Third generation: Hypochondriac tendencies, melancholy, suicidal and homicidal ideas. Fourth generation: Intelligence badly developed, stupidity, idiocy, and probable definite extinction of the race. According to this table one might think that it only admits similar heredity in two degrees. But if, following it, it is the general fact it none the less quotes several others in which the tendency to drink has made itself manifest during three generations. Here is, in effect, what we may deduce from our statistics. In the greater number of cases the transmission of alcoholism is made between two successive generations. Out of our 106 cases of heredity alcoholism, we have in reality found transmission ninety-three times to the second degree. Transmission to the third degree, inasmuch as less often observed, ten times. Lastly, transmission to the fourth degree was only met three times, but it exists in a certain way, and that suffices for stating that the descendants of alcoholics do not always become extinct in the fourth generation. Maybe there are transmissions to the fifth degree which we ignore on account of the difficulty met in procuring exact information as to such a large number of generations. It is only in historic families that such examples could be met with.

DR. GARMIER presented some interesting statistics of the insane in Paris, at the recent congress of *Mental Medicine*. He asserted that alcoholic lunacy and general paralysis were the most frequent types seen. The other forms of mania remain more or less stationary. The duration of alcoholic insanity has lessened greatly in fifteen years. Over a third of all cases of mental aberration that came under observation are alcoholic. Studied carefully they are found more delirious, more violent and dangerous, which is owing to the toxic nature of the alcohol. General paralysis has more than doubled in frequency and is often associated with alcoholics, and moves along parallel lines. Interstitial encephalitis follows most frequently from alcohol.

CONSUMPTION OF LIQUOR.

The Bureau of Statistics of the Treasury Department at Washington has made an interesting report on the production and consumption of wines and spirituous and malt liquors in the United States and the leading countries of Europe. It shows a decrease for this country of more than 50 per cent. per capita in the consumption of distilled spirits since 1840, an increase of almost exactly 100 per cent. in the consumption of wines, and an increase of 900 per cent. in the consumption of malt liquors. It is probable that the decrease in the consumption of spirituous liquors per capita is much greater than is here indicated, as large quantities were distilled and consumed at home fifty years ago of which no returns were made to the authorities.

When compared with the leading nations of Europe, the United States offers no discouragement to those who believe liquor drinking an evil and desire to see it diminished. In 1840 the consumption of distilled spirits per capita in this country was 2.52 gallons, while in 1887 it was only 1.18 gallons, as compared with a consumption in Great Britain of 0.98 of a gallon per capita, 1.09 gallons in Germany, and of 1.24 gallons in France in 1885. In wines the United States showed, in 1887, a consumption of 0.54 of a gallon, Great Britain 0.38 of a gallon, and France 26.74 gallons in 1886. But it is in the consumption of malt liquors that the United States falls far behind the great European nations. The malt liquor drunk per capita in this country in 1887 was 11.96 gallons, as compared with 32.88 gallons in Great Britain, and 24.99 gallons in Germany.

Those who believe in looking at the temperance question in a practical light and of taking human nature into account in dealing with it, will find much to encourage them in these statistics. They prove that the use of ardent spirits has fallen off in a remarkable degree, until now there is very little more consumed per capita in this country than there is among the European nations, and that while wines and malt liquors

have been substituted in a large degree they are yet not consumed in any such quantities, and are not likely to be, as they are in older countries. This certainly shows progress. The advance made in temperance reform during a century past is but faintly realized by the present generation. It would shock the moral sense of the people of to-day to have a true representation given of the abuses of liquor in the times of the Revolutionary Fathers. Even the Puritan youths were so addicted to the use of ardent spirits, and the consequent disgraceful carousals that the Massachusetts Legislature strove to check it, and passed, in 1789, a law "to encourage the manufacture and consumption of beer and ale."

To-day any state would be disgraced the Legislature of which was compelled to pass an act saying: "Mynisters shall not give themselves to excess in drinkinge or riott, spendinge their tyme idellye by day or night," as the Virginia Legislature once had to. The Pennsylvania Legislature also, in order to lessen the drinking of rum, passed a bill "for encouraging the making of good beer," but it does not seem to have had much effect, and the famous Rush temperance movement was begun afterward to stop the enormous consumption of rum in the rural districts of this State. Much yet needs to be done to educate public opinion up to the necessity of restricting and lessening the well-known evils springing from an indiscriminate use of liquors, but those who cite the accurate statistics gathered by the well-equipped bureaus of the present day as proof that we are worse than our fathers in this respect simply argue their own lack of information.

GINGER INEBRIETY.

Dr. Day of Boston has lately given some very interesting testimony in relation to ginger drinking. An officer of a church accused the pastor of being a ginger inebriate. A trial followed and Dr. Day was called as an expert. The peculiar conduct of the clergyman, with the great number of extra ginger bottles found in his private study, with other evidence,

pointed to the conclusion that he was a secret ginger inebriate. He said that for a long time he was convinced that the use of alcohol, plain and simple, was being superceded by a preference for new-fangled nerve tonics that possessed substantially the essential properties of alcohol without the disagreeable reputation, and to discover what peculiar forms this new manifestation was taking.

For thirty-one years he had been treating nearly one hundred cases yearly that displayed all the symptoms of alcoholic delirium when the cause of disease was not, strictly speaking, alcoholic indulgence.

Besides chloral and cocaine inebriates, of which we always have more or less, I had a man who used to get furiously drunk on quinine. He'd stagger about and yell like a regular whisky drunk, and he'd go through all the successive stages of a common intoxication. He'd get jovial and pleasant first, and then cross and savage, and finally maudlin. He was a very interesting case. I have seen some cases suffering from the effects of the use of patent medicines, for instance. Many of these nerve tonics and so-called patent foods are cultivators of an intemperate habit that results in mental and physical manifestations very similar to the indications of excessive alcoholic indulgence. A well-known proprietary food was nothing better than an alcoholic stimulant.

In regard to Jamaica ginger, the doctor said: "It takes the strongest kind of alcohol to preserve Jamaica ginger, and the tincture of this substance is extremely inebriating when used even in small quantities. I knew a patient who used to get drunk on a spoonful or two of this stuff, and there isn't any doubt that a great many people use it as an intoxicant. Anything almost acting as a stimulant to the nerves may be used as an intoxicating agent. I knew a man who got quite drunk on a strong cigar, and I've had several cases of physical derangement of pronounced alcoholic appearance from excessive smoking. Tobacco and alcohol seem to have a very close identity. Many a drunkard will rest comparatively content when deprived of his liquor, if a good supply

of tobacco is furnished him, and many an inveterate tobacco user falls into drink when he is deprived of the favorite weed. I knew a confirmed tea drinker who was badly shattered from the excessive indulgence in what the poet calls "the cup that cheers, but not inebriates," and there are instances of mild intoxication resulting from too much tea drinking.

"The tendency of these days seems to be toward new forms of inebriety, and the effect of alcoholic indulgence now is much more injurious, because the practice of adulteration has become so extensive. Then the odium which attaches to the use of alcohol has led many people in high places to cultivate a habit of secret tippling, and such people frequently devise an original method of securing the effect of inebriety without subjecting themselves to the charge of using alcohol. Consequently the use of outlandish and sometimes deadly drugs is awfully on the increase."

TO MEDICAL MICROSCOPISTS.

In behalf of "the American Association for the Study and Cure of Inebriety," the sum of one hundred dollars is offered by Dr. L. D. Mason, vice-president of the society, for the best original essay on "The Pathological Lesions of Chronic Alcoholism Capable of Microscopic Demonstration."

The essay is to be accompanied by carefully prepared microscopic slides, which are to demonstrate clearly and satisfactorily the pathological conditions which the essay considers. Conclusions resulting from experiments on animals will be admissible. Accurate drawings or micro-photographs of the slides are desired. The essay, microscopic slides, drawings, or micro-photographs, are to be marked with a private motto or legend, and sent to the chairman of the committee on or before October 1, 1890. The object of the essay will be to demonstrate: *First*, Are there pathological lesions due to chronic alcoholism? *Secondly*, Are these lesions peculiar or not to chronic alcoholism? The microscopic specimens should be accompanied by an authentic alcoholic history, and other complications, as syphilis, should be excluded. The successful author will be promptly notified of his success, and asked to read and demonstrate

his essay personally or by proxy, at a regular or special meeting of the "Medical Microscopical Society," of Brooklyn. The essay will then be published in the ensuing number of THE JOURNAL OF INEBRIETY (T. D. Crothers, Hartford, Conn.), as the prize essay, and then returned to the author for further publication or such use as he may desire. The following gentlemen have consented to act as a committee:

Chairman — W. H. BATES, M.D., F.R.M.S., London, Eng.,
(President Medical Microscopical Society, Brooklyn.)

175 Remsen Street, Brooklyn, N. Y.

JOHN E. WEEKS, M.D.,

43 West 18th Street, New York.

RICHMOND LENNOX, M.D.,

164 Montague Street, Brooklyn, N. Y.

ENCOURAGING SCIENCE.

The Vermont Microscopical Association has just announced that a prize of \$250, given by the Wells & Richardson Co., the well-known chemists, will be paid to the first discoverer of a new disease germ. The wonderful discovery by Prof. Koch of the cholera germ, as the cause of cholera, stimulated great research throughout the world, and it is believed this liberal prize, offered by a house of such standing, will greatly assist in the detection of micro-organisms that are the direct cause of disease and death. All who are interested in the subject and the conditions of this prize, should write to C. Smith Boynton, M.D., Secretary of the Association, Burlington. Vt.

HISTORY OF THE FIRST INEBRIATE ASYLUM IN THE WORLD, at Binghamton, New York, by its founder DR. J. E. TURNER. Including an account of the Woman's National Hospital and its opponents.

This volume of over five hundred pages gives a graphic picture of the struggles and trials of a great pioneer and pioneer work, and is a valuable cotemporaneous history of humanitarian effort that sounds more like fiction than the actual history of a great asylum's work. It gives an inside view of the workings of Binghamton asylum and the causes of its failure, and describes at length the men and the influences which gathered about it. A small edition of this

work is published, and the work will become more and more valuable in the years to come.

Published by the American Publishing Company at Hartford, Conn. Copies sent by mail post paid for three dollars

A religious paper has lately become greatly discouraged at the increased wickedness of the times. The burden of its lament is that the increased use of morphia is making hosts of liars; that the growing use of alcohol is recruiting great armies of licentious, immoral people; that avarice and money-getting is raising up crowds of thieves, swindlers, and bank robbers; that politics are filling public offices with dishonest, crooked people; tobacco is sending legions to the grave with cancer; that animal food is brutalizing millions of people; that luxury and comfort is creating sin everywhere, etc., etc. It would appear that this paper and its editor are very near to that "mysterious bourne," and are already dropping down to the great ocean of oblivion.

The Medico-Legal Journal for September is a very valuable number, and reflects great credit on its editor, Hon. Clark Bell.

The Inebriates' Home, under the care of Dr. Blanchard, has recently erected a large addition to its buildings, and is now the largest inebriate asylum in the world.

The American Journal of Psychology, edited by Dr. Hall, will hereafter be published at Worcester, Mass., Dr. Hall having been made president of the Clark University. This is the strongest and ablest journal published in the English language in this department of science. Every student of brain and nervous diseases should be a subscriber.

To those familiar with the use of bromidia (Battle) no argument like this is necessary, for it speaks for itself by ful-

filling the indications for which it is administered with a certainty, efficiency, and harmlessness which elicit at once the delight of the prescriber, and give to the profession the assurance of possessing one remedy at least which approximates so near to infallibility of action as to justify the title of *specific*.

R. L. Polk & Co.'s Medical and Surgical Register of the United States is now being compiled, and to insure correct insertion, physicians should comply promptly with the publishers' request for name and graduation particulars.

R. L. POLK & Co., Detroit, Mich., Publishers.

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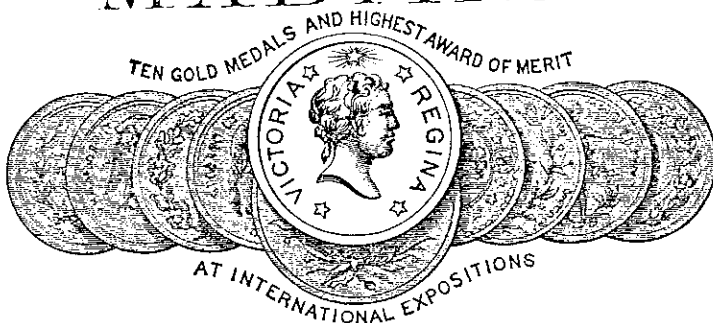
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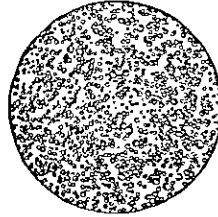
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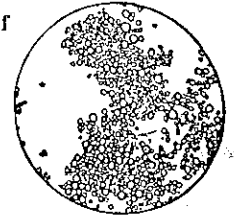
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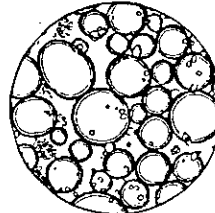


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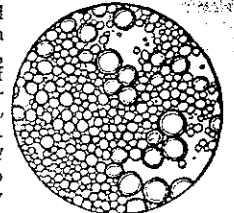


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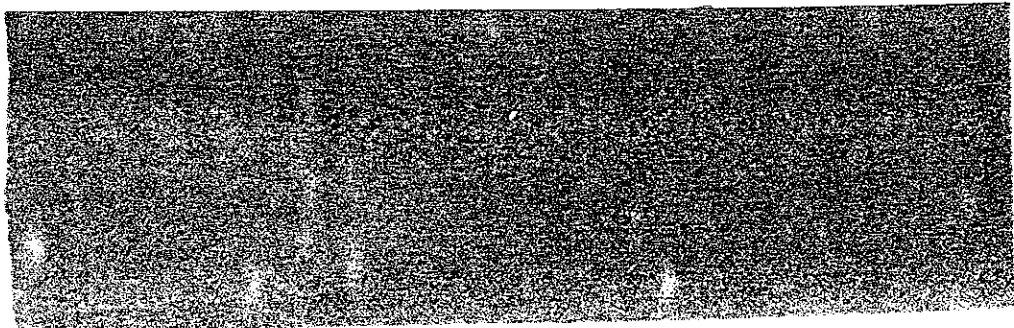
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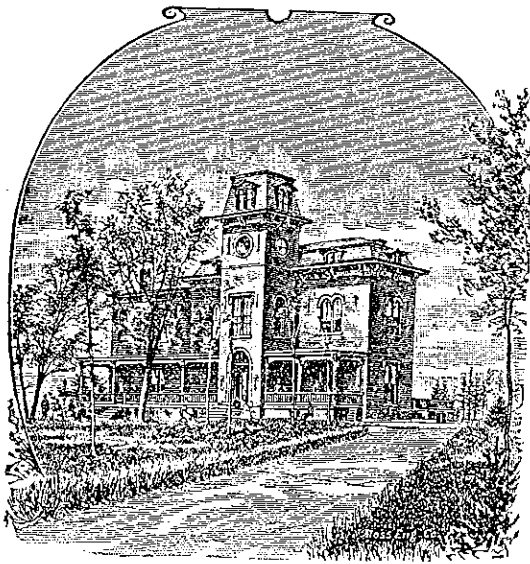
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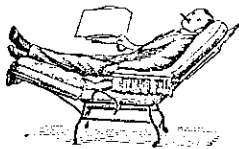
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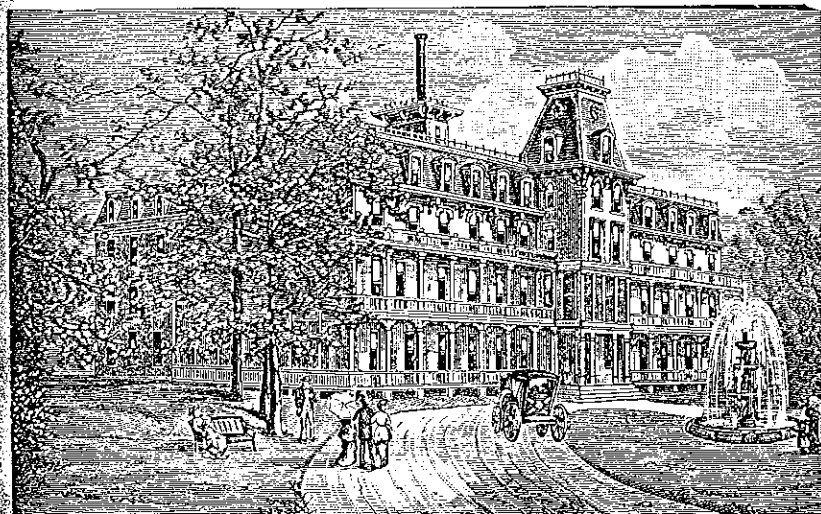
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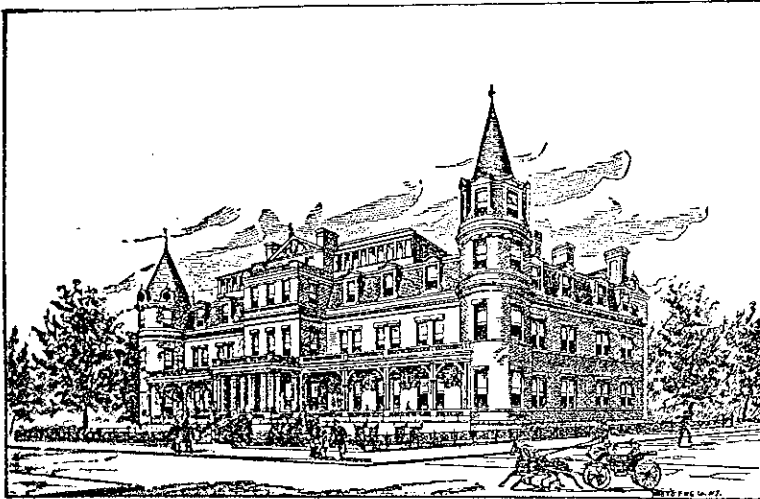
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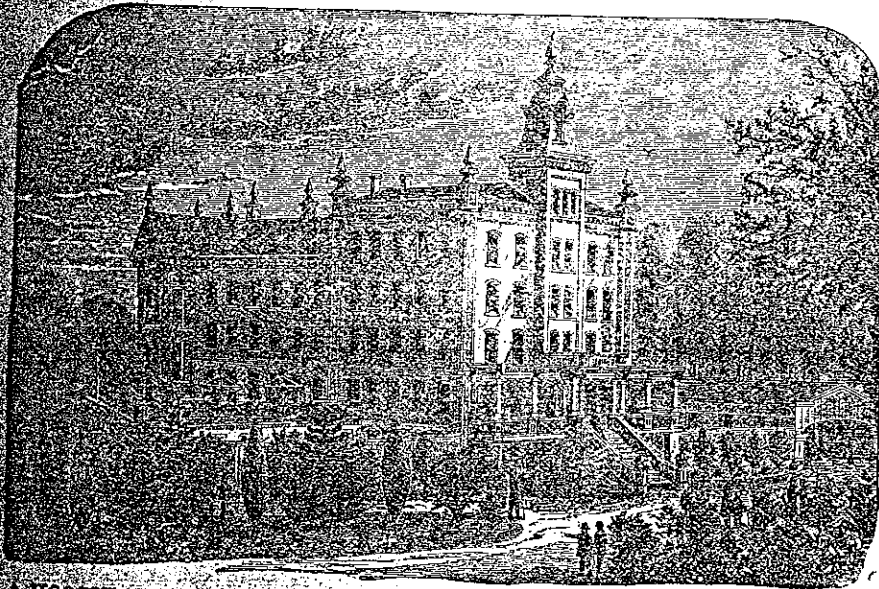
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THE BUILDINGS are constructed for this special purpose, and they are more complete and better adapted for the treatment of Dipsomania and the Opium Habit than those of any similar institution in the world. They are situated on one of the most attractive points on the Bay of New York, and stand on a bluff within one thousand feet of the Narrows, commanding a full view of the whole Eastern Shore of Manhattan Island, also the broad expanse of the Upper and Lower Bay, dotted with the representative sails of the nations, and enclosed on the horizon by the blue outlines of the Jersey Coast to the North and the Atlantic Ocean to the South. There are separate dining-rooms, lodging-rooms and parlors, billiard and ball-rooms. There is also a lecture-room for religious services, readings, concerts, etc. All the New York papers and other newspapers and periodicals are regularly taken.

THE TREATMENT is systematic, thorough and adequate. There has been no change in the staff of medical officers since the inauguration of the Home.

THE DISCIPLINE is that of patients originated with and is peculiar to this institution. Being determined upon a strictly commercial basis, it is made to depend upon the character of the lodgings and other accommodations which the patients or their friends are willing to pay for.

By the available arrangement we are enabled to offer board, washing and medical attendance at rates varying from \$15 to \$30 per week. Those paying \$16 and upwards, according to size and situation of the room, are provided with a single apartment and a seat at table in private dining-room—the accommodations in the select rooms and the table being in every respect equal to those of a first-class hotel. Terms of admission may be had on terms to be agreed upon.

THE RESTRAINTS.—Our system of restraint is compatible with the fullest liberty for each boarder to avail himself of all the recreation, amusement and enjoyment which the billiard-room, park and all grounds, readings, lectures, concerts, musical exercises, etc., afford.

THE DISCIPLINE.—The established code of discipline is comprehended in the observance of THE GOLDEN RULE, as universally understood by gentlemen and ladies in the guidance of well-regulated family and social relationships.

Patients are received either on their application or by due process of law. For mode and terms of admission apply to the Superintendent, at the Home, Fort Hamilton (L. I.), New York.

Two daily mails and telegraphic communication to all parts of the country.

HOW TO REACH THE INSTITUTION FROM NEW YORK.—Cross the East River to Brooklyn on Fulton Street Ferry, and proceed either by Court street or Third ave. horse cars to transfer office; or, cross from Fulton Ferry on Hamilton Avenue boat and proceed by Fort Hamilton cars to transfer office thence by Hamilton cars to the Home. Request conductor to leave you at the Lodge Gate.

THE CASCARA SAGRADA FAMINE.

The consumption of Cascara Sagrada has been so large that there is at present a great dearth of the genuine bark. Even the inferior varieties adulterated with spurious barks which are offered in the open market have greatly advanced in price, and advices from the habitat of Cascara Sagrada state positively that no more of the genuine bark will be obtainable until next fall. The undoubted result of this scarcity will be to flood the market with many inferior and medicinally inert preparations of the drug.

At this juncture it gives us pleasure to state that we have never relied for our supplies of Cascara Sagrada on the inferior article offered in the market, but in accordance with our usual methods have strict attention to obtain supplies from reliable sources.

We have now on hand a large and ample stock of the genuine best quality *Rhamnus Purshiana*. We shall not, however, take advantage of the market and raise our price, but shall continue to supply only the highest quality preparations of the drug at our regular price. We believe physicians in view of the great value and of our special knowledge of Cascara Sagrada obtained by long and careful study of its properties and manufacture will see the propriety of specifying only Cascara Sagrada of our manufacture. Send for our Working Bulletin and Monograph on *Rhamnus Purshiana*.

The Pepsin Question!

What Pepsin do you prescribe, and why? If you will examine the facts we present, you can have only one opinion as to Pepsin for future. Circulars fully presenting the claims we make for our scale Pepsin, with a sample of it, will be mailed to physicians who wish to investigate it.

We can only say here that in appearance, solubility, digestive strength, and permanence, it is far superior, and admittedly so, to any Pepsin hitherto introduced.

A careful search through the prescription file of a prominent New York pharmacist reveals the surprising fact that fully 75 per cent of physicians neglect to specify when prescribing Pepsin, but simply order "pure Pepsin." Now they might as consistently order "solution of cocaine," without designating any particular strength.

"Pure Pepsin," as it is known commercially, is not a definite principle; neither has the Pharmacopoeia as yet established a standard of strength, and, consequently, every producer is a law unto himself. It is obvious that digestive activity is the sole criterion of therapeutic value in preparations of the proteolytic ferment, and a physician is consequently enabled to predict with reasonable certainty the comparative effect that may be expected from the various Pepsins found in the market.

The following tabulated statement of the comparative quantities that should be prescribed in order to accomplish the same purpose may, therefore, enable them to so write their prescriptions that the best shall be obtained at the lowest price.

These figures are based upon each manufacturer's claim, without regard to the discrepancies which we know to exist; but when the fact be considered that our Pepsinum Purum in Lamellis, with a digestive power of one to 2,000, is marketed at a price comparing favorably with that established for many of the inferior varieties, the economy of its employment becomes patent. If it is desired to administer sufficient of the ferment to dissolve 1,000 grs. of albumen, obviously $\frac{1}{2}$ gr. of the aforementioned Pepsin will be sufficient. To derive the same therapeutic effect from one for which the manufacturer claims a power of 1,200 8-10 gr. will be necessary. A power of 1,000, 1 gr.; a power of 900, 1 1-10 gr.; a power of 700, 1 4-5 gr.; a power of 500, 2 grs.; a power of 150, 6 7-10 grs., while a power of 50 (which is the standard adopted by our Pharmacopoeia), 20 grs. will be necessary.

PARKE, DAVIS & CO.,

Manufacturing Chemists,

Detroit, Mich.

NEW YORK BRANCH:

OFFICE, 60 Maiden Lane.

WAREHOUSE AND SHIPPING DEPOT, 21 Liberty St.

CRUDE DRUG WAREHOUSE, 218 Pearl St.