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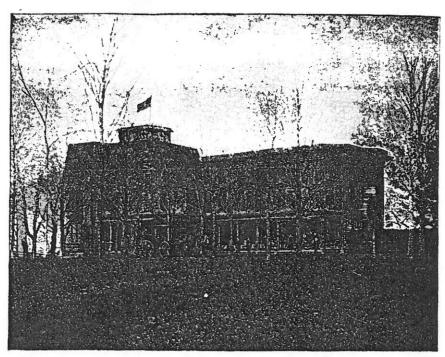
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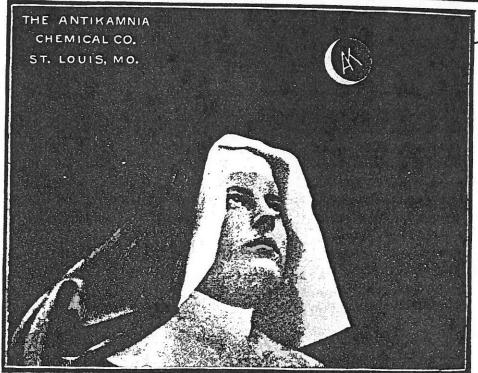
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INEBRIETY AND ITS "CURES" AMONG THE ANCIENTS.*

By WILLIAM L. BROWN, L.R.C.P., L.R.C.S., EDINBURG.

The conditions among the ancient drinkers were pretty much the same as those met with to-day. The ancients were familiar with the consequences of excessive drinking. The same results received attention at the hands of the ancient philosophers and physicians. One can hardly help noting, however, that in their philosophy total abstinence took a very subordinate place. They aimed rather at promoting a physical condition which fitted the drinker to indulge at will without harm to himself, they tried to avert the negative chemiotaxic influence of wine, to produce in the drinker "immunity" from the effects of alcoholic poisoning, and failing that, to remedy the unhappy conditions which followed over-indulgence.

Ancient physicians when called upon to treat these cases divided their remedies into two classes: (1) Those administered before drinking began. (2) Those required after the debauch. In the first place they tried "to prevent the fumes of the wine from rising upwards to effect the brain," and sec-

^{*} Read before the Society of Inebriety of London, England, January 13, 1898.

ondly "to eliminate or drive out the 'fumes' of the wine either by the urine (diuretics) or by the bowels (laxatives)." This we learn from Galen, who, in his "Composition of Medicines," gives many prescriptions on these lines derived from all departments of pharmacopæial knowledge and from every kingdom of nature.

One of the simplest and most primitive ways of preventing evil results from drinking was the custom of diluting the wine with water and flavoring it with ingredients, having an aroma more or less delicate and pungent, which were supposed to prevent the wine from causing intoxication, such as ginger, pepper, spices, and cheese.

The Romans mixed their wines with honey, and a kind of oxymel was prepared by mixing wine with sea salt, vinegar, and oil of roses. The medicated wines, of which Hippocrates has given so detailed an account, contained "horehound," "squills," "myrtle berries," and many kinds of essential oils. They were prepared for medical purposes only.

Both Greeks and Romans used to mix their wine with "resin" (Plut. Symp. v., 3. 1) and with sea water, probably to enable it to keep better. The resin wine is still the favorite drink among the Grecian "hoi polloi" of to-day. The salt water, according to ancient therapeutists, was supposed to promote digestion and to keep the wine from going to the head.

Wreaths and crowns were considered of great medical importance for preventing and palliating drunkenness, and two Greek physicians wrote treatises on their medical virtues (Pliny, xxi., 3). The most popular form, both in Greece and Rome, especially for convivial meetings, being the "wreath of roses." At first only woolen fillers or "head bands" were used to prevent intoxication, but afterwards leaves and flowers were made into garlands and worn at feasts. These were constructed of myrtle leaves, cabbage leaves, ivy, violets, roses, and such like. Pliny tells us the favorites were the myrtle and the roses (Pliny, xxi., 31). The ointments and perfumes

were brought in with the flowers. When more than usually merry the ancients even went the length of decorating the bottles and glasses as Vigil tells,

"Tum Pater Anchises magnum cratera coronæ Induit, implevitque mero."

"Then Father Anchises (as chairman) puts the wreath round a large jar and fills it up with wine." Sometimes they encircled not only the jars, but their heads and even their whole bodies with these "safety wreaths."

Dress formed a very important item in these drinking scenes. The heads were carefully decorated with various forms of animals' skins, and the ladies attached great importance to the kind of dress and jewels they wore. The "amethyst" hue was the "drink resisting" color. The ladies wore amethystine clothes and jewels, and the amethyst formed the favorite ornament for drinking vessels, right up to the time of Nero, who seemed to have a prejudice against them (Seut. Nero, 32). The amethyst formed an artificial means of preventing intoxication, or of curing it, by hanging it round the neck, or fastening it round the body, or else by taking it internally. It was a pharmaceutical article at that time said to act by its "hidden properties."

Nowadays there are many who recommend a vegetarian diet as the best preservative against the snares of alcoholic liquors. The historical origin of this idea comes from ancient Egypt. Herodotus informs us that at Egyptian tables rich stimulating articles were supplied to excite the palate before drinking, and especially boiled cabbage, which was reputed to carry off wine from the stomach if eaten before the drinking began. As a preparatory dish, cabbage long held its place in Egypt. Aristotle recommends "cabbage, olives, and sweet wine" for the prevention or alleviation of drunkenness. Besides cabbage, Pliny recommends "leeks or porret (Bk. xx., c. 6) for allaying thirstiness and despatching the fumes which cause drunkenness." From him also we learn that, "The

Greeks hold that colewort is contrary to wine and a very enemy to vines, and more particularly if it be taken fasting or at the beginning of a meal, and preserveth a man from drunkenness; and eaten after drink it riddeth away the fumosities of the brain and bringeth him to be sober." The German nowaday: still keep up the custom of eating cabbage before and with their deckel glass of beer in the form of the juicy "sauerkraut."

The bitter principle of certain vegetables was recognized centuries before it could be isolated by chemical process, and it played a great part in the prevention and treatment of drunkenness. This principle is still used; but the origin of its employment for quenching the fumes of wine is lost in the vista of antiquity.

This important group included in ancient times such things as wormwood in raisin wine, bitter almonds (either whole or in the form of an emulsion), peach stone kernels and leaves of the peach tree, hops, crocus, "bitter roots and mullet." Those who held that drunkenness arose from the acid part of the wine gave anti-acids and bitters to cure it. The action of "bitters" was, then as now, a therapeutic puzzle. Hops and crocus, peach stones, and many bitters acted very well, but Dioscorides (Bk. i., c. 25) showed that absynthe, though a bitter stuff, actually caused drunkenness when given in raisin wine.

The action of the essential oils was specially represented by the rue plant. Powdered rue in water was praised by Pliny. "Is a man disposed to drink freely and to sit square at it? Let him before he begin, to take a draught of the decoction of rue leaves, he shall bear his drink well and withstand the fumes that might trouble and intoxicate his braines." (Pl., Bk. xx., c. 13, p. 57.) Here permit me to illustrate the influence and importance of Pliny on Saxon learning, and consequently on our popular medical beliefs. In Sextus Placitus, who was the first medical compiler of Pliny, and

whose works formed the first standard text-books translated into the Saxon tongue (B. M. MS., Harl. 5294; Bod. MS., Hatton, 76), we learn that the herb rue acted on sore and swelling of the eyes, was a remedy for stupor, for dimness of vision, and for headache—all symptoms of intoxication. Anglo-Saxon drinks are described in the Beowulf and also in the Anglo-Saxon poem of Holofernes. These people did not restrict themselves merely to mead and beer. Large importations of wines were made from Spain, Italy, and France. Olaus Magnus in his "Historia de Gentibus Septentrionalibus" states that these northern people "sweat in their contentions who shall at one or two or more draughts drink off a huge bowl."

The Saxon doctors never thought of treating drunkenness or inebriety as a disease, simply because they only treated observed symptoms. One looks in vain through Saxon literature for any such word among lists of diseases or among the remedies they employed. The symptoms they treated were swelling of the eyes, unconsciousness, dimness of vision, headache, bloatedness, and such like. For these the Saxon wise women had their charms, their potions, their unguents, mostly derived from Pliny through Sextus Placitus and Marcellus. They also treated their cases by operation, principally bleeding and blistering, pinching, and other barbarities. In Sextus Placitus we read that the herb rue acted very well upon "sore of the eyes" and swelling of the eyes, and was a common remedy for dimness of vision and for headache. this and much more is taken from Pliny and handed down to us through our Saxon fathers, and they are remedies which may yet be found employed by the wise women of to-day who inhabit those remote and unsophisticated districts where the remains of the purest Saxon is still the mother tongue of the populace. "If you eat the flower of rue," says Pliny (25, 13) "it is a good preventive of drunkenness, driving out the wine by the urine and preventing it from being absorbed."

a modern explanation of the diuretic properties of oil of rue. Milton in his "Paradise Lost" mentions the old Saxon belief in the effect of rue on the optic nerve:

"Then purged with Euphrasy and rue
The visual nerve, for he had much to see."

The gin-drinker of the present day sometimes still drinks "rue gin" probably as a preventive of the ocular effects of gindrinking, since gin in itself is reputed by its votaries for its diuretic properties. Aelian mentions myrtle seeds, verjuice, crab-apples, medlars, mulberries, asparagus, origanum, thyme, as well as rue, as suitable for mingling with wine to prevent temulentia. Nutmegs were recommended because they close up all the pores and drive out wine by the urine.

This was the ancient way of expressing the diuretic and antiseptic action which most of the essential oils possess. And here we may remark in passing that the treatment of drunkenness by diuresis was practiced long before Dr. Alexander Peddie's time, or before the liquor ammonium acetatis was a pharmaceutical preparation.

Perhaps the most curious of all the remedies used by the ancients to prevent the effects of wine came from the mineral kingdom. Theophrastus says that great drinkers, when they drank for wager, use to take the powder of pumice stone before setting to. Concerning this Pliny observes that they must " quaffe lustily indeed, for unless they be filled with drinke they are endangered by the aforesaid powder." It is remarkable that in the poetry of the Norsemen from the earliest times, say up to the thirteenth century, which Professor York Powell has classified and translated, a similar advice is given in these words: "Whenever thou drinkest ale, take earth's strength as antidote, for earth acts against ale, fire against sickness, oak against binding of the bowels, the corn ear against witcheraft, the rye against the biting sickness, runes against charms, earth drinks up floods." The mountaineers in some Alpine regions have still belief in the efficacy of certain kinds

of sandy soils and use it for the same purpose as did the ancient Romans.

In Pliny's time the application of the gold cure was simplicity itself. "Gold," says he, "that was brought in a place to do a shrewd turn, wash it well and sprinkle those to be cured with the water." In Pomet's time, the seventeenth century, "its use gave a great opportunity to mountebanks to cheat with impunity. This sort of cheat is what generally succeeds best, for patients are prepossessed in favor of such medicines as carry great names and have a specious appearance. It is cried up for a miracle, and the effect is attributed to the gold." The Arabians first administered gold internally, thinking as many vainly imagine nowadays, that it must have great virtues, though in all probability it has really none. Even in reconstructed forms of administration it is a mere physiological absurdity.*

Perhaps the simplest and best remedy history has yet discovered, and the one most commonly used at the present day, is one referred to by Pliny. "Passing good it is," says he, "to drinke faire water other whiles between. In like manner such as use ordinarily to be drunk and are lightly never sober shall not do amiss to take a good draught of cold water presently upon their liberal pouring in of wine, for it will forthwith dispatch and discuss those fumes which cause drunkenness." (Bk. xxiii). Some waters had more effect than others in achieving this result. Salt water was supposed to aid digestion and keep the wine from going to the head. There was an Arcadian fountain whose waters was reputed to make those who drank it so abstemious of wine that they could not even bear the smell of it. "Let a man," says Pliny, quoting from Varo, "drink of the Lake of Clitoius he shall take a misliking and loathing for wine." (Bk. 31, c. 2.) Galen recommended barley water (prisane), wheat water (sorbilio), and toast water to prevent the stomach from being too

^{*} For other pretentious drink cures, see " Chemist and Druggist," January 30, 1897.

much upset. This water cure has recently been revived. "He that drinketh shall thirst again," "but," say some doctors, "he that drinketh of the water that I shall give him shall never thirst." Such would fain have us believe they have discovered springs from the Arcadian fountain in some natural mineral waters with which the pharmaceutical market is so well stored. As to the efficacy of mineral and effervescent waters in the treatment of over-drinking the same differences of opinion exist as were called forth by the learned round the shores of Lake Clitorius.

When the appetite for drink began to pall, the ancient Greeks and Romans provided themselves with articles which stimulated the palate. Horace mentions the African snail and onions as fulfilling the purpose for which thirsty souls now employ the anchovy to assist their cloyed appetite for liquor.

"Tostis marcentem squillis recreabis et Afra potorem Cochlea."

("You will stimulate anew the clogged powers of drinkers if you give them roasted onions and African snails"), which the Romans esteemed as great delicacies. Perhaps it is for similar reasons that, in the Burgundy districts of France, notably the Côte d'Or, the escargots are regarded with so much favor. On the continent these appetizers are greatly in vogue.

In modern days, in nearly all English-speaking countries, the red herring or salt herring finds favor with the surfeited drinker. He rejoices in hardened salted fish, like the "Speldern," which, in Scotland, has now almost become extinct before the more luscious and aristocratic close fish from Bervie.

On many an English and Scotch bar these appetizers occupy a prominent place in company with olives, shrimps, prawns, sardines, whelks, leberwurst, and the savory saveloy.

Failure seems to have characterized all these prophylactic cures. Not all the cures suggested by all the ancients prevented them, male and female, from becoming intoxicated.

Theophrastus mentions a typical case of an Egyptian lady, of which I give the following translation

"I remember," he says. "a certain woman in Egypt, who, being drunk by a large amount of Cretan wine, became immoderately mad, and afterwards so lascivious that she immediately embraced and kissed every man she met. From laughing and singing, she went over to rage and fury, and wanted to fight everybody, and so strife and confusion was the consequence. All who were in the same house with her took precautions against her, because they were frightened of her. Then she got very sorrowful and lamented a great deal, invoked her dead relatives and friends in a plaintive song, until she was overcome by sleep by which she was altogether cured of her drunken fit." Nothing could surpass the accuracy of this description of the action of alcohol in its different stages.

The ancient physicians aimed at curing the temulential condition by treating the stomach (apepsia), the head (crapula), and removing the morbid product which interfered, as they thought, with the action of the vital spirit, but which modern pathology regards as "an excess of excrementitious matter." "The continuous ingestion of an enormous quantity of liquid, much more substantial than water, which fails to turn on the renal taps sufficiently to ensure its own rapid excretion." *

It is certainly curious to consider how much time and energy our ancient confrères devoted to the endeavor to harmonize their clinical observations with the curious systems of pathology which existed up to the last century. Drunken hilarity was the effervescence of acids and alkaline spirits in the ventricles of the brain. Aristotle said. "One thing seems to the drunken man to be many, because his vision was at no time at rest on the same object." The tendency to lacrymation the "Greetin fou" stage was due to the head being filled with a pipuitous humor which the fumes of the wine made

^{*} A. T. Wilkinson, "Lancet," December 11, 1897, page 1520

thinner. The thickness of speech was due to the absorbency of the tongue and to the mind suffering in drunkenness.

The treatment was perhaps a good deal better than the pathology, consisting at it did. for the most part, in an attempt to bring about a dislike for wine, to eliminate it from the system as quickly as possible by emetics, diuretics, or purgatives, or to act upon it with drugs which possessed "hidden properties." *

Loathing was said to be produced by such things as wine in which an eel had been suffocated, or into which boiled Sea Grapes had been put. If the eggs of the night owl were given in wine it produced this loathing (Pliny, xxx, c. 5), and a "Mullet killed in Rubellium," or "two eels," or a grape fermented in wine had the same effect (Pliny, book xxxii, c. 10). If the lion's stercus was put in wine it created this feeling of disgust (Albert Magnus, "De Animalia," book xxii). Democritus pointed out that the thin humor which flows out of the Sarmentis (a kind of twig), when given to a man without his knowledge, destroyed the desire for wine. The water of the Arcadian fountain, already mentioned, caused even the smell of wine to become nauseating. A Scythian writer gave a good prescription if it were only practical. When asked how to make men "total abstainers" (invinius), Anacharous replied, "If the motives of drunkards can be put before their eves, it is as if that were done which Cicero advised in the case of an angry man, that is to put a looking-glass before his face." What a list of stupid things could be mentioned as having been seriously put forward to create a "loathing for wine," even if one only confined one's self to recent suggestions.

What may be called the first aid in the treatment of temulentia consisted in invoking emesis by the administration of lukewarm water and vinegar, putting wet cloths round the head, and applying cold douches to the genitals, a proceeding still in vogue among sailors who sometimes apply it very vigor-

^{*} Galen, " De Medicine." Book III, c. 108.

ously. Galen recommended sleep as "Nature's sweet restorer," in these cases, after which his directions are "Wash him in a bath of fresh water." This was Mr. Weller's method of dispelling the feverish remains of a previous evening's conviviality and of making himself feel less like a "walking brandy bottle" next morning. Homer records that Circe was found by Jason's companions bathing her head in cold water. Hippocrates gives very full and careful directions for using the bath in such cases.* This was the popular treatment in the time of Persius, who writes:

- "Haec sancte ut poscas, Tyberius in gurgite mergis Mane caput bis, terque, et nocte fulmine purgas."
- "The boon to ask with grace in Tiber's wave you plunge
 And by the morn's immersion a night's debauch expunge."

You will remember how his treatment has found favor among all classes of society, represented in Martin Chuzzlewit by young Mr. Bailley, who informed his friend Poll Sweedlepipe on a memorable occasion that, "Arter late hours nothing freshened up a man so much as an easy shave." It would scarcely be believed that the cold bath treatment was for long in abeyance and in disrepute. In the early seventeenth century, Sir John Floyer advocated in his "History of Cold Bathing" a recurrence to a useful ancient practice, which has held its ground ever since.

The object of all the treatment was to "repress" the vapors. Galen mentions many means of doing this. In his "Composition of drugs" (Book II) there is a chapter on drunken headache ("De Dolore Capitis ab ebrietate"). Most of the preparations used are those already mentioned, ivy, cabbage, fomentations, frictions with unguents, and the application of cabbage leaves to the head. Patients were given barley water (tisane), wheat water (sorbilio), bread steeped in water (panis ex aqua), lightly boiled eggs, lettuce,

^{*} See Account of the Instruments of the Bath, by G. Witt, F.R.S., "Archeologia," 47, p. 338.

and juicy herbs, which were refreshing and cooling. Lentil water and the modern pease pudding were highly recommended. If these did not produce sleep the hot bath was resorted to, frequently assisted by the hot douche.

The main objects aimed at were to aid the stomach, to produce sleep, to relieve headache and nervous symptoms. The shampoo was freely resorted to, and the head was rubbed with sweet smelling unguents and oils, and stimulants were administered. It was customary in ancient times to administer what is now called "a hair of the dog that bit you." I have been unable, though I have searched long, to discover the origin of this phrase in connection with the drinking customs of the ancients. It was certainly held among the Greeks that "if you get drunk to-day, drink again to-morrow to put yourself right." The Greeks had a notion * that they could drive out wine by wine (Oino ton oinon Exelaunein), or kill drink by drinking (Kraipalen Kraipale). The prescription perhaps arose from the fear the ancients had of dog-bite. Ancient works abound in prescriptions for dog-bite, most of them being directed to avert the patient's attention from the injury and to administer a stimulant. Pliny says that the Romans had great faith in the efficacy of drinking burnt hairs taken from the tail of the animal that inflicted the bite, but the hair was always given in a good bumper of the best wine. The death of the dog was ensured by requiring an infusion of its liver to be made and administered, a practice adopted by the Egyptians, Indians, Chinese, as well as the Romans. But I can go no further. I do not know how this expression has connected itself with curing inebriety, or how, or by what means, the expression first became current in this sense.

Stimulation formed a part of the ancient treatment of temuletia: the wine administered varied in strength and quantity according to circumstances. In Italy Sabine wine was preferred as the proverbial "hair of the dog." In England

^{*} Beecher's "Claricles," Scene VI, p. 105, foot-note.

you will remember Christopher Sly's request when he awakened from his debauch:

"For God sake, a pot of small ale!
(Taming of Shrew, Induction, Scene II.)

Indulgence in small ale was the favorite mode of curing the "horrors" in early England, and served to discharge the friendly office assigned by more cultured age to brandy and soda to slake those parched throats and to soothe those shaken nerves that follow over-devotion at the shrine of Bacchus. Modern drink doctors express contempt for all these, and speak of such stimulation as "treacherous and false." They prescribe instead such things as columbo, aromatic spirits of ammonia, compound tineture of cardamoms, as the pick-me-up. But still it is stimulant treatment. In former days the Bacchanalian students of St. John's, Oxford, improved upon this treatment, and had a saying, "Better burn your coppers than drown them," as a reason for drinking a wine-glassful of Worcester sauce the following morning as a restorative.

Our country has played a vigorous part in imposing such restrictions, for it appears that in the Christian ages, and in Christian countries, the custom of partaking of alcoholic liquors grew to such an extent that canonical regulations had to be laid down to check it at a very early period. Probably the first liquor law of this country was that canon of St. Gildas the Wise (latter half of sixth century), which, at the close of the sixth century, sent the drunken monk supperless to bed. St. David was still more severe. He imposed three days penance for the first offense, and forty days if it were repeated. Theodore of Canterbury (668-693) extended the law to laymen, who got fifteen days penance for drunkenness. From this to the principle of prohibition was but a step. The Saxon king, Edgar (959-971), instituted it by reducing the number of alehouses in the villages and instituting the custom of pegging the huge drinking cups then in use. He made it a penal offence for any one to drink beyond the peg. This "drinking to the peg "was not everything that could be desired by the rigid prohibitionists of that time, and was so unsuccessful in the case of the priests that St. Anselm (died 1079) took a stand and forbade priests either to go to "drinking bouts" or to "drink to pegs." A further development of this took place in King John's reign when the Scot Ales or Shot Houses were interdicted.

In the fourteenth century prohibition took the form of a revival of the Sumptuary Laws,* derived in part from the austere and injudicious theory of religion disseminated by the clergy. These laws tended to render all increase of general comforts odious under the name of "luxury." Almost everything was regulated, even the expenses of the table (37 Ed. III, repeated 38 Ed. III), and the dress of the people. These attempts to restrain what cannot be restrained continued down to the eighteenth century, and have not yet been wholly abandoned.

The Assize of Bread and Ale (Henry III) was in a sense a form of prohibition. Any brewer, baker, or tipler breaking the Assize of Bread and Ale to be fined (13 R., 2 c. 8; Lambert, 459). Sometimes the offender was punished corporally.

Other prohibitive measures were found in ignominious and disgraceful treatment meted out to inebriates. The Corporations in those early ages had far more extensive power of dealing with drunkenness than they have at the present day, and they sought out many strange inventions to cure the drunkard. The Corporation of Newcastle invented a jacket by taking a barrel with one end knocked out, placing the inc-briate's head through a hole in the other end and compelling him to promenade the streets like a man in a circular sandwich. Besides this they used the filthy hurdle to drag the poor creature through the open sewers and cesspools of the town. Public ducking of offenders in dirty water was much in vogue four centuries ago. A newspaper describes such an

^{*} Hallam's "Middle Ages," Chap. IX, part ii.

event in 1745: "Last week a woman that keeps the Queen's Head alchouse at Kingston in Surrey was ordered by the Court to be ducked, and was accordingly placed in the chair and ducked in the river Thames under Kingston Bridge in presence of two or three thousand people." The ducking stool or "cock stule" was used for drunken women even in this century. Jane Curran was punished in this way not more than eighty years ago at Leominster (N. and Q., Ser. II, vol. ii, p. 295). It was also used at Kingston on Thames in 1738. In James I time the stocks was a favorite punishment, and in late days many drunken people, among whom we may mention the immortal Pickwick, were wheeled into the pound, to await there the filthy tokens of the playful disposition of the English many-headed. This might almost be called the Filth Treatment of Drunkenness.

Early closing was first tried in Edward I's reign to prevent "excessive drinking and its noxious effects." Laws were passed to secure good ale for the public and the punishment of those who sold inferior or adulterated liquors. Ale conners or tasters were appointed by many corporations to see that the ale was good, and the brewer had to swear on the Blessed Evangelists to "brew good ale and wholesome so far as ability and human frailty permits."

Fines for drunkenness were tried as prohibitive measures first in the reign of James I (4 Jac. I, c. 5). The laws being made perpetual in the same reign in "An act to restrain the inordinate haunting of inns and other victualling houses and the propensities to drunkenness" (21 Jac. c. 7), affording evidence of the beginning of the puritanical spirit which characterized that and the subsequent period. The justices were by this act empowered to convict of drunkenness on the testimony of one witness, within six months after the offense committed, and to impose for the first offense a fine of 5s, or the stocks for six hours: for the second offense to bind over the offender in £10 or send him to gaol (4 Jac. 5). The licensing

justices had to "take bond with good surety for good rule to be kept in alchouses" (5 Ed. VI, 25). Tippling was vigorously put down by four distinct Acts of Parliament in James I's reign. James was a good example of the distinction between preaching and practicing. Mayeme tells us that his death was expedited by his fondness for sweet wines. The innkeeper suffering tippling was fined ten shillings and had his license suspended for three years (1 Jac. 9), (4 Jac. 5), (7 Jac. 10), (21 Jac. 7), and unlicensed alchouse keepers were fined twenty shillings, and failing payment within six days were ordered to be openly whipped (3 Car. I, c. 3). Any person found tippling was liable to a fine of 3s. 4d., or in default "sit in the stocks for four hours." (4 Jac. 5; 21 Jac. 7).

Even wines were under supervision so strict that: "Any under a baron's sonne, or under a 100 marks a yeare, or 1000 marks in goods; keeping to spend in his house any vessels of Gascoigne wines, French or Rochelle wine above ten gallons loseth £10" (7 Ed. VI, 5).

Many records exist showing the effect of these laws, and the fines recorded by churchwardens for the benefit of the poor. Thus the Windsor churchwardens made the following entry in 1618:

"Received more to the use of the poore for drunkenness and absence from church, 11s. 6d." "Item of strangers for drunkenness, 5s." "Vidua Bebe, for tipling in service time, 2s."

Other prohibitive measures of this time can be found recorded in the Salehurst (Sussex) Parish Register for October, 1610. It mentions that, "Henry Turner a prophane drunkard died excommunicate and was buried in the highe way to the terror of drunkards." A still more prohibitive measure of indignity even to the corpse of the habitual drunkard was sanctioned by the reformed clergy of the time, and a record is kept in the Parish Register of Iken (Suffolk), saying that, "On November 10th, 1669, Edward Reeve lately of Iken

Hall returning from Saxmundham 'impletus fortioribus liquoribus' (full of strong liquors) fell from his horse and was killed. The next day towards evening time his body was placed upon a fire and burned."

How shall we deal with those whom, "This abuser of the world, this practicer of arts inhibited and out of warrant," had enfolded in its toils and wounded with its cruel fangs. There is but one way, and I will mention it in the language of our President, Dr. Kerr, which surely should create the desired new public opinion.

"Deal with the inebriate," he says, "as you have successfully dealt with the maniac. Frown not on him as a hardened criminal. Remember he has fallen by the power of a physical agency which has crushed to earth some of the noblest and most gifted. Treat him as a patient, laboring under a baffling and inveterate disease, and amid many discouragements, such a measure of success will follow your true curative treatment, as will gladden your hearts as men, while it will attest your skill as physicians."

TOBACCO WORKERS AS NURSING MOTHERS.

Careful investigations in France have proven that, while the occupation of tobacco working on the part of women does not affect to any great extent the occurrence and progress of pregnancy, yet it does fearfully affect the health of the infants if the mothers nurse them and go back early to work in the factory. It was found that the mortality among the children of these women is considerably more than double that of the children of other working women. The recommendation is that the mother should not return to work while nursing her child, and when compelled to do so, she should feed the child artificially. The recommendation of common humanity is that mothers should never have to work in a tobacco factory at all.

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LEGAL CONSEQUENCES OF INEBRIETY.*

S. V. CLEVENGER, M.D., CHICAGO, ILL.

Though sixteenth century criteria are still propounded in legal text-books, and nominally applied in the trial of criminal cases involving drunkenness, the law as to the responsibility of the inebriate has been modified by advancing medical knowledge to an extent of which most lawyers and physicians are unaware.

Definitions of drunkenness are apt to take a wide range, and to include either too much or too little. The following is a recent attempt: "A person is drunk in a legal sense when he is so far under the influence of intoxicating liquor that his passions are visibly excited or his judgment impaired." A little reflection will make the insufficiency of that description apparent. Judgment may or may not be impaired; and there may be depression, instead of exaltation, during drunkenness, the results of which may bring the inebriate to trial.

In recognition of the difficulty of definition it was held that the remark, "But you can define it as well as the court,"— was not such as to mislead the jury as to the definition of an habitual drunkard."

That a person may be drunk and the fact not apparent is recognized in the quotation: "The offense of a licensed person 'selling any intoxicating liquor to any drunken person.' under Section 13 of the (English) licensing act of 1872 is committed by a sale to a person who is drunk, although he show no indications of insobriety, and neither the license-holder nor hisservants notice that he is drunk." A dipsomaniac, if pre-

^{*} Extract from Medical Jurisprudence of Insanity, in print.

 ⁶ Am. & Eng. Enc. Law. p. 35.
 Rude v. Nass, 79 Wis., 321.

³ Candy v. Le Cocq, 53 L. J. M. C. N. S., 125.

vented from obtaining liquor, may be affected and may act as though drunk. And drunkenness, or its general appearance, may be caused by other things than intoxicating liquor. "Arrested in a public place, kept in custody till sober, and then brought before a court of justice, he may be able to show that the intoxication, which he admits existed, was produced by some other cause or means than the voluntary use of intoxicating liquor. If he does this, he is entitled to acquittal and discharge." Emphasing the word "voluntary" in the decision restricts its meaning, however, to what was probably intended.

It may be questioned if over-susceptibility induced by a head injury, or the impurity of the liquor taken, or some disease, is not often the direct cause of intoxication which is altogether out of proportion to the amount of liquor taken. Drinks are sometimes purposely drugged, with criminal intention as to the drinker; and it is notorious that adulterations of liquor cause unexpected results varying from unpleasant feelings to fury or coma.

The rule that drunkenness is no excuse for crime has been rigidly and generally applied in England and America. Some European countries as cited by Ray, are much more lenient, and French jurists' especially contend for milder principles, and construe their Penal Code, art. 64, which declares insanity, without distinction of any kind, to be a ground of entire exculpation, as justification for the admission of drunkenness which produces a temporary insanity, as a ground of extenua-Juries there have not failed to avail themselves of the suggestion. But in all countries, including our own, courts have differed widely on the question whether drunkenness is an excuse, often in spite of statutes or common-law construction. "Voluntary drunkenness" has been made the basis of the fallacious theory that as the act of drinking is voluntary the person is responsible for what he does. An act that unin-

¹ Com. v. Coughlin, 123 Mass., 437

Med. Jur., 450.
 Op. cit., 451.

tentionally leads to crime is confused with acts deliberately designed; and, as Ray notes, this confusion of moral and legal distinctions is not overlooked, but acknowledged and defended. In short, the law deliberately takes immoral, unscientific, and unjust grounds in justification of the results. It may be safely asserted that its assumption in this instance is productive of far-reaching and innumerable instances of injustice and confusion, as in every other attempt to ignore facts for any ulterior purpose, good or bad. The admission that drunkenness in the vast majority of cases is a disease (and sooner or later that acknowledgment will appear in judicial dicta) might seem too dangerous from a legal view; but the fact that it is demonstrably a disease in many cases exists regardless of what any class or profession may think. It is not so long ago in the world's history that insanity was not legally, or otherwise, regarded as a diseased condition. one time punishable by English custom. The earliest provision made for the custody of lunatics was under the vagrant act of 1744; and there is a record of the constable of Great Staughton, Huntingdonshire, entering a charge of 8s. 6d. "for watching and whipping a distracted woman." Shakspeare's Rosalind mentions the "dark house and the whip with which madmen are punished." It, would have been regarded as a very dangerous precedent in those days to admit that insanity was a disease. It was a phase of the crime of vagrancy, as drunkenness is often regarded to-day, and feigning would have made excuse for idleness and worse crimes possible. Insanity is simulated in attempts to evade the consequences of crime. It would be just, moral, and scientific to admit, in the light of modern research, that drunkenness is a disease. and rely upon our growing knowledge to determine whether the defense is improperly set up.

It often occurs that admissions of various kinds of natural phenomena are attended with some inconvenient results; but that outcome does not alter the truth, whether admitted or not. The fact that water flows down hill might be taken advantage of to evade the law, but is the law any safer if it denies the fact? It would be much more dignified and sensible to face the fact, and inevitably the new order of things would be found to be simpler and vastly better for all. "Two wrongs do not make a right," is an old maxim, lost sight of by those who advocate falsehood for fear that evil consequences will follow admission of the truth. The law would not allow any culprit to benefit by a similar policy on his part.

Then, the one who voluntarily makes himself drunk for the purpose of committing crime is constantly confused in legal procedure with one who voluntarily drinks and commits crime which he did not premeditate when sober. A sensible construction of the common law would be that the former was the more culpable, if not the only culpable, person of the two.

Ray suggests that drunkenness should be divided, with reference to its moral and legal character, into three kinds: the *dolus*, or criminal, the culpable, and the inculpable.

The law of England distinguishes clearly between culput and dolus, fault and intentional injury or crime, with reference to other considerations than drunkenness: "If a person who enters a stable with a lighted candle not properly protected, and carelessly drops it into a haymow, whereby the building is destroyed, is not deemed guilty of arson, no more should one who, in a fit of drunkenness, kills a fellow being without any previous intention so to do, be deemed guilty of murder. True, the fault of drunkenness is far greater than that of carelessness, and consequently should be punished with proportionate severity; but the difference is one merely of degree. The doctrine of the common law would have a shadow of support, if drunkenness were really a crime of some magnitude; but it is not so regarded by the laws of England, and in most parts of this country it is no crime at all. The free, unembarrassed use of the reasoning powers is essential to responsibility; but while the contrary conditions of these powers in

insanity absolves its subjects from the legal consequences of crime, it is not permitted to have the same effect when produced and accompanied by drunkenness. It does not seem to be a sufficient reason for this distinction, that in the latter case the loss of moral liberty is the voluntary act of the party, while in the former it is the effect of disease. In the first place, the only object which the drunkard has in view is animal enjoyment; for the loss of his reason, though a certain result, is not the motive for his indulgence; and, secondly, the very insanity which is admitted in excuse for crime may be, as in a very large proportion of cases it really is, the result of habits of drunkenness in which the party has voluntarily persisted. Where the moral guilt is very nearly, if not precisely, equal. it seems unjust that the legal consequences should differ so widely as they do in regard to criminal acts, according as they are committed under the influence of drunkenness or of that insanity which may be one of its direct results."*

"If previous to the drunken fit there were no design nor malice, which is essential to murder, we are obliged to suppose that it arose in the mind after it had been brought under the influence of drunkenness. But a mind which has lost the use of its reasoning powers cannot, without an unwarranted abuse of language, be deemed guilty of originating the feeling of malice." In a case where the defendant was tried for murder committed in a fit of intoxication, and where the circumstances precluded the idea of previous intention, it was suggested by the court as worthy the consideration of the jury, that, "as drunkenness clouds the understanding and excites passion, it may be evidence of passion only, and of want of malice and design." It scarcely need be added that the accused was convicted of murder, or that an eminent jurist, in commenting on the opinion of the court, should characterize it as a rather refined and hazardous speculation.2 Juries, however, both in

2 21 Am. Jurist, 7.

^{*} Ray, Med. Jur., Sec. 455.

Pennsylvania v. M'Fali, Addison (Pa.), 257

this country and England, are beginning to think otherwise. In some recent trials in England the court held that the fact of drunkenness had an important bearing on the question of intention.

The apprehension that men will intentionally make themselves drunk for the purpose of committing a crime with impunity has hardly a shadow of a foundation. In the first place the existence of the previous intention is liable to be detected: and even if the accused be successful in concealing it. and his plea is admitted, the penalty will be severe at the very best, for the drunkenness is merely a ground of extenuation. We need not apprehend, therefore, that men would abandon the ordinary method of committing crime, in secrecy and silence, for one that it sure to be followed by severe punishment, perhaps the very punishment they would avoid.

Inculpable drunkenness is that which occurs without any fault of the party, and consequently renders him irresponsible for whatever acts he may commit while under its influence. The common law recognizes but two ways in which it can be produced, viz., by the unskillfulness of the physician, or the contrivance of enemies. Ray suggested two other ways, at least, in which it may be produced: The drinker may drink no more than he has habitually taken without becoming intoxicated, but the liquor, from some cause unknown to him at the time, is much stronger than usual: or without any change in its quantity or quality, it exerts an unusually potent effect on the brain, in consequence of some pathological conditions. Head injuries, overheating, sunstroke, an occupation such as furnace feeding or cooking may and do, not only dispose to liquor indulgence, but slight quantities often affect such persons unduly, and produce maniacal furies in some, even though insanity has not previously existed.

Jurists could study to advantage the effect upon criminality of leniency of Austrian and German procedure upon this

³ Reg. v. Cruse, 8 Car. & P. 541; Ray, Ibid. Sec. 564.

point. Ray cites several cases of Drew and McGlue, and, indeed, too many later reports lack the details necessary to enable us to distinguish between delirium tremens and chronic alcoholic insanity or to determine whether head injury were not an overlooked and most important factor. Many traumatic and chronic alcoholic insane would appear to the multitude to be rational, because experience and trained observation are often required in the detection of such derangements.

THE MORPHINE HABIT WITH MEDICAL MEN.

In a work on the morphine habit, lately published in Paris, much interesting information is given concerning morphinism and morphinomania, some of which will be new to American readers. It is stated that Germany, France, and the United States are the countries in which the vice is most widespread, but that it has its victims in Russia, Sweden, and Turkey, and that even in the extreme East morphine as a narcotic is said Statistics are furnished of one to be supplanting opium. thousand cases, collected from all parts of the world - six hundred and fifty men and three hundred and fifty women. These statistics show that of the male morphinists the medical profession supplied the largest number, forty per cent. Men of leisure come next, with fifteen per cent.; then merchants, eight per cent.; while peasants, clergymen, and politicians occupy the lowest positions on the list. Women of means are the most numerous class among the females, forty-three per cent.: followed by wives of medical men, ten per cent. In Germany there are entire villages whose inhabitants are all addicted to the use of the drug, but the general belief that the morphine habit is more extensively practised in Paris than in any other city is contradicted. Morphinomania is said to occur with the greatest frequency between the ages of twenty-

The direct action that morphine exerts on the organs of generation in both sexes, producing impotence in the male and amenorrhora in the female, is too well attested to need argument.

The prognosis of morphinomania is stated to be favorable,

although relapses are frequent.

ACUTE SEROUS MENINGITIS (ALCOHOLIC MEN-INGITIS, WET-BRAIN).

By Charles L. Dana, M.D., New York.

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The description I am about to give of so-called alcoholic meningitis is based upon twenty cases observed during life and examined after death macroscopically, and in most cases microscopically. The observations were controlled by clinical and autopsical studies of a case each of pernicious anæmia, suicide, purulent meningitis, cerebral tumor, uræmia, cancer of the pylorus, and morphine poisoning. Most of these patients died in terminal conditions suggestive of the last days of alcoholics. I have also had careful notes taken by Dr. A. J. Brown, Dr. Gardner, and Dr. Daley, of cases of "alcoholic meningitis," which ended in recovery. Out of this material I have constructed a picture of what is known in the hospitals as "wet-brain," or "alcoholic meningitis," and what I have termed serous meningitis. This term is not strictly correct, as I shall show; for the process is not so much an inflammation as it is a toxemia leading to congestion, then to an ædema both of the brain and its membranes, with a moderate serous effusion into the ventricles and decided disorganization of the brain elements. But the clinical picture is strikingly like that of true meningitis.

Etiology. — The disease occurs oftenest in men simply because of the more frequent indulgence of the male sex in alcohol. It rarely developes until a person has been drinking eight or ten years, and consequently affects people oftenest between the ages of thirty and forty. The exciting cause is commonly alcohol, and in this country whisky or what are

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known as "hard drinks," but beer and ale will accomplish the same result. I have rarely seen the disease in wine-drinkers. The persistent use of morphine, cocaine, and chloral may lead to much the same condition. The patients often have some tuberculosis, or sclerotic changes in the arteries, and perhaps cirrhotic liver and kidneys. The exciting cause is usually a continuous drinking-bout of two or three weeks, ending in delirium tremens. The delirium tremens, however, is not by any means always present. The patient may pass directly from a condition of prolonged intoxication into the condition of alcoholic meningitis or "wet-brain."

Symptoms. — In case delirium tremens have occurred, the patient after two or three days of prolonged delirious excitement gradually sinks into a semicoma. This is accompanied by a muttering delirium. The patient is sufficiently conscious to have flitting delusions and hallucinations of sight and hearing. At this time he is able to drink and take food; the pulse is rather rapid, the temperature is usually normal or may be raised one-half or one degree. The skin is hyperæsthetic, and pressure upon the muscles of the arms or legs or abdomen causes pain. The patient rarely complains of headache, as in acute meningitis, and he has no explosive vomiting. The pupils are usually rather small. Often at this time conjunctivitis and keratitis appear.

After a few days the patient's stupor becomes deeper and he can be aroused only with difficulty. The arms and legs are now somewhat stiff, the reflexes are exaggerated, the neck is stiff and slightly retracted, and attempts to move the head bring out expressions of pain. Indeed, the stiffness is in a measure voluntary, the patient resisting directly attempts to move and bend the limbs. There are no jerking, jumping, or convulsive movements. The abdomen is retracted and the skin and muscles are still very hyperæsthetic. The lids are nearly closed: the pupils are small and do not react well to light. The tongue is coated and usually dry, and urine and

fæces may be passed involuntarily. The patient may linger this way for several days more. The pulse becomes rapid and feeble, the extremities are stiff and cold. The skin is dry and loses its elasticity, so that when pulled up between the fingers it stays in folds. "Putty skin" is a good name for this. The coma deepens, the temperature may rise to 103° or 104° F., and symptoms of pneumonia may appear as the scene closes, the duration of the attack being about ten days. On the other hand, in some cases the patient does not pass into the worst stage, the mind becomes clearer, the hyperæsthesia lessens, food is taken better, and the bowels are moved voluntarily. Improvement continues, and in three or four weeks the convalescence begins.

Some special clinical observations were made for me by Dr. A. J. Brown. In ten cases the blood was examined. He found in all a diminution of red blood cells, the average being about four million per cubit millimetre. The hæmoglobin was also diminished, the average being seventy per cent. Evidence of degeneration of the red blood cells and of poikilocytosis and leucocytosis was often noted.

The urine noted in two cases showed excess of urea and earthy phosphates. Albumin was found once, and this was due to an old nephritis.

Electrical tests of the muscles showed uniformly a lessened irritability to the faradic current. The deep and superficial reflexes were usually exaggerated until the latest stage, when they were diminished.

Careful examination of the eyes was made in a number of cases by Dr. A. E. Davis, who reported his results in *The Post-Graduate*. He never found optic neuritis; in the early stages there was congestion of the fundus.

Pathological Anatomy. — Besides autopsies made under my own direction, I have a number of careful reports from Dr. H. Brooks of the Carnegie Laboratory.

In cases of short duration in which the delirium has hardly

abated or in which a pneumonic fever has complicated the course, the meninges are congested; but in the typical prolonged cases this congestion is only moderate. The dura is often thickened; rarely it is adherent in places to the pia. The pia is thickened and opaque just about in proportion to the age of the patient and duration of the alcoholic habits. It sometimes shows hemorrhagic patches. There is considerable serous fluid in the subdural sac and in the subarachnoid spaces. The ventricles are usually found dilated and contain an excess of fluid, but are not often extremely distended. The brain when cut into is rather pale, soft, and shows punctate hemorrhages, especially in the deeper parts and in the pons. Occasionally one finds points of hemorrhagic softening, similar to those described as hemorrhagic encephalitis.

Microscopic examination shows in the uncomplicated cases that there is no true inflammatory process. There is often congestion, but not always; the commoner condition is an ædema of the brain tissue, the perivascular and pericellular spaces being dilated. The nerve cells show conditions of degeneration such as one might expect if they were attacked by an irritative and destructive agent, which agent had not markedly affected the vascular conditions of the part. The cortex may even be somewhat pale, and often shows the evidence of ordema in the dilated perivascular and pericellular spaces. The cell bodies themselves show, in very acute and febrile cases, a great degree of pigmentation, and in some cases the masses of pigment occupy more than half of the body of the cell. In the pyramids these deposits are usually at the base, in the region of the axis-cylinder process: in some of the spindle-shaped cells of the deeper layers the pigment is seen deposited between the nucleus and the apex of the cell. But in the ordinary types of wet-brain I found but little abnormal The cytoplasm shows a loss of the distinct pigmentation. chromophilic markings, and looks as though these bodies had been broken up into granular masses. The body of the cell sometimes looks as though it were made up of minute fatty granules. Sometimes the granular masses have dropped out of the cell into the perivascular space. The pigmentary

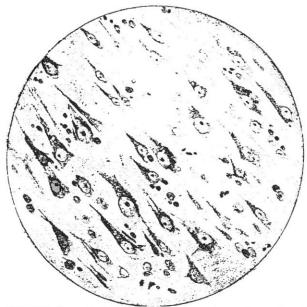


Fig. 1.—Male, thirty-four. Alcoholic "meningitis," seven days, mid-central convolution. × ½12 in. Pericellular dilatation and infiltration.

changes are always most striking in the large cells. The changes are by no means uniform, but appear to affect certain areas, and are much oftener seen in a typical fashion in the cortex of the central convolutions than in the occipital or frontal lobes. The cell processes are still fairly perfect, at least many of them, and at times the chromophilic granules can be well seen at the roots of the cell processes, especially the axis-cylinder and the apical process, though the cell body may be in a very damaged condition. Nothing is so striking throughout the whole of the brain cortex as the preservation and great integrity of the nuclei and nucleoli. In the smaller pyramids, in which the body substance is relatively less in

amount, these nuclei are often stripped almost entirely of the surrounding cytoplasm; but the nucleus itself usually remains unchanged in form and size. The chromatic network is not easily made out, however. The nucleolus loses its sharp outline, and shows ragged edges, becoming star-shaped, and sometimes being thinned out into a line. As the cell body degenerates and is dropped off, the nucleus becomes more and more nearly free, and the nucleolus can be seen approaching the line near the periphery of the nucleus. A vacuole is sometimes seen in the nucleolus, but never in the cell body in good specimens. It is a pretty well-established fact that in the nucleus, with its nuclein or nucleic-acid compounds, takes place the constructive metabolism of the cell. When this part is destroyed the cell may live for some time, but it cannot regenerate or longer perform its functions. On the other hand, if the nucleus still remains intact, the capacity of the cell to throw out a new body and reconstruct itself is still present.

In the brains of alcoholics which I have examined, there is throughout the transverse section a striking integrity of the nucleus, and I attribute to this the fact that, despite the most severe intoxication with alcohol poisons, the individual may still recover perfectly his former mental powers.

The smaller blood-vessels sometimes show thickened walls and the evidence of a general arterial sclerosis.

Pathology. — Persons suffering from acute alcoholism, and who have afterward died in that condition, have come to the hospital with this history: First, that they have been hard drinkers for a good many years, or else moderate drinkers with periodical sprees; next, that they have been drinking very hard for two or three weeks previous to admission; third, that they have practically eaten nothing for a number of days, having sustained life by copious libations of beer and whisky, intermixed with gin, a little beef tea, milk, and vichy, and occasionally some soft food. Finally, these patients, for some days before death, are lying in a condition of coma, with

a little fever. or else are in active delirium, with a considerable degree of fever.

The conclusion that I draw from these conditions is that

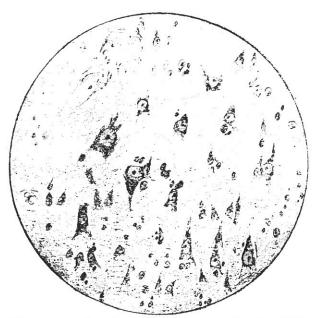


Fig. 2.— Male, forty-six. Alcoholic "meningitis" ten days, mid-central. >1/12in. Pericellular dilatation and infiltration, cytoplasmic degeneration.

death in such cases is not caused in any large degree by direct poison from alcohol, but is due much more to exhaustion and starvation, which probably led to the development of leucomains or toxic products of some sort, the result of the disturbed metabolism. The pictures, therefore, of cell degeneration in persons who die of acute alcoholism do not represent the same things that one would get in producing acute and excessive alcoholic poisoning in animals by the injection of massive doses of the drug.

It is probable that the injured cells, losing their vitality, throw off products of acute degeneration. These morbid chemical products lead to a vascular relaxation or other morbid

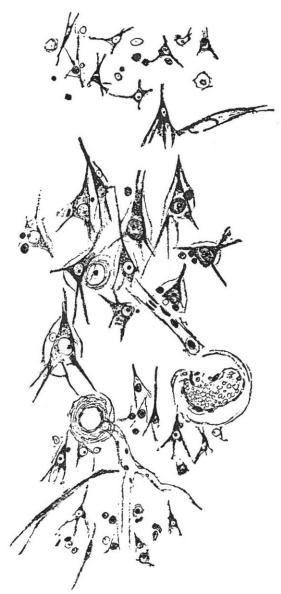


Fig. 3.—Male, forty. Delirium tremens, followed by "meningitis," four days. Cells of three layers of mid-central convolutions. $< V_{12}$ in. Granular degeneration of cell bodies, pericellular infiltration, arterio sclerosis.

state of vessel walls: serum is poured out for the purpose of dissolving and carrying away the products of cell degeneration. This process is a serous exudation, which, being a reaction to an irritant, is protective to the organism, and may therefore be classed as inflammatory, using that word in its broadest sense. If this serous exudate could be rapidly withdrawn, so much poison would be taken from the system, and the parts would heal just as when the pleural effusion is removed. This furnishes a certain rational basis for the treatment to be referred to later.

Diagnosis. — The diagnosis of the disease is to be made from ordinary suppurative meningitis, from acute serous meningitis due to infection, and from acute encephalitis. In most cases the history of the patient is quite sufficient to establish the diagnosis. The symptoms of themselves are almost identical with those of ordinary acute suppurative meningitis. The only distinctions which I have been able to observe are that in suppurative meningitis there is more fever, there is less of the low delirium, hallucinations are rare, and there is an earlier and more profound coma. In other words, it is an acuter and more severe malady than alcoholic meningitis. The absence of convulsions and paralysis and the presence of hyperæsthesia, rigidity, and contracted pupils, as well as the absence of pyrexia, are usually sufficient to distinguish the disorder from encephalitis or encephalitis complicated by alcoholic meningitis.

Prognosis. — The prognosis is bad when the disease has become well developed with fever and when decided coma and rigidity have set in. Most cases not seriously complicated with other diseases get well. A prognostic criterium which I have long used and which is fairly accurate is this: if the patient has not a stiff neck he will get well, but when stiff neck comes on the patient dies in the majority of cases.

Treatment. — The treatment of the disorder should be instituted at the very beginning. If there are still any relics

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of the debauch, as shown in the condition of the stomach or intestinal tract, the stomach should be washed out, and at all events a thorough purge should be given. The patient should then be fed most liberally with hot milk given every two hours; beef tea and an egg beaten up in milk may also be given, and the condition of practical starvation should always be borne in mind. Stimulants in the shape of whisky should not be administered if it is possible to avoid them, but strychnine in doses of one-sixtieth of a grain every two hours is often useful. An ice cap should be applied to the head, and at times leeches or large blisters seem to be useful applied to the back of the neck. The patient, however, should not be much depleted. When he becomes comatose it means that the ventricles and arachnoid cavities are becoming filled with water. At this time tapping the spinal cord may be tried. I have done this in about fifteen cases, and have at times removed two or three ounces of fluid with some amelioration of the symptoms and never any bad results. In one case the patient improved at once, and finally recovered. In the others improvement was only temporary. — Medical Record.

TOTAL ABSTINENCE AND LIFE INSURANCE.

Emory McClintock, a life insurance actuary, has made a very careful examination of the records of all policy-holders of his company, classifying them as abstainers and non-abstainers. The main results of his examination are summed up by him as follows: "Upon those who on entering stated that they abstained from alcoholic beverages the maximum expected loss was \$5,455,669 and the actual loss was \$4,251,050. Upon those who stated otherwise the maximum expected loss was \$9,829,462, and the actual loss was \$9,469,407. These abstainers show, therefore, a death loss of 78 per cent. of the maximum and the non-abstainers 96 per cent."

ASSOCIATION FOR THE STUDY AND CURE OF INEBRIETY—REPORT OF THE SECRETARY, DR. CROTHERS.

The mere record of the year's work would be dull and of little interest except by comparison with the general progress of the years which are past.

The traveler on a dusty highway has little to record from day to day, but as the journey lengthens his view widens, and he is able to see more of the progress, and more of the difficulties and successes which gather round his travels.

Our association started on its long unknown journey in November, 1870, twenty-seven years ago. In a small room in the Young Men's Christian Association in New York city, a group of fifteen persons met and organized. They formulated a group of principles which they believed and started out to prove and defend. The only one of that company living is our president, Dr. Mason. All the rest have passed away.

The first secretary's report was a brief record of formal duties and sayings of members with a few papers and resolutions. The years rolled on and each report was the same brief record. The dust of conflict and opposition hid all the land-scape and only an occasional landmark showed movement. But the toilers and few pioneers kept on with undaunted faith. Meetings were held in Chicago, Boston, Philadelphia, Hartford, Brooklyn, and New York. Some of them were large in numbers and enthusiasm, others were cold and chilly in opposition. Many excellent men joined and attempted to change the rout, have different principles adopted, and start the association on reformatory, moral, and other lines of travel. Finding this impossible, they dropped out of the ranks and looked on from afar with pity and silent regrets.

The Journal of Inebriety came at last and for over twenty years it has gone on recording the slow steps of progress and marking out the road of unmistakable growth and evolution. It has been a continuous report every three months four times a year of what our members are saying and thinking on this great subject of the study and cure of inebriates.

We are all more or less familiar with the history of the first years of our association. Its bitter opponents and sneering detractors and also the struggles in our annual meetings with good but mistaken enthusiasts who sought to divert us from the central purpose of studying the laws and forces which make inebriety and prevent it. To approach this subject from the physical side and ascertain why inebriety existed and what means were necessary for its cure and prevention.

The late Dr. Beard pointed out long ago that all new truths and methods to understand them must pass through distinct periods:

First — Denials and opposition.

Second — Credulous acceptance and extravagant faith.

Third — Scientific acceptance and recognition as truth.

The first period has practically passed. A few of the great army of opponents still linger, but their voices are receding and attract less and less attention. The second stage of extravagant credulity and expectation is also passing. The gold cure craze is one symptom of this stage. The credulity which welcomed an unknown remedy put on the market by unknown men and methods, the virtues depending entirely on the promoters and hysterical confidence of inebriates, buoyed up by the most extravagant hopes of final cures. The time had come for the quack and charlatan. The idea of disease had become a recognized fact and the demand for a remedy a natural sequel. Asylums existed where rational scientific treatment had been applied for years. Therapeutic measures had been discussed and tested in many places in both Europe and this country. All this had been openly and frankly put before the

public. There was no concealment, and every remedy had been used in the same way and the same spirit as all other scientific measures. But credulity and expectation were not satisfied. In 1865 the first specifics for the cure of inebriety appeared. From that time up to 1880 the number slowly increased and were largely confined to opium specifics. The advertisements were coarse and the pretentions were blatant. Certificates of cure published were along the same lines, only inferior in skill to the ordinary consumption and rheumatism cures. The gold cure was announced before 1880, but was used for opium more than alcohol. It began very crudely advertised and lacked sadly the ordinary skill of common quack medicine. St. Jacob's Oil, Buchu, Sarsaparilla, and other remedies which became popular were put before the public with some skill, plausibility, and appearance of honesty. They appeared to have merit and were at least open and frank in their appeals to the public. The gold cure was advertised far below these drugs in commercial skill. Two men who had tried this treatment published wildly extravagant stories of its virtues, and offered to pay for any one who would test it. This roused and fired expectation, and the Keely gold-cure craze began. The credulity of the public was open for some novelty and some mysterious means of breaking up the drink craze. The gold cure had a deep significance to the great army of expectants who are ever looking for miracles and new discoveries. The gold cure managers were astonished at the sudden popularity and rush of patients, and in their bewilderment adopted a most fatal course. While demanding implicit faith from others in their statements and work, they gave no confidence to the public or their patients, implying distinctly want of faith in the reality of their drugs and the need of making the most of their present opportunity. They failed to realize that the hysterical enthusiasm of the supposed cured cases was certain to react, that the greater the confidence of cure the more certain the relapse and bitter condemnation.

It is claimed that over a hundred gold-cure specifics have followed the Keely craze, each thriving on mystery, pretension, and expectancy. Several thousand inebriates have tried these remedies only to be disappointed. The higher the expectation, the greater the reaction. The falsehood, glamor, and transparent deception in all these were overdone. While the public may support and admire a great charlatan wave skillfully conducted, it soon tires of coarse extreme pre-The devotees of to-day become the persecutors of tensions. The gold cure has been managed on the lowest commercial levels, by the most stupid unconcealed selfishness, and hence its death. Had its originators the business sagacity of even ordinary proprietary medicine men, they could have sustained a great number of small asylums for the temporary relief of inebriety for a long time. As it is, they have practically disappeared, the confidence of the public is gone, and the few persons who have received benefit are in doubt. Had Keely been frank with the profession, and frank with his patrons, giving his formula which contained well-known remedies and promising only to remove the drink craze, and give the patient a chance to begin again, untrammeled by the impulse to drink, he would have been sustained by the public. A thousand asylums could have been opened in this country for the temporary relief of inebriates, and every medical man would have supported them as temporary hospitals. From these the more prominent work of restoration would have received a fresh impulse and become more fully established. As it is, there are less than one hundred homes with all the gold cures combined, and they are rapidly passing away. This movement, so startling and livid in all its claims, is psychologically of remarkable interest, in that all its promoters were practically inebriates. All the managers, and generally physicians, have taken the specific gold cures, and from this training have become trained to treat others. Their methods and conceptions of inebriety and treatment are all on the same

level and all are characteristic of defective mentalities. those of us who have studied the inebriates, these gold cure specifics and their management are most striking examples of inebriate intellects and inebriate reasoning. Irrespective of all previous training, after the man becomes an inebriate his mental activity, when called to work along new lines, always takes certain directions. His higher ethical brain is impaired and he cannot work on the same level as before. Deception, intrigue, and cunning to take advantage of others follow. is suspicious of the honesty and motives of others, and presumes on their ignorance, and while he is extravagantly enthusiastic, he seldom loses the opportunity to turn everything to feed his vanity or selfishness. Keely himself started out on the assumption that his formula would be taken away from him by the dishonesty of medical men, and that the ignorance of the community would sustain him in any position he took. He sold rights to use his drug, demanding pay in advance, with the same suspicion, and treated his patients with dogmatic assertiveness that would admit of no exception. His followers and imitators have pursued the same lines. The enthusiasm and dominance of positive convictions, coupled with physical revelations of freedom from drink, has brought about restoration in some cases very much as the excitement of a temperance revival sobers up a large number of people, some of whom continue a long time, but this is uncertain and dangerous and very far from being permanent restoration. It is interesting to know that the "Journal of Inebriety" in 1877 published the first account in this country of the treatment of inebriety by injections of strychnine. At another time and place I hope to make a long exhaustive study of this movement and show its psychology and rise and decline. At present it is very clear that this craze and wave of credulity will serve as a great educating force, bringing into prominence the possibility of cure by accurate physical means. Many persons have seen the relief from and the certainty of the absence of the drink craze not

recognized before. It has been proved that this drink craze can be checked by drugs and treatment, and that belief is an advance along the lines of public sentiment. Recent advances in physiological chemistry has given new interest to the question of alcohol and its effects on the body. The controversy of ten years ago and more on the disease of inebriates has been transferred to alcohol. This has been so prominent that at least four great societies, one in this country, and three in Europe, have been formed. These societies are studying the question of the effects of spirits in health and disease alone.

The American Medical Temperance Association, of which we are all members, practically takes up this very question from a higher point of view. It is not the inebriate but the alcohol which he uses so insanely that calls for study. Our association considers this only one part of the field, and while it welcomes all study of this kind, it would seek to give greater prominence to the complex causes of heredity and environment and conditions which call for alcohol and make it possible to produce a craze for it. The narcotic of alcohol would not be sought and used were it not for favorable soils and chains of exciting causes. While alcohol depends on these special conditions, it has the power to create other equally favorable states demanding its use. The "Journal" has presented many very clear studies of these causes and has sought to keep its readers acquainted with the new facts along this line. Already the literature has widened so as to demand a larger journal giving these facts exclusively.

The "Bulletin" of the American Temperance Medical Association is confined exclusively to studies of alcohol. The Medical Pioneer in England is the English society for medical temperance. "L'Alcool" is the French journal. "Le Temperance" is another journal giving scientific and moral papers on all phases of the subject. There are two German and one Russian journal which are conducted by medical men along similar lines. They are very valuable for the statistics which

they give. The English society for the study of inebriety, presided over by Dr. Kerr, simply publishes a small quarterly of transactions, containing their papers and discussions. It is quite a remarkable fact that after twenty-one years of constant publication, our journal is still alone in its special and exclusive study of the inebriate and his malady. During all this time the "Journal" has appeared regularly four times a year, except the years of 1881 and '82, when only one copy was issued in 1881 and three in 1882. So that with the exception of four copies or issues there has been no failure in the publication. The early prediction of a moribund existence and early death have been unverified. Many of the most violent critics have passed away, some of them became warm friends, others died in the conviction that we were supporting a great error. A new generation of readers and critics have come up, and now our position is recognized, but the advice we receive now is to modify our statements and admit a stage of reason and moral control in all cases and draw lines beyond which disease and irresponsibility extends. This is the same old compromise in which a truth and half truth and error are mixed in a most confusing way. The "Journal" has refused to notice many of these opinions and papers and has incurred some ill-will, but in the long journey we have started some one must be in the way. The change in the size and appearance of the "Journal" is for the purpose of making it more suitable for binding, and is highly prized by most of its friends. It is a pleasure to note that in at least six of the great continental libraries of Europe full sets of the "Journal" are deposited. In many of the libraries of this country it is eagerly sought for and the demands for back numbers are increasing yearly. Nearly all the early sets are exhausted, and only broken volumes can be supplied.

The conduct of a journal which conflicts with habits and prejudices of many persons is a peculiar and exasperating labor of love. To maintain that all inebriety is disease, and

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all inebriates are of unsound mind, seems very foolish to very many persons and reflects on them personally. Yet to one who can constantly verify these facts it is a keen pleasure and continued source of satisfaction to know that you are right, no matter what persons may deny it.

Probably no other subject in the range of science is discussed with so much confidence as inebriety. The workman on the street and the clergyman and lawyer and laymen of every grade and position in life feel competent to talk and understand the inebriate thoroughly. Medical men, equally ignorant, show the same volubility to judge and describe what the inebriate is, and is not. The temperance and religious press are more emphatic and clear than others. During all these twenty-one years I have been the center and object for advice by a vast number of people, both personally and through letters. I sometimes think very few men ever receive so much counsel and advice concerning any one subject as I have in inebriety. Men who are so clear at first, grow cloudy as they become acquainted with the subject. The more they study the inebriate and his malady, the less positive they be-The less they know the more cercome in their assertions. tain they appear to be. The reformed inebriates and the Keelv and other "Gold Cure Managers" are the most imperative in their knowledge of what inebriety is and how to cure it. The temperance lecturers who talk so positive and certain how to check inebriety, and the medical men who have a very scant knowledge from one or two cases imperfectly observed, are the most certain teachers. Most of these people, if students, learn after a time and some become real workers in the field. The critics of asylums and public hospitals for this class who talk so positively are the most dangerous. The little knowledge which they possess is positively perilous to the cause. Many excellent men and institutions have been broken up by the criticism of its crazy inmates and the outside ignorant egotists. Every year the same charges appear against the asylums and their management by the same class of critics. Every home for inebriates must pass through the same identical censure, and in most instances it is continuous but confined to a small class. Occasionally, the papers take up this subject, and after a time find that it is chronic and give it up. Inebriate physicians are usually the most bitter in their com-The more degenerate they are the more severe their fault-finding. In the twenty-seven years of our work a number of institutions have been actually driven out of existence by the criticism and censure of its inmates and the ignorant temperance worker. Binghamton asylum went down before this storm, and at least a dozen asylums have been crushed by its crazy inmates and the unreasonable public. This has not died out yet. Recently a man died in an asylum suddenly. He was a hard drinker and had stopped the use of spirits thirty hours before death. The inmates asserted and the public took up the charge of criminal neglect in withholding spirits. The physician was a good sensible man, but he was most severely injured by this criticism. Medical egotists who become prominent as surgeons or as general or special practitioners, and assume to decide what should be the proper course in the management and conduct of asylums, and show profound credulity in accepting the statements of unreliable authors, and skepticism of men who should know, are to be shunned as dangerous. Newspaper accounts of asylums are often incendiary in the highest degree and should be ignored. We have come to an age which demands investigation, analysis, and revision of all thories. The statement that inebriety is a disease and curable must be based on evidence which can be proven by an appeal to facts accessible to every The men who persist in arguing these facts as if they were unsettled ought not to receive any attention. The facts are open to every one who can examine for themselves. Can the inebriates be cured by asylum treatment and residence is another question which should not disturb our time or atten-

They are settled facts beyond controversy. These are only great landmarks or mountain tops, with all the intervening country largely unknown. A few of us have gone over this ground and have found the same great laws of cause and effect here as elsewhere. We have been able to trace out the origin, growth, development, and decline of inebriety. We have the intense satisfaction of being able to conduct these back to health and health levels again. No curing them in the popular sense of placing them beyond all possibility of relapsing, but restoring them to health and pointing out the road they must follow if they would remain temperate and well. The assertions of permanent cures are incorrect and savor of ignorance and limited experience, but the fact of restorations is the common history of all work in this direction. At another time I hope to study this question of "cure" in the light of our continually growing experience.

To return to our work as a society, the question which we have considered with much anxiety is this: Has the time come to enter upon a great national organization? to rouse up and create branch societies in every state? We have a scattered membership of nearly a hundred all over the United States and Canada, with an honorary list in Europe. Shall we try to formulate a working machinery that will take in a thousand members or more? For years we have been working along and waiting for an advanced public sentiment which would sustain us and an interest that would keep alive the enthusiasm The gold cure empiricism has done much to clear away the obstacles, but yet the field is not open. We have seen the need of keeping our society and journal well up to the front of an army of pioneer workers, with a faith which becomes brighter every year in the more certain consciousness that both our society and journal will be supported by a vast army of students who will rally round us in active work. The malady of the inebriates and its prevention and cure will be great vital topics in the coming years. Studies of local character show that the statistics of inebriety exceed by far the estimates of temperance reformers. The unrest, the alarm, the demand for facts, the present uncertain conditions of social life will surely bring to the front the question of prevention and cure of inebriety. The searchlight revelations of alcohol will not answer alone; facts must be brought behind this, and facts that cover wider fields of causation. If we fail to attract large audiences at our annual meetings, it is simply because we are in advance and the army of scientific occupation is coming slowly up to our level. Years ago we met here and less than fifty persons gathered in the old Music Hall to hear the papers read. Dr. Day introduced a clergyman who had been educated as a physician to make some remarks. He was a man with a philosophical turn of mind. I remember well some predictions he made which were very impressive at the time. They were in substance as follows: "The full recognition of the disease of inebriety and its proper remedies will require a century of time and study. No one living to-day will see their conceptions fully recognized. But close observation will give you intense satisfaction at the certain progress and growth of facts you are urging. The treatment of inebriety by physical means and remedies is one of the certainties of science, and through long patient work you will open this field and prepare the way for other men in later times."

We that have been in the work realize the full significance of this prediction. I think all our efforts show that a larger, deeper structure is going up than we are aware of. Certainly, I am sustained by the assertion that the causes and remedies of inebriety were never so clearly known, and never before has there been so much interest to understand its prevention and cure. I may even go further and say we stand on the very frontiers of this new land, and each one of us, without clashing or friction, can lead public sentiment and direct the study of the laws and forces which are both evolving or dissolving.

SOME CLINICAL ASPECTS OF INEBRIETY.

BY H. S. DRAYTON, M.D., NEW YORK CITY.

The pathological side of inebriety has been a subject of study for so many years both on the part of the social reformer and of the physiologist that a vast body of data has been accumulated and placed in such relations to the reading public that very few intelligent people of mature age are not fairly conversant with the main facts involved in the per nicious work of the beverages that contain the subtle elements of alcohol. In no other department of modern research has so much evidence been marshaled, not even in the universally agitated domain of tubecular disease, as in that which concerns the use of alcoholic mixtures for drinking purposes. We have statistics protean, anthropological, sociological, economical, pathological, criminal, etc. The most eminent of students, chemists, medicists, historians, moralists, essayists, have given the subject careful consideration from a thousand points of view, until one might think that its depths were quite exhausted. Certainly, so far as the essential character of this product of tissue decomposition is concerned, there is no question among the best authorities regarding its disturbing and harmful effect upon organic structure and function. Carpenter, Anstie, Beale, Richardson, Kerr, Niemeyer, Davis, Martin, Loomis, Ellis, and others of eminent name, may be mentioned who have described the degenerative changes that the alcoholic habit induces. An all diffusive element, alcohol in time depraves nearly every tissue of the body and induces morbid conditions that are for the most part characteristic. once narcotic, corrosive, absorbent, and irritant, whatever it

comes in contact with, of vital structure, is affected disastrously. In the stomach the membrane becomes inflamed and a catarrhal exudate impairs the quantity and value of the secretions: the liver becomes congested and later hardened and contracts: the lungs suffer loss of elasticity, and a bronchial and vesicular catarrh may lead to tubercular infiltration: the heart muscle undergoes fatty degeneration; the arteries likewise are changed in consistency and resilience: the kidneys sustain grave alterations with tendency to forms of Bright's disease; the vascular tissues lose their normal elements and function: fat may accumulate in the cellular spaces, in the abdominal wall, the mesentery, while the extremities become lean and attenuated; the nerve centers especially suffer injury; brain and spinal cord degenerate with corresponding loss of function. These perversions and deteriorations are well known to the laity, so to speak, of our community, for their symptoms and phenomena are too common and expressive to be misunderstood.

My purpose is not to deal with this subject so much from the point of view of pathology as that phase of it may appear to the general observer, as from one or more points of view that present themselves to the physician who comes in contact with the drinking man or woman at the hospital clinic. There are certain privileges investing the function of the clinician that are recognized in very few other classes of men who have dealings of a social or philanthropic nature with the masses. By the very character of his office he is inquisitorial, and what would be regarded as impertinent and insolent in others may be accepted as but part of the modus in his professional service. Hence the clinician often sees and hears things quite excluded from the observation of the average missionary and reformer. Through the signs created by a course of vicious living, that build themselves in the features and influence attitude and speech, he reads the life of the patient at the first interview, and is enabled to sketch out the

necessary plan of advice and treatment. The catarrhs, the coughs, the hoarseness, the sore throats, the rheumatisms, the skin eruptions, the lameness, aches, pains, and the hundred other ills that are complained of, are but the outer limning of the mental malady, that through its insidious agent, alcohol, is destroying the physical organism.

We are usually met by the plea that "I drink only a glass or two a day; that ain't enough to hurt me"; or "I work hard and need something to keep me up"; and if the trouble complained of is pointed to as a direct result of the drinking habit, we may be told that "I had that before I drank."

Here is an instance that is merely illustrative: A bright. energetic young man of about forty years of age applied to me for advice. He had a chronic, gastric catarrh; no appetite. inability to sleep, restless, nervous, his tongue so very tremulous and excited that he could not keep it out for inspection. He was a plasterer, and very skillful. I inquired how many glasses of liquor he drank a day. Protesting that he had always been a temperate man, he said that he found it absolutely necessary to take two or three glasses of whisky and water to keep up his strength. The weather was warm, and his work being so much indoors he became very warm and thirsty. So he took about four "beers" to keep cool and moisten his throat. That became so dry and harsh that he must have something to make it comfortable. He did not understand how the alcoholic mixture operated to render his mouth and throat inflamed and harsh, and why his repeated imbibitions but added fuel to the flame of his discomfort, while the poor stomach, persecuted by the same treatment to the extreme of endurance, was breaking down. This man was anxious to be well, and, accepting my assurance that his drinking habits lay at the root of his weakness, promised to follow my directions, although fearful that he would suffer while doing so. He had the courage to carry out the advice, and after a few months had so improved that he could do his

work in comfort and without sending to the corner saloon for a kettle of beer.

I think that the clinician realizes as fully as any other class of observers the depraving ravages of the liquor disease on morality. To his room at dispensary or hospital come the young of both sexes, and he is made cognizant of alcohol's fell work, often in a most pitiable manner. When young men, well-born, educated, cultivated, appeal to him for help; when young women, who in their youth had been the light and pride of refined homes, come to him and to his questions sorrowfully disclose a few side views of the cause of their headache, he cannot but feel for them, and add some words of monition and encouragement to the medical prescription. But the mature and bloated regular, the chronic tippler, is more likely to receive some sharp thrusts of professional wit, and is often told, "It is of no use for you to come here; you'll never be better so long as you keep on with your drinking." It is not strange that for this type of dispensary frequenter the old clinician entertains usually a deep contempt; for the reason that he has no confidence in such a patient's statements, no expectation that he will attempt to carry out the instructions given The perverted moral sense of the chronic drinker renders him indifferent to censure or admonition. If he gets some treatment for his ailment and a little medicine that may contain a proportion of alcohol, he goes away chuckling. one dispensary gets tired of him and refuses further aid, he can go to another, and another.

The part that is borne by children in this realm of clinical experience is especially sad. It is bad enough that the father is a drinking man, but when it is the mother, or both parents, the poor little ones appeal most urgently to the doctor who has a thread of sympathy in his composition. The weak little one is brought to the clinic because it is sick, and "we don't know what to do with him," is the mother's statement. A child has no business to be sick or complaining in a family where

the bottle is the chief element in the dietary. The poor little thing is more likely to receive curses and blows than nursing from the maudlin mother or father. I have told such a parent that the child was very sick and given careful directions for his treatment at home, in language simple enough and emphatically repeated. I have warned against omitting the medicine, and threatened vengeance through the Health Board if my counsel were not heeded. A stolid nod would be the reply. and off the child will be taken, leaving me in state of mind combining indignation with compassion. I have, in my anxiety for the fate of some pretty innocent, gone to the tenement in a back alley only to find that nothing had been done On one occasion a bright little boy was brought by his mother. The child's throat was sore and much swollen. the pulse rapid and thin, the indications pointing to the onset of a severe attack of fever, resulting from a long period of insufficient nurture and care. The mother was earnestly warned that she must be very attentive to the treatment advised or her child would not live. She professed great devotion to the "little darling," and would surely do as I advised. Mistrusting her promises, I sent that night to the tenement where she lived and my messenger reported that "the family and some friends were having a Bacchanalian orgy while the 'little darling' was lying helpless and unnoticed in a dark and close room adjoining."

On the pathological side we need not say that the worst cases the hospital physician deals with are the alcoholics. The depraved general condition of the drinker, the atonic nerve centers, the flaccid muscles, the impaired nutritive supply, the slow and imperfect metabolism, the depressed heart action and languid blood current, the engorged glands, make of the chronic drinker an unwelcome patient. With him a cold may develop into pneumonia: a "bilious attack," as it may be called, into a severe fever. Does he contract any of the zymotics — typhoid, diphtheria, scarlatina, the grippe, ton-

silitis - it is likely to prove serious. His abstinent neighbor has many times the advantage for recovery in similar diseases. Indeed, what to the man of careful temperate habits would be considered a slight matter may prove fatal to him because of the apathy of the nerve centers governing circulation. Poisoned by the alcohol, a paretic state having been induced, the system fails to respond to the treatment, and the sluggish blood stream cannot supply the imperative demand of the poorly nourished tissues. The constant accelerated waste precipitates functional loss and breakdown. I remember one instance - a man about fifty who came to the New York Hospital with symptoms of rheumatism and semi-paralysis of the limbs. His case did not appear to be very serious. A few days' rest, simple application, etc., would be likely to set him on his feet. But in spite of all that was done for him the paralysis increased and he died suddenly. He had been a drinking man for years, not what is termed excessive, but by habit. I remember how we put our heads together, pathologists, neurologists, dermatologists, heart-and-lung men, etc., and came to the conclusion that the brain must be the place of the disease, the lesion. An autopsy (we call it necropsy now) was made, the brain carefully examined, and nothing of marked character denoting disease found in it. So with the other organs, all seemed in fair condition, only a generally depressed, atonic, poorly-nourished state of the different parts of the body declared itself. The blood seemed thin and watery, and the stomach and intestines were ænemic and their interior coats had a patchy, washed-out appearance, with here and there reddened spots of inflammation. The man was a beer drinker mainly, and the effect of the beer ingredients had thinned the membranes of the organs and vessels, and given them a somewhat pallid color. Loss of function, loss of energy, loss of volume, attended the habit of drinking, until the organs became exhausted. I have sometimes wondered what kind of beer the man especially favored.

The effect of alcohol on the brain and correspondingly the mind is in its grosser aspects pretty well known. The grades of disturbance are many, from slight obscuration to maniacal frenzy, according to the temperament and organic constitution of the drinker, according to the sort of stuff he drinks, and the way in which he drinks, etc. I need not go into particulars here. The journalism of the day furnishes abundant details for the information, if not edification, of the public. The saddest as well as the most destructive work of alcohol is that produced in the brain, accompanied as it is with the dethronement of man's intelligence and the wreck of his moral integrity. Some natures appear to experience a kind of temporary mental improvement through their potations, but it is improvement of a coarse kind, a low wit that amuses, but on analysis is found to have little real point. Stimulated wit is usually but exaggerations of well-known jokes and passages of facetiæ. In the stories that are circulated of the doings and sayings of the frequenters of the café and the saloon, there is a blunt stupidity, a misapplication of points and principles, an obstinate insistence on having this or that, and a slangy obliqueness of language. The very oddity and grotesqueness of these instances furnish the humor which people affect to enjoy, who are more amused than grieved by the vices and weakness of their fellow mortals.

Another phase of hospital experience is the emergency cases — injuries from accident, falls, collisions, shootings, stabbings, burns. The tippler figures here unfortunately also, as compared with his abstinent brother. He does not rally so promptly. The liquor has absorbed so much of his vital force, so large a proportion of it has gone toward counteracting the effect of the ethylic poison, that the unfortunate sufferer has but a modicum of reserve strength for the treatment, the surgical operation, that may be necessary. So it is that he dies on the operating table frequently, or from the shock of a minor operation. I have known the drinking man

to succumb to a burn that in itself did not appear to be very extensive. I remember a case of leg injury that caused the death of a comparatively young man. It certainly did not seem grave in itself and needed no special surgical skill for treatment. The man sank under it and died, and some of his friends accused the doctors of neglect or carelessness. They apparently forgot that he was a rather free drinker and came into the hospital in an advanced state of intoxication.

I am of opinion that a good proportion of the so-called cases of hydrophobia are more probably cases of meningitis due to cerebral conditions induced by alcoholic drinking. In the country it used to be the custom, when a man had been bitten by a dog assumed to be rabid or by a venomous reptile or insect, to give him whisky until he was thoroughly drunk. It was the impression that the whisky would counteract the poison of the bite. It was claimed to be poison antedoting poison. But it did not always work. In one of the Southern medical journals lately a physician gives the account of a man he was called to treat. The whisky act had been played on him until he was more dead from the liquor than the poison. Alcohol is antiseptic to a degree, we know, and necrotic, i. e., destructive of living tissue. I have tried it on false membrane in the throat, injurious growths, small tumors, ulcers, etc., and found it of value in destroying them, just as I might use carbolic acid, caustic potash, nitrate of silver, etc., to cut down and remove offensive growths. So alcohol might, in default of better things, be of service in treating poisoned wounds, dog bites, etc.

The other day I assisted at a severe operation for the removal of a tumor from the abdomen of a young woman. She was in a very weak state at the time — "all run down," bloodless. She lost scarcely an ounce of blood, but the shock of the operation was great. She became ghastly blue and the heart merely fluttered for some minutes and respiration stopped. We used to inject brandy in such cases, but in this instance we

used a little strychnine, about 1-20 grain, and the heart revived, and the color came back in the face. If other treatment had been necessary, we should have injected a considerable quantity of salt water into her veins, and put hot water to her feet, etc.

BEGINNING OF INEBRIETY.

"Mamma, why can't I have a glass of wine?" This was the question asked by a bright-eyed four-year-old youngster in one of the restaurants of Chicago not long since. My heart seemed to stand still waiting for what answer the mother would make.

The parents were apparently well-to-do, intelligent people, who, upon taking their seats for luncheon, had ordered beer for the father and wine for the mother. The lady sweetened the wine to suit her taste and placed the glass in front of the child, who sipped several teaspoonfuls, when the father remarked: "That is sufficient. That will give the little man an appetite for his luncheon." But the boy was not satisfied, and gave the mother no peace until she had given him more, until at least a dozen teaspoonfuls had been taken, and when finally he was refused more, he asked why he could not have a bottleful like papa. By this time, the face, which had been sweet and rosy when he came in, was flushed and feverish, and the eyes, which shone with an innocent brightness when I first looked into them, were now dull and heavy.

The importance of educating mothers on the dangers and possibility of child inebriety was never more forcibly impressed upon me than by this incident. The thoughtlessness or ignorance of these parents was almost beyond conception, and the conviction that this young mother was sowing seed which would mature into a harvest of debauchery for her son and lifelong sorrow for herself, made the noonday hour one of feverish dread for the future of the boy, and regret that we seem so powerless to reach such a large majority of the women who are and will be the mothers of the coming generation.

ABNORMAL FORMS OF ALCOHOLISM.

By M. LE LEGRAND, M.D.*

We shall consider the different reactions to alcohol in a pathological individual — in an individual already under the influence of a nervous incubus - and study the more or less profound modifications of the common form of alcoholism in consequence of these two factors (individual predisposition and poisoning). Here we shall find the explanation of the manifold aspects in which the drinker presents himself to medical observation. The knowledge of the soil throws light on numerous cases for a long time under dispute, which it is difficult to place in the same category. To understand the importance of this part of the article, we must remember the great step made forward in nosography by considering the individual and his reactions in connection with his pathological We know that diseases do not develop in the same manner in individuals with a certain diathesis as in normal individuals. Prognosis is completely altered by this knowl-A fracture may be complicated by contractures in edge. hysterical patients; acute bronchitis is interminable in an arthritic individual; acute pneumonia changes its form in an old man; anthrax may be fatal in a diabetic patient; simple angina may in a latent syphilitic cause very serious symptoms; and lastly, in a weakened individual an excess in drink may involve dangerous consequences. We have seen that in many cases the drinker is a predisposed individual presenting predominant symptoms in the nervous system, and has to be considered as possessing primordially a nervous system with feeble resistance. This is the only plausible explanation of

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the localization of the symptoms of intoxication in this soil. in accordance with the law of general pathology, that morbid symptoms mostly appear on the part of the "lociminoris resistentiae." The consideration of the ancestors of drinkers has shown us that a great part of them belong to the neuropathic. This predisposition has as first consequence that alcoholic symptoms easily appear after a number of excesses, which would not have affected a normal individual. We have seen at the same time a great proportion of drinkers (about twothirds), were sons of drinkers, and that consequently the excesses of the ancestors seem to influence the excesses of the descendants (similar heredity). Another consequence of predispositions is the tendency to premature excesses, even in very early age. The influence of predisposition, however, will become still clearer by a methodical consideration of the history of alcoholism.

(1.) Predispositions in Drunkenness. — A predisposed person is most easily inebriated; the slightest excess overthrows the unstable equilibrium of his faculties, and, if he does not keep absolutely sober, he will soon be a victim of drunkenness. There is a certain amount of truth in the assertion that alcohol is a criterion of the psychical resistance of individuals. We know some men are able to take enormous quantities of intoxicating liquors without any symptoms of drunkenness, but we also know that the first resistance becomes in the same individual much weakened by age and the wearing out of the organism by prolonged excesses.

One of the first effects of alcohol is the dis-equilibration of the intellect, and this is much easier in a predisposed individual, whose mental equilibrium is already unstable at ordinary times. Consequently, alcohol creates an abnormal opportunity of revealing the innermost nature of the patient to the outside world in a most striking manner; the slightest defect of the mental state is exhibited; the dominant feature of the character becomes exaggerated; the instinct, desire, and tendencies, no longer subject to the regulating control of the

higher faculties, have free course: the animal nature is set free. We see already the variety of forms which the drunkenness of a predisposed individual may present; it is sufficient to know in detail the mental situation of a patient to be able to foresee to some extent what observation afterwards will confirm. A degenerated individual will not rave like an ordinary lunatic, neither will be be drunk like other people. A man who is deprived of his moral senses becomes, during drunkenness, disgusting and obscene in word and action; a man with a morose and tacitum character will be sorrowful; he likes in his drunkenness to sigh, to weep, and to fancy lamentable stories; he will speak of death, and see everything black. A predisposed individual who is exuberant, exalted, and does not know any measure in his words or actions will almost certainly be merry, more exuberant than ever, he will exaggerate his personality, will become ambitious, will speak of his powers. of his luck, and of his chances; he will see everything in a bright light. A weak-minded fellow will in his drunkenness be absurd and foolish. A predisposed individual with brilliant faculties will become sparkling with wit. and will evolve thousands of lucubrations, each one more fantastical than the other.

When the predisposition is of a well-marked nature, if it is caused, e. g., by the presence of melancholia in the ancestors, the drunkenness is still more accentuated. It is not rare to see the drinker manifest some delirious ideas reminding us of his special predisposition; suicide in drunkenness in consequence of a series of melancholy ideas indicates the same.

The two principal attitudes of the drinker, sadness and gaiety, give rise in a predisposed individual to two well-defined forms of drunkenness, melancholy and maniacal drunkenness. In the former as a short attack of melancholia we find the elements of that psychosis: imaginary accusations, depressions, scruples, ideas of unworthiness, and attempts at suicide. In the second form we find an attack of mania of some hours' duration,

with the symptoms peculiar to that derangement: exaltation of the faculties, disorder, and incoherency in words and actions. In both forms even hallucinations have been observed.

The convulsive drunkenness of Percy finds its place here, and is described elsewhere. It is a form essentially peculiar to predosposed individuals, if it does not conceal genuine epilepsy, and if it is not caused by a poison producing convulsions.

Predisposition reveals itself in a drinker in his actions and words still better than in his attitude.

If we remember that "degenerated" is in many cases synonymous with "instinctive" or "impulsive," we shall understand how easily drunkenness will favor the unchaining of all impulses. Homicide, robbery, arson, and extravagant or reprehensible actions may be committed in drunkenness. Therefore in analyzing the mental state of a man who has under these circumstances made himself guilty of a trespass or crime, we shall always find him defective. These actions seem sometimes caused by strange ideas which have suddenly grown up in the brain of the drinker, but still oftener they present the aspect of veritable unpremeditated impulse.

We also have to mark in the drunkenness of predisposed individuals the sudden occurrence of delirious ideas (ideas of persecution, of exaltation, etc.), of which we often find the trace in the patient's past history. As quite a special form we have to mention the drunkenness of the epileptic, who, impulsive already on account of their neurosis, become particularly dangerous by their attacks, their brutality, and their tendency to mischief. Alcohol, besides, aggravates this neurosis; this is often manifested by a series of dangerous attacks, with frenzy, amounting to, in some cases, transitory mania and the convulsive drunkenness of Percy.

Such are, briefly, the peculiarities of drunkenness in individuals already deranged or predisposed to cerebral disorders.

CLINICAL NOTES OF CASES OF OPIUM INEBRIETY.*

By J. H. Kellogg, M.D., Superintendent Battle Creek Sanitarium.

Case 1. Mr. ----, age, 51.

Had used ten to twelve grains of morphia a day for nearly six years. Had several times been able to discontinue it for a short time, but quickly returned to it again. Had finally become completely enslaved. The patient was using daily, in addition to morphia, several grains of cocaine, smoked from three to seven cigars and chewed from eight to ten cigars daily, and took regularly six ounces of whisky, to which other alcoholic drugs were often added.

Treatment.— First day: Patient took several electrohydric baths; 20 grains of bismuth and 4 minims fluid extract of cota bark every two hours, and ½ grain of morphia at night. The patient was very nervous all day, having had no morphia since the day before, but slept six or seven hours during the night, by the aid of the neutral electric baths, temperature 92° to 95° F.

Second day: The patient suffered considerable pain. Slept a few minutes only. Took 20 grains of trional, but without any apparent benefit. Had neutral electric baths and massage.

Third day: Took several neutral electrohydric baths, fomentations to the spine and abdomen, slept six hours. Felt much better, and was allowed to go about in a wheel chair.

Fourth day: Slight diarrhea. Had several electro-

^{*} Notes supplementing the paper on this subject in last number of Journal.

hydric baths, application of faradic of electricity and massage. Slept six hours, and felt very comfortable.

Fifth day: Neutral baths, massage, electrothermic baths, fomentations to spine. Felt very comfortable, indeed. Read newspapers. Slept three and a half hours.

Sixth day: Fomentations to the spine, salt glow, wet sheet rub. A fair appetite. Improved very rapidly. Slept five hours.

Seventh day: Neutral electrohydric baths, fomentations the spine, massage, faradism. Good appetite. Slept well.

Eighth day: Salt glow, fomentations to the spine, massage. Patient now considered himself well. Able to go about as usual, and had no desire for narcotics. Continued to improve in general health, and a few weeks later returned to his home.

A year later he reported himself in perfect health, engaged in active business, and no disposition to relapse.

Case 2. Dr. —, age, 38.

Patient had been using morphia for many years. On arriving was taking 4 grains daily, and in addition smoking daily 10 cigars, and taking alcoholic liquors of various sorts quite freely. Had for some months past been taking several grains of cocaine daily, was not quite sure as to the exact quantity. Patient discontinued the use of morphia at once.

First day: By the aid of neutral electrohydric baths, fomentations to the spine, massage, patient was able to rest quietly seven hours, and slept two hours.

Second day: Treatment continued. Patient very nervous and quite sick. Had several attacks of vomiting. Received 1/150 grain of atropine. Slept between two and three hours.

Third day: Several electrohydric baths, neutral temperature, massage, fomentations to the spine, abdomen, and head. Warm enema. Several slight attacks of nausea and vomiting. Slept between five and seven hours. Was more comfortable than the day before.

Fourth day: Treatment same as the day before. Patient quite restless, but slept between two and four hours.

· Fifth day: Several neutral electrohydric baths. Patient very much better. Able to read newspapers. Slept between five and seven hours.

Sixth day: Two electrohydric baths, massage, fomentations of the spine. Patient rested quietly a number of hours, slept well, felt strong, and took some exercise about the room.

Seventh day: Wet sheet pack, neutral electrohydric bath. Strength good, mind clear. Went out for a ride. Slept between five and seven hours.

Eighth day: Treatment same as the day before. Patient nervous and restless. Three or four hours' sleep.

Ninth day: Patient spent almost the entire day out of doors. Took dose of sulphonal on his own responsibility. Slept five to seven hours. Took a cold spray bath on rising. Felt quite comfortable during the day.

Tenth day: Neutral baths as usual. Again took sulphonal at night, but obtained no sleep.

Eleventh day: Treatment same as the day before. In the evening was persuaded that sulphonal would on the whole do him no good, and would probably lead him back to the use of morphia, that he must get rid of drugs of all sorts. Instead of taking the sulphonal he are a few apples. Slept four and a half hours.

Twelfth day: Tonic baths consisting of cool shower and spray, followed by massage. Fomentations to the spine at night. Six hours' sleep.

Thirteenth day: Treatment the same. Seven hours' sleep.

Fourteenth day: Treatment continued. Six hours' sleep, patient being much stronger.

From fifteenth to twenty-fifty day: Rapid convalescence. Gained 10 pounds of flesh. Patient returned to his home at the end of a month.

Two years later reported himself well and happy, and attending to an immense practice.

Case 3. Dr. ———, age, 35.

The patient's drug habit began with the use of very strong coffee, which was taken for stimulating effects. Patient was soon compelled to take bromides, 20-grain doses, to quiet his nerves, as he said, and later 2 grains of opium, combined with small doses of atropine, were added to "maintain a comfortable state of mind."

The treatment pursued with this patient was essentially the same as those outlined in the preceding cases. All the drugs were discontinued at once at the beginning of the treatment.

First day: Patient suffered very little.

Second day: Very nervous.

Third day: Somewhat nervous, but much more comfortable and rapidly improving.

Fourth day: Considered himself entirely free from his drug habits, and felt well.

Fifth day: Had a good night's rest and felt very comfortable, but still weak.

Sixth day: Improved rapidly, feeling in every way well. Seventh and eighth days: Patient slept six or eight hours, and on weighing himself at the end of the week of treatment discovered that he had gained twelve pounds of flesh.

A year later he reported himself as feeling better than ever in his life before, and he had not relapsed.

Case 4. Dr. ----, age, 45.

Had been under treatment two years before for the morphia habit. On this occasion the patient insisted on taking sulphonal and other drugs to lessen the inconvenience attending the withdrawal of the drug. He remained but a few days. Got along very well for about a year and a half; then, while suffering from a severe attack of sciatica, he took morphia to relieve pain, and so found himself again a victim of

the habit. He resorted to a so-called specialist for relief, but was treated with morphia under another name, with the addition of strychnia, and on arriving at the sanitarium was worse than before, taking three grains of morphia daily. The first night after arrival ½ grain of morphia was administered.

First day: Slept much of the time and received very little treatment.

Second day: Received several neutral electrohydric baths, and three baths during the night, with frequent fomentations to the spine, and almost constant friction. Felt very weak; considered himself bordering on a collapse. Received ½ grain of morphia in the evening.

By 4 A. M. the following day the patient was feeling much better, and by morning he was quite relieved of pain and discomfort.

Third day: Patient rested well during the forenoon; during the afternoon and evening had three neutral electrohydric baths, fomentations to the spine at intervals, and warm enemas. Slept five hours during the night. On awaking in the morning found himself entirely comfortable.

Fourth day: Two neutral electrohydric baths, massage three times, fomentations to the spine, stomach, and abdomen, frequent warm enemas. Slept fairly well during the night. Some discomfort on awaking in the morning.

Fifth day: Fomentations to the spine, neutral electrohydric bath, massage. Slept several hours. Doing fairly well.

Sixth day: Quite a sharp pain in arms and shoulders. Electric light bath, fomentations to the spine and arms. Diarrhea. Ten grains subcarbonate of bismuth, and three minims fluid extract of coto bark every two hours. Slept an hour and a half.

Seventh day: Neutral electrohydric bath. Fomentations to spine, feet, and knees. Massage, hot leg bath. Patient felt stronger, took moderate exercise in the gymnasium, also took a short walk in the open air. Two or three hours' sleep during the night.

Eighth day: Hot and cold to the spine, static charge, moderate exercise in the gymnasium and out of doors. Took 20 grains of sulphonal and slept four hours.

Ninth day: Neutral electrohydric bath, fomentations to spine. Still quite restless. Took 10 grains of sulphonal, slept seven hours.

Tenth day: Much stronger. Took considerable amount of exercise in the gymnasium, and also out of doors. In the evening felt so much better he declared himself well and could not be prevailed upon to remain longer. Went home. A year later the patient was found in good health, engaged in active practice, with no relapse.

Case 5. Dr. ———, age, 31.

Had been using morphia two years. Was taking 5 grains daily, and sometimes larger doses, with 5 grains of cocaine regularly, and recently had been taking 25 grains of cocaine daily, also 1/150 grain of strychnia and several grains of caffeine daily, with occasional doses of atropine and quinine. The morphia habit was contracted during an attack of peritonitis.

All drugs were withdrawn at once.

First day: Patient very restless. In the evening took neutral electrohydric bath 96°. The patient was so comfortable he was allowed to remain two hours; was then given two ounces of malted nuts dissolved in hot water. Slept quietly for nine hours.

Second day: Patient received 20 grains of subcarbonate of bismuth, with 4 minims of fluid extract of coto bark every two hours to relieve diarrhea. Electrohydric bath for one hour at 95°. In the afternoon the patient was very irritable and excited. Received one grain of morphia. Massage to head and limbs almost constantly. Cold compress to the head. Slept nine hours during the night and following morning.

Third day: Neutral baths, hot fomentations to the spine, cool compress to the head continually, with massage and fomentations to the abdomen. The patient was somewhat delirious, had muscular twitchings, but was relieved by the neutral bath and other treatment. Was able to sleep four hours.

Fourth day: Massage, neutral electric baths, ice compress to head, hot enemas. Patient comfortable, and slept eight hours.

Fifth day: The treatment was the same as on the preceding day. Respiration and temperature normal. Mind clear. Ten hours' sleep.

Sixth day: Patient felt well. Outdoors in a wheel chair. Slept nine hours.

Seventh day: Patient said he felt better than for many years. Appetite good. Received tonic treatment consisting of cool shower bath, salt glow, and massage. Slept seven hours.

Tenth day: Patient was weighed and found he had gained ten pounds since beginning treatment. Allowed to walk about, and declared he felt himself in better health than for many years. Experienced no discomfort of any sort whatever.

This patient had made several attempts to rid himself of the morphia habit, but on each occasion treatment had been suspended on account of persistent vomiting which could not be controlled. Under the treatment outlined this symptom did not appear.

Case 6. Mrs. ———, age, 50 years.

Had used morphia habitually more than twenty years, keeping her friends in ignorance of the fact until within the last three years. Was using from 20 to 30 grains daily. The same method outlined in the above case was pursued, with the result that in less than a week the patient was feeling very comfortable without the use of morphia, and at end of three

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months she returned home enjoying good health. A year later she reported herself well and entirely free from the drug.

Case 7. Miss ———, age, 36.

Had been addicted to the use of morphia for about six months. Used \(\frac{3}{4} \) of a grain at a dose by hypodermatic injection from two to eight times daily. Patient extremely nervous, debilitated, emaciated, and suffered frequent attacks of severe headache, frequent attacks of diarrhea, and severe vomiting, with hemorrhage from the stomach. Bowels very inactive when not loose. Attacks of headache occurred one to three times monthly. Had suffered from the severe headaches ever since early childhood. Weighed 80½ pounds. The patient had been confined to her bed for six months.

The morphia was withdrawn at once. The patient was very nervous the first night, but obtained six to nine hours of refreshing sleep each night after. Began walking three weeks after beginning of treatment, and in eleven days gained sufficient strength to be able to walk two miles. Seven weeks after treatment began, bowels moved naturally for the first time in many years.

More than a year has passed since this patient was discharged, but she reports herself still in good health. The treatment employed was the same as has been described in other cases.

Case 8. Miss ———, age, 36.

Had been using morphia habitually for eighteen years, but had managed to keep the quantity down to two or three grains daily. At the time the patient came under treatment, the daily dose was somewhat smaller than this. The drug was withdrawn at once, the usual course of treatment pursued, and with the following results:

The first few nights the patient slept very little, but was able to rest quietly, and at the end of the week felt herself quite well. Though a confirmed invalid when she arrived,

going about in a wheel chair and able to walk but a few steps, the patient left so greatly improved in strength that she was easily able to walk several miles if necessary, and enjoyed better health than for many years before.

Case 9. Mrs. ----, age, 25 years.

Had been using morphia habitually by hypodermatic injection, and gradually increasing the dose to 20 grains. Suffered greatly from hemorrhoids, indigestion, much nausea and vomiting, and at times manifested symptoms closely resembling hystero-epilepsy. Had several attacks of convulsions, which sometimes occured daily for three weeks or more. The patient was accompanied by her physician, who had promised to stay by her to see that the drug was not removed too quickly. The dose was gradually reduced from February 20th, when the patient arrived, to March 13th. During this time the patient suffered much severe pain in the head, vomiting, nausea, and extreme nervousness. Was constantly in a very excited state, and could not be made entirely comfortable by any treatment which was applied. Finally, the physician and patient both consented to an entire withdrawal of the drug, and with the happiest results. The patient obtained four hours' sleep the night following, and the next day felt much better. Improvement was so rapid that within two days the patient lost all desire for the drug, the bowels moved normally, and a little more than three months after the patient arrived she left for her home, declaring herself to be in better health than ever before in her life.

This patient's sufferings were greatly increased and prolonged by the attempt to withdraw the drug gradually. If the drug had been wholly withdrawn within the first fortyeight hours, the patient would have been saved much inconvenience and suffering, and would have reached a condition of permanent restoration to health at a much earlier date.

COCAINE ADDICTION.

BY W. F. WAUGH, M.D., CHICAGO, ILL.

I have been searching recently for records of cocaine addiction, and have been disappointed to find so little in print upon the subject. There must be a good many cases, and if each one who has met with these would put them on record it would be of a great advantage to us all. While I have been treating drug habits for ten years, I have rarely met with cases of purely cocaine addiction. In nearly every instance those who had previously taken morphine simply added cocaine to their list of accomplishments or vices. It is generally stated that drugtopers increase their doses, because, as they become accustomed to the drug, it requires a larger dose to produce the desired effect,- relief, sleep, or euphoria. But the vast majority of those I have questioned upon this point have admitted that this was not the case, but that they increased the dose in order to procure more of the effect, more euphoria especially. There seems, however, to be a limit in regard to the extent to which morphine can be pushed, and beyond that point the habitué cannot go. Usually he stops at about fourteen grains per diem, and at this point he will remain for years. But as he still wants more euphoria, he seeks for other agents to produce it. One man told me that, having made up his mind to come into my house for treatment for the morphine habit, he thought he might as well have all the comfort he could in the meantime, and so he started the use of cocaine. But usually the cocainist says he really does not know why he takes it, as there is no special benefit derived. And if well-advanced in the habit he lies about it, denying its use altogether, even when he is paying for a cure.

The cocainist is peculiar in his manner of using the drug. He makes up a little vial of solution, and of this he injects a few drops, repeating the operation almost incessantly. He reminds one of the boy who sets off his firecrackers one at a time to get a large number of little pops. The cocainist is careless to the last degree. He takes not the slightest precaution to keep his syringe in an aseptic condition, but mixes up his drug with anything that will flow through the short needle of his syringe, and injects solution, dirt and air into himself anywhere, through his clothes, unless he hunts around for a vein into which he can inject it in order to secure prompter effects. He never loses an opportunity to provide himself with more syringes and needles; so that it is not uncommon to find him with dozens of syringes and hundreds of needles in his possession. He is covered with sores, the result of his slovenly methods; but these he cultivates, as they serve as excuses for obtaining cocaine. He is peculiarly restless in his demeanor, never still for a moment. He sits down, crosses one leg over the other, reverses them, clasps his hands over his knee, hangs one arm over the back of his chair, twists about until his legs are over the chair-arm, gets up, walks about, sits down again, and goes through numberless other alterations of posture in the space of a minute. He gets out his syringe and takes an injection while conversing with you, apparently unconsciously, so mechanical or automatic has the action become.

The effect upon the bodily health is difficult to determine, as these cases are, as I said before, usually old morphine habitués. But with the advent of cocaine the progress downwards is accelerated. The emaciation goes on more rapidly; the complexion becomes pale or cachectic; the physical activity is lessened, so far as useful work is concerned; the appetite and digestive capacity are decreased. One singular effect is to increase the daily use of morphine, since the victim can take a dose that would ordinarily put him to sleep and then keep him-

self awake with cocaine. But as to the permanent effects upon the tissues or functions of the body caused by cocaine there is scarcely any information extant. So far as gross, macroscopic lesions are concerned, none have been as yet proved. But my own observations go to show that cocaine does not obtain the disastrous control over tissue metabolism that makes life so hard to the morphinist without his drug. When morphine is discontinued the cellular functions are performed so sluggishly that toxines accumulate and the body-temperature becomes subnormal, while an indescribable oppression and profound melancholy pervade every fibre of the victim's being. I have observed nothing of the kind with cocaine. On the contrary, when this drug is withheld there is a general nervous hyperesthesia present. The slightest prick of the hypodermic needle, an injection of warm, normal salt solution, absolutely unirritant, is followed by the most exaggerated complaints of agonizing pain, of the torments of the damned, which are kept up for days, when not the slightest external evidence of the injection is to be seen.

And in recording this symptom of cocainism, we pass to the consideration of the effect of this drug upon the mental and moral nature of the habitué. There is no question here as to the pernicious character of its influence; and I unhesitatingly pronounce cocaine the most disastrous in its effects of any habit-drug I have as yet studied. It destroys the soul. In using this term, I follow Garretson, who described man as a three-fold nature, consisting of the body, the ego, and the soul. The body, the Rupa of the Buddhist, is the material, which is dropped at death; the soul, the Buddhist Atmi, is the divine part, which at death returns into the Godhead if this is lost to its possessor; and the Ego, the individual himself, who lays aside his body, and keeps or loses his soul. Now in the worst confirmed cases of cocaine addiction that have come under my observation, the soul is gone; the moral consciousness is dead; the sense of obligation to

do right has been extinguished. The cocainist is depraved; he will take and break the most solemn obligations without compunction. To his dying day the morphinist's soul rises unconquered above the influence of the fiend which enthralls him. He struggles against the over-mastering influence, and bitterly laments his degradation: he is sensible of his obligations as a man. a husband, and a father; and the suicide which so often ends his career is the last protest of an unconquered will, the final effort of the slave who, unable to free himself, seeks death rather than continue to live in bondage. Under the fierce craving for morphine he will lie, steal, or murder to obtain his necessity; but he will suffer for his crime.

Nothing of this sort is to be found in the cocainist. He has no moral sense; he has no sense of responsibility, no manly interests, no love for his family, no religious principle, no shame. He will lie for the pleasure of lying, and steal needlessly. I have exhausted every appeal that can be made to the better nature of man, and have not found a fibre of the heart that would ring true. There is nothing to build upon. He presents the semblance of manhood, but the soul is dead. Trust his honor and he chuckles at your gullibility. Bring squarely before his face the proof of his deception and oath-breaking and he has no blush of shame, no compunction. He simply laughs, and begins to devise a new scheme to obtain his drug in which he displays much ingenuity.

One of these men came down one morning holding his jaw, saying he had the toothache. The doctor offered to treat it, but the man said he would rather have it out. So a nurse took him to the dentist, where the following conversation took place:

[&]quot;Can't you give me something to prevent pain?"

[&]quot;Yes, I will give you gas."

[&]quot;But I can't take gas."

[&]quot;Then I'll inject cocaine into the gums."

[&]quot;All right, go ahead."

- "How is that?"
- "There is not enough to prevent pain."
- "But the gum is so full the solution is oozing out."
- "Then put some in the other side."
- "Now the other side is full."
- "Then inject a good slug in my arm."
- "Are you ready now?"
- "Yes; go ahead."
- "Which tooth is it?"
- "Oh, I don't care a d-n. Pull any one you wish."

And so the moment he had his cocaine-hunger satisfied he dropped the deception without the smallest thought for a future supply, confident of his ability to obtain it by some other method. This man had had nearly all his teeth extracted in this way.

When the later stages have been reached there are certain phenomena present. The delusion of parasitic infection is manifested. The man believes he swarms with parasites. He examines little bits of epithelium with a magnifier and is sure they move. Still later come the delusions of persecution. He is hounded by enemies, harried by his relatives, and sometimes applies to the police for protection. Sometimes his stories have a certain plausibility and occasion great annoyance to those whom he selects as objects of his delusions. Or he believes himself a criminal and accuses himself of atrocious crimes, wholesale butcheries. Suicide often ends his days, but not as with the morphinist, to break his chains, but to escape from his pursuers. Still more frequently death results from overdoses of some drug; for if he has not access to cocaine enough he will take anything stupefying in his reach, and that in the most reckless manner. One of these men attached a rubber tube to the gas-jet and conveyed the gas to his bed, covered his face with the clothes and inhaled enough to stupefy him without the least regard to the danger.

Are such men curable? It depends on the degree to which

the moral degeneration has progressed and on the means emploved. If enough manhood is left to induce the patient to seek relief, there is a good prospect of cure, and the danger of relapse is much less than from morphine. But if he does not want to be cured, the only chance is in strict confinement for a long period. Whether the moral sense can be restored when once lost is doubtful; but from the absence of permanent physical changes from cocaine it seems fair to expect some degree of recovery even here, if enough time is given. But in the treatment no opportunity must be allowed for obtaining cocaine. Morphinists can be given their drug with permission to take it if too hard pressed on the sole condition that they shall inform the physician if it is taken; and this trust is never, or but very rarely, misplaced. But the cocainist must be watched every minute, night and day, by incorruptible attendants, for at least two weeks, and longer in bad cases. Beyond this the treatment is singularly easy, painless, and satisfactory.

I will close with a word of warning to physicians as to the use of cocaine themselves and for their patients. No man knows whether he is safe from the allurements of the drug until he has tried it, and when he has made the trial he cannot stop himself if he would prove liable to the habit. Never give a patient cocaine in such a shape that he will know what he is taking or be able to supply himself without your aid. Disguise the drug and dispense it yourself. Never use it for asthma, hay fever, or any other affection for which it is only palliative and not curative. And discourage it every way the use of catarrh snuff and other nostrums that contain cocaine.

Every paroxysm of intoxication is a picture of general paralysis, condensed into a brief period. The exhilaration and delusions, with the gradual failure and dementia, ending in sleep, are all phases of paralysis extending over years. The mental changes of the inebriate before intoxication comes on, and after it merges into dementia, are very exact pictures of the paretic.

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REPORT OF WALNUT LODGE HOSPITAL FOR 1897.

By Dr. T. D. CROTHERS, SUPERINTENDENT.

The records of the work in this hospital during the past year show an increased number of cases, with substantially the same histories, and about the same results. The mistake of friends of patients, and patients themselves, in expecting any permanent results from four or six weeks' treatment is always a serious obstacle. Studies and treatment of cases are suddenly broken up, and the case passes away, to relapse in many instances, and blame the hospital for their failures. The subsidence of the drink craze is not a cure or return to health, but is usually chemical restraint, or a pathological halt in the progress of the case. No treatment can be permanent which does not remove the exciting and predisposing causes, giving nerve and brain rest, building up and restoring the entire or-This is done not by drugs alone, but with the use of baths, nutrients, physical and mental change, exercise, tonics, and also with every means known to science, and called for by the special demands of the case. Each case is made the subject of special study and special treatment, and if the requisite time is taken the results in final cure is the rule, to which there should be but few exceptions.

Eighty cases have been under treatment during the year. Sixty-nine were discharged and two died. The class of cases were as follows: Periodical inebriates, 38; continuous inebriates, 23; dipsomaniacs, 4; opium inebriates, 5; cocaine inebriates. 3; complex cases, including ether, chloral, ginger, and other drugs, 5; unclassified, where spirits were used as medicines, 2. The periodical, continuous, and opium and

other drug inebriates are usually distinct classes; the others are always complex and interchangeable, one merging into the other readily.

In the question of causes heredity is the largest factor. The direct heredities were 21; the remote heredities, where the grandparents and great grandparents were inebriates, were 17. The collateral heredities, where other neurotic diseases have been common, and inebriety is one of the same class, were 14. Injuries of all kinds, called traumatisms, were present in 8; general and special nerve exhaustion appeared in 6; environment and contagion seemed the most prominent causes in 12. In two the causes were unknown.

In a study of the ages, eight cases were from 20 to 30 years; twenty-nine cases were from 30 to 40; twenty-five cases were from 40 to 50; thirteen were from 50 to 60; and five from 60 to 65.

The social condition of these cases were as follows: Married and living with wives, 36; widowers, 5; single, 35; married and separated, 4.

Occupations were as follows: Physicians, 10; lawyers, 6; farmers, 5; merchants, 6; clerks, 2; manufacturers, 3; druggists, 2; lumbermen, 1; drummers, 2; speculators, 4; engineers, 5; barbers, 2; spirit dealers, 8; mechanics, 3; artists, 2; bankers, 3; brokers, 4; students, 2; railroad men, 2. Of women: Housewives, 6; teachers, 1; no occupation, 1.

The education of these cases was as follows: Collegiate, 18; university, 14; academic, 22; common school, 26.

The duration of inebriety: From five to ten years, 8 cases; from ten to fifteen years, 36; from fifteen to twenty years, 24; over twenty years, 12.

Treatment in other asylums: In Keely and other goldcure places, 47 cases; in hospitals and sanitariums, 13; never treated before, 20.

Results of treatment: Recovered and restored, 35; improved and temporarily recovered, 43; little or no improve-

ment, 2. One died of cerebral hemorrhage, following an excessive drink period, ten hours after admission; the other from heart failure complicated with nephritis.

The experience of the years brings most encouraging evidence of the increase in the number of permanent restorations. While all cases as a rule go away restored, the test of years is required to prove the permanency of the restoration. small number of cases under treatment limits our studies to a comparatively few cases which are probably from the more favored classes, and yet this test of time is more and more prominent. In 1879, of fifty-one cases under treatment, four are now living and have been total abstainers during this In 1890 twenty of this number were well up to that The remaining number had disappeared or died. Since that time the history of five has been noted who were temperate. Others had relapsed and died. Six spent some time in asylums for insane, and one went to state prison for life for a homicide. At least twenty of the fifty-one remained restored eleven years after, and four were living and temperate nineteen years from the time of the first treatment. One of the four living was thought to be an incurable, and yet the sequel proved that the restoration of his mind and body was the turning point of his cure. One of these cases was literally starved and exhausted, and by nutrition and nerve rest recovered, and has been a useful, highly respected citizen.

It may be said that in all cases there are present states of exhaustion and defective nutrition. This may have preceded the use of alcohol, but it always follows its use. Inebriety is clearly a disease of degeneration and starvation. The former may begin in the ancestors, but the latter follows from alcohol.

It is evident that general intemperance and extreme overwork of all the functional and organic activities of the body are very active causes of inebriety. Often these conditions are unknown to the patient, and only recognized by a careful study of the case. A long personal study brings out the facts

and the means for correction with a measure of exactness in results, which cannot be obtained otherwise. We are often able to find conditions that are active in the causation, the removal of which constitutes a practical cure. In this way a special study in small asylums gives a more exact knowledge and greater facility in the use of means for cure. The work of tabulating facts of heredity and the various complex conditions which precede the use of alcohol has been largely increased during the year. New studies and data have been gathered on the influence of climate and occupation over inebriety, which promise to be of much interest.

Every year intimate studies of cases bring out concealed delusions and morbid conditions, enabling us to treat and correct what was unknown before. In this way we are able to go further back into the field of causes, and suggest and apply means of cure with the best results. With the full co-operation of the patient and friends and ample time, the cure of the case should always follow, and its permanency should be the rule and not the exception. Along these lines the work of this hospital is directed, and the experience of each year gives greater confidence in general therapeutic measures, with personal care and exact surroundings to build up and bring about final restoration.

PROPOSED REFORMATORY FOR INEBRIATES.

The Ontario government of Canada has had a committee on inebriate asylums since 1891, which has reported in favor of an asylum for inebriates. The report has been supplemented by facts and experiences from other sources. The Prison Aid Association has recently sent its secretary on a tour visiting asylums in this country, and also to inquire into the claims of the gold cures. His report is very suggestive, and brings many new facts to sustain the project of an inebriate reformatory. A number of eminent authorities have endorsed the plan, and a farm and building will be procured and an asylum open d at an early day.

Abstracts and Reviews.

MORPHINISM IN WOMEN.

By J. B. Mattison, M.D., Brooklyn, N. Y., Medical Director Brooklyn Home for Habitues, etc.

Morphinism in women is not rare. The assertion has been made, and that opinion somewhat obtains, that it is less often noted among men; but my experience is not in keeping with that belief. Inference is not fact, and I am unaware of any proof that it prevails more largely among the gentler sex. The genesis of morphinism in women presents no special variation from that relating to men. A physical necessity — not "vicious desire," not innate propensity to wrong, as some mistakenly put it — stands out strongly along causation lines in almost every case among the better class. Even those departures from physical health, peculiar to their sex, which lead up to this toxic neurosis, have as the one great factor, pain.

The diagnosis of morphinism in women need never be difficult. Often, however, it is. Usually a consensus of symptoms, the import of which is destructive, though details need not detain us, mark the disease, even to the non-expert. But there are cases — and not a few — where the lack of somatic signs, combined with denial of the drug taking — a denial due to the desire, common to most habitues, to protect herself from unkind and unjust judgment (the outcome of ignorance as to the true ethics of these cases), which prompts her to conceal the opiate using — make it not easy to determine the true condition.

There is a largely held opinion that all morphinists have a set of symptoms which leave little doubt as to diagnosis. That is not true. Many of them, objective as well as subjective, pertain to other diseases. Some morphinists use the drug years with little departure from mind and body health. I recall a striking case: New England physician who had taken morphia fifteen years, by mouth, reaching a six grains daily using, in whom I noted no evidence of his disease. Another notable instance was that of Mrs. A., wife of a New York doctor, whose case, in 1888, figured largely in the courts, during a suit for divorce. Charge was made that she was a morphinist. It was denied. She was examined by two physicians, who declared her free from the disease. They were mistaken. She had been an habitue six years. She came under my care, made a good recovery, and has remained well.

The mistaken opinion as to the patent signs of morphinism has led to legal error. The most notable of recent years was in the case of Carlyle Harris. You will remember that application was made for a new trial on the ground of evidence that his wife had been a morphinist. The application was denied, and in an opinion accompanying, the presiding judge laid much stress — most stress, if I mistake not — on his belief that had Mrs. Harris been an habitue, it would have been known to her husband, for whom, in a former trial, no such extenuating plea had been presented.

I have known again and again morphinism in the wife concealed from her husband for years. In view of this fact, I have no hesitation in saying that the opinion of Recorder Smyth, refusing a new trial on that ground, was a grave judicial error.

The detection of morphinism in women need never be difficult. We have infallible means to decide it. Two tests place the diagnosis beyond doubt. One is urinary analysis; the other, enforced abstinence. The latter is the better. The former is best made by the Bartley process,— Dr. E. H. Bartley, Professor of Chemistry, L. I. College Hospital. There are

other methods, but they are complex. This is simple and sure. It is: Make suspected urine alkaline with carbonate of soda. To this add one-fourth of its volume of chloroform or amylic alcohol. Shake well, allow to settle, draw off the chloroform and add small amount of iodic acid. If morphia be present, a violet tinge will be noted. The other test suggests itself. Forced abstinence from morphia for forty-eight hours will surely give rise to reflex symptoms due to opiate weed, and settle habitual taking beyond dispute.

The length of opiate using in cases under my care has been from six months to twenty-two years. The former took morphia subcutan., recovered in five weeks, and has been in good health several years. The other used 14 grains laudanum daily, and was not cured.

The daily amount of poppy taken has varied from nine-tenths of a gr. to forty grs. morphia subcutan. Both were women. The former had been given the drug ten years, and it seems scarcely credible that the daily giving was so small. In that, the case was unique. All tests to prove larger using failed. The secret of the unprecedentedly small amount was found in the fact that it was never self-taken. Patient was dismissed in five weeks cured, in the winter of 1892, and has continued well. The case of forty grains daily subcutan. taking was a brilliant literary woman. The first treatment was a success, which continued three years. The disease has recurred several times. Treatment has not been, probably will not be, of lasting avail.

Three women, each taking thirty grains morphia per day, by mouth, have been noted. Two were sisters, each ten-years takers, the other seventeen years. The latter and one of the sisters recovered four years ago. The disease has not returned.

Morphinism in women is, as in men, disastrous. You need not be told it in detail. The most important feature of it concerns functions peculiar to their sex,—ovulation, fecundation. The former is almost always disturbed, often very irregular,

sometimes long suspended. This condition is non-structural, and on removal of the cause rights itself. As a sequence of this status, most women morphinists are sterile. Marked exceptions, however, have been noted. The most notable case of the kind known to me, and emphasizing the need of special post-partum care to these miniature morphinists lest they die in collapse, was reported by Dr. Frank B. Earle of Chicago, in December, 1887. The preceding October, he attended at the birth of a ten-pound girl, whose mother, a morphinist, seemed specially solicitous regarding her babe. Inquiry revealed the fact that three children died soon after birth.— the first in two and a half days, the second in three days, and the third on the fourth day. In this case, on the third day, the child became sleepless, pale, and prostrate. Twelve hours after was found pulseless and cyanotic; five minutes later, died. The mother had taken eight to fourteen grains of morphia daily, commencing soon after marriage.

The sterility of morphinism ends soon after the removal of drug. My clinical records show quite a colony of postpoppy babies.

The prognosis of morphinism in women, in cases eligible for treatment, is good. Based on my experience, it is better than in men. The main reason for this is the larger liability to recurring causes among the latter. Of those who honor me with their care, seventy per cent. are medical men. With the coming of improved health, when the opium incubus is removed, comes the danger of a premature return to professional work. This is the rock on which the doctors founder. This, with the lack of that prolonged post-active treatment—hygicnic care and favoring environment, which continued through months, or even years, is absolutely essential to a lasting cure—is, I take it, the great factor in a recurrence of morphinism in medical men.

Recovery may be secured in some cases where the prospect seems signally unhopeful. My most striking case of this sort was noted in 1884. A Canadian lady — a lady by title as well

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as her accomplishments — was brought to me by her medical and legal advisers, who had accompanied her because her condition was such they deemed it doubtful whether she survived the journey. She was the greatest wreck from morphia I ever met. Physically she was too weak to walk; mentally she was imbecilic in look and talk; had various delusions; hallucinations of sight and sound, and — the only instance in many hundred cases — hallucinations of touch, not only seeing bugs and reptiles crawling over her, but feeling them as well. A more pitiable case could not well be pictured. She responded promptly to treatment, made an excellent recovery,— her psychical betterment outpacing the somatic — was dismissed, cured, in eleven weeks, and has remained well nearly eleven years — tidings, by telegram, to that effect, reaching me to-day.

The treatment of morphinism in women, like that in men, must depend on conditions peculiar to each case. The patient as well as her disease must be treated. Changes incident to her sex must be met and adjusted. In my experience, however, the need in this regard has been small. In most cases, nature, freed from poppy fetters, has, unaided, reasserted herself. Along other lines there need be no special therapeutic departure. Speaking broadly, more prolonged treatment than in men is usually required. The extremes in recoveries under my care have been five weeks' and six months. The latter was a ten-years case, with a daily morphia taking of thirty grs. by mouth. The siege was a long one, but it was a success.

In proper cases, the Mattison method — which it is a pleasure to commend, because I know its value — may be used with full promise of success. Other cases should have a more gradual morphia quitting. Not seldom the opiate plays a minor part in the situation,— profound neurasthenia or other condition being of larger import. Such a case is now under my care; a brilliant young woman, wife of a physician, weary and wakeful from constant care of her husband, who from morphia-cocaine excess will soon reach a graveyard or a mad-

house. Three months ago she was given morphia, subcutan, to bring rest and sleep, and — history repeated itself. The drug made special havoc in her case, for from an avoirdupois of 140 she wasted to 70. The tide has turned; she weighs 96; she will recover, but months of active treatment and prolonged post-active care will be needed, because, underlying her toxic neurosis, is a profoundly depressed nerve status that will require long time to restore.

Treatment in women enciente may be effected — by nonabrupt method — without solicitude as to mother or babe, anytime before the fourth month. After that the risk to each progressively increases. If gestation be completed, special care must be given the child, lest it die in collapse, which so often proves fatal in such cases.

Under no conditions, save very limited opiate taking as to time and amount, or others beyond control, should the morphia quitting be abruptly complete. This method — monstrous, brutal, mentioned only to be denounced — always entails needless suffering, and sometimes ends in fatal collapse. Two such cases, both women, one in a Brooklyn hospital, the other in a Virginia asylum, are known to me. Never was there so little excuse for it, for never was the humane treatment of the morphine disease so simple, so satisfactory, and so successful as now.

Mr. Chairman, in reviewing the subject of morphinism in women, I am profoundly impressed with a belief which has steadily grown stronger, that the largest measure of good work by the profession, in this field, lies not along the line of cure, but prevention. Morphinism has its rise in painful or other disorders, met by morphia. In many cases this must needs be, but in many more it need not be. Morphinism is, largely, a preventable disease. This fact and my belief that the profession is increasingly appreciating it, and by less frequent counseling and less lavish giving of this snareful drug are steadily tending to lessen the growth of the disease, make me optimistic regarding morphinism in America. I think it on the wane.

To the fathers of our fraternity, in my opinion, much credit for this is due, for, by more careful thought, or an experience often unhappy, they have come to realize the danger ever connected with a careless or uncalled-for use of morphia; but I believe their wise precept and practice is bound to have a like effect upon the sons, and, at no distant day, redound to the glory of the profession and the good of human kind.

KNOCK-OUT DROPS.

This name is used to describe some secret narcotic which is put in the drink of inebriates to make them insensible, for purposes of robbery. This is found to be always chloral, in concentrated solution, sixty grains to a drachm. This can be readily disguised and put in spirits without detection. The drinker always having palsied taste, this drug cannot be detected in spirits and is more readily soluble in spirits. One hundred grains can be dissolved in a drachm. Enough of this is absorbed to produce narcosis quickly without the usual stage of extreme excitement.

Dilation of the capillaries is a marked feature in the alcoholic brain, and the lesions are identical in appearance with those of artificial anæmia: while morphine has a specific action on nerve fibers, and eccentricity of nuclei is strikingly frequent in fatal poisoning.—Dr. Ewing in Medical Record.

Dr. Rosebrugh, the secretary of the Toronto Prisoners' Aid Association, has recently made a tour of observation in the States, visiting all the asylums for inebriates, and looking up the gold cures. There are some people in Canada who still think gold specifies are valuable. The doctor's report will give them some light on this topic.

REPORT OF THE ENGLISH INSPECTOR OF RETREATS FOR INEBRIATES.

The seventeenth annual report of the inspector of retreats for inebriates has just been issued, and is an instructive document. We learn from it that the ten retreats licensed in 1895 were licensed again in 1896, and two retreats were added, one at Reigate and the other at Street Court, near Leominster. Early in the present year two other retreats were opened, one at Horfield, near Bristol, for ten women, and one at Denbigh for ten men. A note to the schedule of all the retreats informs us that the license for the Hope House retreat at Reigate, granted in 1896, will not be renewed; neither will that for Daisy Bank, Walsall, be renewed. In the latter there was only one patient and in the other only two. The number of patients for which the twelve retreats are licensed is 172, being 96 males and 76 females. At the close of 1895 the number of patients remaining in the retreats was 89, during 1896 the number admitted was 166, the number discharged 143, there were two deaths, leaving the number of patients in the retreats at the close of 1896 at 110.

The report of the inspector speaks of the very satisfactory manner in which the retreats have been conducted during the year, and embodies the reports made by the licensees of several of the retreats. The most voluminous of these is that made by the licensee of the Dalrymple Home at Rickmansworth, which we fully commented on a few months ago, when the report of that home was published for the information of its friends and supporters. Another voluminous and interesting report is that given by the licensee of the Grove retreat at Fallowfield, near Manchester, a retreat for the reception of 25 females, which was opened in 1890. We read: "Strong practical motives led to the establishment of the retreat. On the one hand, the experience of the W. T. A. in their police court mission had forced upon their minds the need of applying remedial rather than punitive methods to the unhappy

English society is strangely under-estimated by most of those who speak or write on this subject. . . . There is an easy optimism which is fond of repeating the statement that excessive drinking has ceased among the 'upper' classes, and will in time die out likewise among the 'lower orders.' There is painful reason to believe the statement to be fallacious. Less wine is drunk at the dinner table, but it may be otherwise at the club, the billiard-room, the smoke-room, and the bar. There is ground for believing that immoderate drinking, though frightfully common among the industrial classes, is yet more prevalent in the classes usually contrasted with them. One reason why the fact is obscured is that drunkenness soon precipitates a man to the bottom of the social scale. tramp wards and labor homes number among their inmates no small proportion of 'gentlemen.' Among women also of all classes it appears certain that drunkenness is on the increase."

The report of the licensee of the retreat at Westgate-on-Sea embodies the following words of Dr. Symes Thompson, one of the directors of that retreat: "The experience of last year forcibly illustrates the importance of early treatment. If the retreat could be resorted to before the evil effects of alcoholic indulgence have induced degenerative changes, the prospects of permanently successful treatment would be greatly enhanced. When frequent indulgence has led to functional disturbance, or to deterioration of tissue only, the prospects are hopeful; but when advanced degenerative changes have taken place in the liver, kidney, heart, brain, and, indeed, throughout the whole vascular system, it is impossible to be sanguine of cure: but even in such cases it is found that by patient adaptation of remedial measures arrest may be for a time secured."

BROMIDES IN INEBRIETY.

The bromides in inebriety for the relief of excessive nervousness and irritation are usually uniform in their action. In small doses, below fifty grains, very little influence is noted unless continued for several days. The cumulative action is always more marked from the use of small doses than when doses of a hundred grains are given at one time. Excessive irritation following the removal of alcohol is often very quickly removed by the bromides. They should be given in large doses of at least two drams every four hours in large quantities of water flavored with peppermint or tincture of cinchonia. As soon as the bromide effects are noticeable, small doses of bitartrate of potassa and sulp. of magnesia should be given, with warm shower baths, twice a day. The brominism is usually very slight after this, and only the slight sedative effects remain. In low types of inebriates, with marked mental and physical feebleness, the bromides increase the debility with marked muscular paralysis and incoördination, followed by sub-acute delirium. Cases of this class come under my care in which the bromides have been given with spirits. result is semi-paralysis, delusions, and hallucinations, and profound exhaustion. A vigorous treatment of baths and salines clear up these symptoms rapidly, and the apparently fatal symptoms disappear. Recovery follows with more mental feebleness than in other cases. Bromide of sodium seems to be the most powerful and prompt in its action. In vigorous plethoric inebriates, with a high degree of mental irritation and delirium, the sudden withdrawal of spirits and the substitution of bromide of sodium, one hundred grain doses every three or four hours, is followed by rapid recovery. The drink symptom disappears at once, and the delusion of return to full health and sobriety is very marked in the patient's mind. Some of the gold cures are simply bromides in disguise, and the disgust for spirits are prominent results. Many cases cannot bear the bromides, they seem to intensify the debility and depression from spirits, also to bring out delusions, and hallucinations with muscular palsy. Chloral should never be combined with bromides for its sedative effect, especially in inebriates. When using the bromides, stop all other drugs that are sedative; there seems to be an incompatibility which destroys the effects of each. When using bromides for their sedative effect, always give hot baths and salines. When the temperature falls and the heart becomes feeble, stop all bro-When low muttering delirium comes on, with muscular enfeeblement, the bromides are dangerous. The bromide poisoning in some degree counteracts the effects of alcohol, and in certain cases, substitutes one condition for another. Its alterative action is doubtful in inebriety, but as a safe sedative in large doses for short periods in selected cases, it is a valuable medicine. Its indiscriminate use for all cases is unsafe, and its action should be watched carefully.

A NEW INTOXICANT.

Attention has been recently drawn to the fact that much of the drunkenness among the extremely poor inhabitants of the northern capital is caused by the consumption of a mixture of methylated spirit with paraffine oil. It appears that a certain proportion of the newly-distilled whisky kept in bond undergoes decomposition, and it is thus rendered unfit for consumption. This material is treated with methyl, removed from bond, and is sold by retail dealers for use in furniture polishing and other similar occupations. It was found, however, that the addition of methyl did not deter the poorer workman from drinking the spirit, and consequently the authorities decided to add a small quantity of naphtha or paraffine oil [?] In spite of its nauseating character, however, this mixture, popularly known as "dynamite," is very widely consumed and in the poorer closes of the city one may see, in the

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On the other hand, the magistrates felt victims of drink. that to sentence habitual drunkards to short terms of imprisonment, as the law directs, is worse than futile. They are liberated just at the moment when the sense of satiety and shame that follows a debauch is passing away, and the crave is returning upon them; but too soon for any change of habit or character to have been made; the prison, indeed, is not the place for such a process." We also read: "It may interest the public to know that in all cases the patient, no matter in what condition she comes to us, is made, from the moment of her admission, an abstainer. This rule is found to be attended with the happiest results. A change rapidly follows in health and spirits, which is reflected in the look of the features. It is the commonest occurrence for the friends of the patients to say of them, after a short stay at the Grove, that they look 'years vounger."

The licensee of the Grove concurs with the licensee of the Dalrymple Home and other licensees in lamenting the defects of the Inebriates' Acts, which contain no power for dealing with inebriates except with their own consent - always a difficult matter, "for the drunkard, especially if a woman, has the most fickle of wills, and the resolve to amend and to seek detention for that purpose is made one day only to be scouted the next." Another remark of the licensee is this: "The inebriate is often the wife or mother of the household, and her uearest and dearest friends would do anything in their power to recover and restore her. But through slavish deference to individual liberty the law prevents them from taking the one method which can do any good, viz., to detain the sufferer (whether she will or no) in a licensed retreat." urgent need for an amendment of the Inebriates' Acts such as the temperance party have long been advocating, the licensee of the Grove says: "The experience of the Committee at the Grove confirms the general opinion of temperance workers, that the number of habitual drunkards existing in words of the report, "groups of men and women, in a more or less hopeless intoxicated condition, a bottle of 'dinimite' in one hand and a corn beef can in the other, from which they continue to drink the liquid diluted with water from a neighboring well." It can hardly be supposed that the liquor is relished, or that any amount of indulgence would lead to an acquired taste; the object is simply to get drunk, and the compound enables this end to be attained quickly and cheaply, for it is six or eight times less expensive than whisky. The injurious effects arising from this pernicious habit are not dwelt upon; but although the small quantities of methyl and naphtha may give rise to no discomfort to those accustomed to their use, yet the impure and raw spirit which is the basis of the compound must eventually work havoc, especially upon the nervous system. It will be remembered that ether drunkenness became very prevalent in Tyrone, and the North of Ireland, but our detailed exposure of the widespread practice and the discovery that it was a fraud on the Revenue, led to its prompt suppression at the instance of the Treasury. A similar intervention might here be invoked.— British Medical Journal.

EFFECTS OF CIGARETTE-SMOKING UPON CHIL-DREN AND YOUTHS.

Selma Severson, M.D. ("Pediatrics"), queries: "What is there about tobacco smoke so injurious to the young?" After referring to the composition of tobacco smoke, the suggestion is offered that the products of such are more readily taken into the lungs when smoking cigars and cigarettes than when a pipe is used, as the stem of a pipe, if porous and clean, absorbs the nicotine. Upon the heart there is a functional derangement producing irregularity of action, due to the poisonous effect of the nicotine upon the nerves controlling its action; thus we have palpitation, dyspnea, and cardialgia.

Upon the nervous system, nicotine has a decided effect, the pupils often becoming dilated with consequent obscurity of vision, specks before the eyes, and sometimes deep-seated pain. I pon the exhausted brain it has a soothing effect, while upon the fully nourished brain it acts as an irritant. Through the sympathetic nervous system the secretions are disturbed, also the regulation of involuntary muscular contraction, as shown by spasm of the stomach and the vomiting produced on the first attempt at smoking. There is also an oversecretion of the salivary glands, with frequent irregular secretion of the gastric juice, the result being a loss of appetite, if not dyspepsia. These disturbances being functional, the tissues quickly regain their normal condition when tobacco is discontinued. It also acts as a mechanical irritant to the mucous membrane of the bronchial tubes, and if a bronchitis be present it maintains an irritable state of the membrane and keeps up the cough. Thus by lessening the bodily vigor the person is unable to withstand disease, and if he inherits weak lungs, may easily become a prey to tuberculosis. From the foregoing, the author suggests that upon the young, tobacco has a decidedly injurious effect, so much energy being wasted through all the years when so much is needed for growth and repair, the whole organism being in a state of disorder.

THE KEELEY CURE.

This exerts a harmful influence upon the human system as regards longevity. Carefully compiled statistics by life insurance companies show that the life of a Keeley-cure graduate is very materially shortened, even though the individual was not originally considered an inebriate, and in consequence several of the most prominent life insurances companies absolutely refuse to consider the application for a policy from any Keeley-cure graduate, no matter in how good condition the health might be.—Fort Wayne Medical Journal.

TWO CASES OF PARALYSIS OF THE LEFT VOCAL CHORD OF ALCOHOLIC ORIGIN.

It has doubtless happened to every laryngologist to have met cases of paralysis of the vocal chord, the cause of which it has been difficult or even impossible to discover. Dr. Dundas Grant (Journal of Laryngology, Rhinology, and Otology, October, 1897), in reporting two cases of toxic aphonia by alcohol, calls attention to the fact that the general recognition of the different forms of peripheral neuritis, and especially of those of the toxic origin, the alcoholic being the most common, is comparatively recent.

His first case was that of a clergyman, aged 40, who complained of weakness of his voice which came on suddenly at the commencement of the service. Complete immobility of the left vocal cord, both in respiration and phonation, was found. There was no evidence of aneurism, mediastinal tumor, or syphilis. He had recently suffered from sciatica in the left side, from which he had not yet recovered, and it seemed that the so-called sciatica and the paralysis of the vocal chord might be a neuritis dependent on the same cause. There were no signs of locomotor ataxia; there was no indication of lead, mercury, or arsenic poisoning. The patient complained of gastric disturbance, and the fact was finally elicited that he drank at least a pint of strong stout at each meal, and in addition spent the evening in reading and drinking brandy. Cessation of the habit resulted in complete restoration of the voice, the movements of the vocal chord becoming again normal.

The second case was practically similar, except as affecting a lady not previously suspected of alcoholic indulgence.

INEBRIETY AND SUNSTROKE.

Dr. W. F. R. Philips of Washington, in a very suggestive paper on "Meteorological Conditions of Sunstroke," which appeared in the International Medical Magazine for August, 1897, gives the following table. The influence of alcoholic beverages in determining both the incident and fatality of the affection is as follows. Of 841 cases examined, 465 had this history:

Using to excess,				140	cases,	or	30	per cent.
Using moderately,				230	"	"	50	**
Using not at all,				95	"	"	20	**
Total,				465	"	"	100	**
History unknown,				376				
Total,				841				

And of the 140 deaths that occurred the history of 70 is given as follows:

Using to excess,			41	death	s or	60	per cent.
Using moderately,			22	46	44	30	**
Using not at all,			7	"		10	"
Total, .			70	**	"	100	"
History unknown,			70				
Total, .			140				

THE MORPHINE HABIT AS A LEGAL DEFENSE.

A kleptomaniac in one of the British courts plead guilty, and her counsel assured the bench that she was in no want of money, but had sufficient means to enable her to live comfortably, and asked that she be treated leniently on the ground that the theft was due to the effects of the excessive use of morphine. According to the testimony, she had consumed ninetysix grains of morphine in a single week. The magistrate suspended judgment, upon the defendant giving security in £50 to appear for sentence when required. DeQuincey's daily consumption of laudanum was nine ounces, and there is a case on record where 120 grains of opium were taken at once without producing death. The tolerance of opium and its salts proves in reality much more than old women's fables, and instances of enormous doses are in the possession of nearly every family practitioner. A poisonous draught of laudanum can not be measured by cases on record.

Popular papers on scientific and semi-medical topics written by authorities with accuracy and clearness, is the special feature of Appleton's Popular Science Monthly. It is a pleasure to read papers on branches of science unfamiliar and be confident that they are correct.

The Scientific American contains many valuable papers on the new developments of our navy, with other matters of universal interest.

The Homiletic Review gives some excellent papers on the new researches in archæology, revealing much of the inner life of the old and forgotten civilizations of the world. This monthly brings a new field of thought to every reader of deep and helpful interest.

The Review of Reviews has a unique place in the library of the busy man. It is the medium through which he can glance over the current thought of the day, and see what is said all over the world, on all topics of the hour.

THE PSYCHOLOGY OF SUGGESTION. A research into the sub-conscious nature of man and society. By Boris Sidis, M.A., Ph.D., Associate in Psychology at the Pathological Institute of the New York State Hospitals. With an introduction by Prof. William James of Harvard University. New York: D. Appleton & Co., 1898.

This work of nearly four hundred pages is a very original, suggestive study of a subject that is largely unknown to the profession. Every medical man, and particularly specialists, are constantly observing phenomena which they cannot understand and classify. The terms hypnotism, mesmerism, suggestion, and other names are used to describe these phenomena. This work is a new study and attempted explanation of consciousness, personality, and sub-consciousness and its relations to every day life. The special value to students of mental

diseases comes from the explanation which it gives of the borderland diseases, insanity, paranoia, and toxic cases from a new point of view, and in new and most suggestive language. The new physiological data of the neuron, and the new experiments which make it possible to demonstrate the theories offered, are of great value to the reader.

Part third, on social suggestibility, society and epidemics, stampedes, mediæval mental epidemics, demonophobia, financial crazes, American mental epidemics, are most suggestive groupings of great facts, in the new light of suggestibility and sub-conscious workings of the mind. In a work occupying new ground, the reader must naturally follow without being able to judge of the full meaning of the facts stated. can quickly determine the scientific tone of the author, and the youthful assertiveness of his criticisms. Dr. Sidis has no doubt written an epoch-making work, which will serve as a starting point for wider studies; studies more condensed, clearly stated, and along broader lines, free from sweeping conclusions. No book on this subject will be more helpful at present, and do more to create a new interest in these phenomena now so confused and ill-judged. Dr. Sidis' work should be read by every student and specialist as a most valuable chapter in the new researches of the psychology and physiology of brain activities.

A COMPENDIUM OF INSANITY. By John B. Chapin, M.D., LL.D., Physician-in-chief Pennsylvania Hospital for the Insane. Illustrated. Price, \$1.25 net. Philadelphia: W. B. Saunders, 925 Walnut street. 1898.

This work of fine print and paper gives an outline view of insanity in sixteen short chapters, written in a semi-popular style. As a single volume giving general principles, symptoms, and treatment, it is both practical and valuable. For the general practitioner and the lawyer who may want some general idea of insanity this work will fill a real want. The

tone is very conservative, and the style is clear and concise, and while the critic will find fault with many of the author's views on disputed subjects, and regret that a wider conception of brain physiology and psychology should not be urged, still there is so much of real value that these are overlooked. To the student it will be very helpful, and the hospital nurse will find much valuable matter not easily understood in a larger volume. The author, Dr. Chapin, is an eminent man whose life-work among the insane as superintendent in two of the largest asylums of the country has made him a great authority on insanity. Hence a volume of this kind is useful in making clear many topics of which he has a large personal acquaintance, all of which will widen and greatly enlarge his reputation.

ORTHOGENESIS. The importance of natural selection in species-formation. By Th. Elmer, Professor of Zoölogy in Tubingen. Open Court Publishing Company, Chicago, Ill.

This little work is the January number of the Religion of Science Library, and was delivered as an address at the Leyden Congress of Zoölogists. It is an argument to show that organisms develop in definite directions without the least regard for utility through purely physiological causes as the result of organic growth. No natural selection is a determining factor, no heredity of acquired character, but a definitely directed evolution which goes on without change. This is presented with a large array of evidence, which makes up a strong case. This publishing company issues some of the best brochures of science, and every reader should have their catalogue so as to select from the new works as they appear.

HYSTERIA AND CERTAIN ALLIED CONDITIONS.

Their nature treatment, with special reference to the application of the rest cure, massage, electrotherapy, hypnot-

ism, etc. By Geoge J. Preston, M.D., Professor of Diseases of the Nervous System at the College of Physicians and Surgeons at Baltimore, Md., etc., etc. P. Blakiston Son & Co., Philadelphia, Pa. 1897.

This work has been received with warm praise by the press and has sold largely, being the only single volume discussing hysteria in print. In eleven chapters the author discusses the following topics: Historical; the nature of hysteria, etiology, and pathology: symptomology: disturbances of motion; tremor, contracture, and paralysis; convulsive attacks; major and minor attacks: hysteria-epilepsy: the mental condition in hysteria; visceral and vasomotor disturbances; differential diagnosis: treatment: electrotherapy: hydrotherapy: massage; the rest cure; hypnotism; surgical interference in the treatment of hysteria. These topics are presented in a very practical, graphic way, and although varying widely in fullness, yet on the whole are very helpful and satisfactory. The purpose of the author to give a clear clinical picture of hysteria in all its forms, and outline the general principles of treatment which should be followed, has been very clearly accomplished. This work should have a place in every library. The type and paper are excellent, and the mechanical makeup of the book is very attractive.

ANNUAL AND ANALYTICAL CYCLOP. EDIA OF PRACTICAL MEDICINE. By Charles E. DE M. Sajous, M.D., and one hundred associate editors. Vol. I. The F. A. Davis Company, Publishers, Philadelphia, Pa. 1898.

This volume is an evolutionary outgrowth of the annual of the Universal Medical Sciences, by the same editor, which appeared for many years in sets of five volumes yearly. The change to an encyclopædia, taking up the various subjects in an alphabetical form, giving condensed summaries with the new facts in the literature, are excellent and will be highly

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appreciated by the busy reader. These will extend back for several years, thus enabling one to trace the growth of medical thought and practice without great loss of time and a study of many volumes. The associate editors are experts on the subject they write about, and are able to give very clear reviews of the practical and theoretical facts of the topic. For example, on alcohol and inebriety Dr. Norman Kerr gives an excellent review of these subjects in forty-four pages. The facts and literature are grouped in a clear graphic way very satisfactory to all readers. Other topics are presented in an equally practical order. Unlike other works of this class, this is a study of the subject at present, and not a historical review of the work in the past, or views and theories long since abandoned. Their can be no doubt that the classification and order of the presentation of the topics is a great advance, enabling the reader to see at a glance the facts and learn where and what has been said on the subject. We commend this book very warmly to both the general and special practitioner, confident that he will consult it more and more as he becomes acquainted with its value, and find it one of the indispensable works of his library.

MEDICAL JURISPRUDENCE OF INSANITY, OR FORENSIC PSYCHIATRY. By S. V. Clevenger, M.D., Consulting Physician for Mental and Nervous Diseases to the Alexian and Reese hospitals; Associate Editor of *The Alienist and Neurologist*. Two vols., about 1,200 pp., best law sheep, \$10. Table of contents and sample pages on application. The Lawyer's Co-operative Publishing Co., Chicago, Rochester, N. Y., New York city.

The author, Dr. Clevenger, is well known as a leading expert in his particular field. The present work embodies his study and experience. He is well qualified for its presentation, both as a student of the subject and by experimental knowledge of the needs of the medical and legal profession in this direction.

To the student and specialist in mental diseases, the book gives the result of much study and experience in these matters and the gist of the world's best literature of psychiatry from the most modern sources. English, German, French, and Italian

To the general practioner of medicine this work offers an especially valuable and useful, brief, thorough, and convenient compend of a subject, which, outside his daily routine, may become at any moment one of immense importance, in which an opinion or decision involving responsibility for life and property may be immediately necessary. It gives him in such emergency the assistance of an expert.

To the lawyer and judge this book offers a combination of the best work of the expert alienist and the expert student of judicial decisions. The work of the courts is thoroughly embodied. It comprises the tests, evidence, and presumption of insanity, the mental capacity to contract, marry, or make wills, the effect of insanity on the relation to partnership, agency, or marriage, and also in criminal offenses. It treats also of the pseudo insanities, from alcoholism, morphinism, etc. The legal effect of these abnormal mental conditions in civil actions or in defense of crime are nowhere else as fully presented. This work answers questions likely to come up in every lawyer's practice.

Professor Belman of the University of Bonn, relates the career of a notorious drunkard who was born in 1740 and died in 1800. Her descendants numbered 834, of whom 709 have been traced from their youth. Of these seven were convicted of murder, 76 of other crimes, 142 were professional beggars, 64 lived on charity, and 181 women of the family led disreputable lives. The family cost the German government for maintenance and costs in the courts, almhouses, and prisons no less a sum than \$1.250,000; or, in other words, just a fraction under \$1,500 each.

Editorial.

IMPERATIVE IDEAS IN INEBRIETY.

A number of inebriates suffer from impulsive ideas to do something which their reason condemns. Often it is to procure and drink spirits; this idea becomes a morbid impulse, which pervades the system, overwhelming every other motive, increasing with the difficulties and opposition encountered. This dominance of an insistent idea is a veritable insanity, and after a certain time subsides. It may lie dormant for an indefinite time, then burst out with great intensity. The person may suffer acutely in efforts to resist it, then give way helplessly, and after its gratification be buoyant and happy that the struggle is over. This condition resembles a new personality which suddenly comes into consciousness and demands recognition and gratification. In one case, a physician who had been a total abstainer for five years was seized with a desire to drink to intoxication. He resisted this with great suffering mentally for a week, then came under my care. In a short time the idea disappeared, and profound exhaustion followed, although he had not used spirits. In a second case, a farmer who had never drank to excess, but had occasionally used beer in moderation, after the death of a child had an impulse to become intoxicated. He determined to resist this impulse, became ill, and confided to the family physician his trouble. An emetic and carthartic, with light diet for two days, broke up this idea completely. Often patients under treatment will be possessed with an insistent idea that they must have one drink. When they fully recognize the danger of giving way to this impulse, and seek help it is quickly

overcome. But where they conceal and follow its bidding, nothing but positive restraint is of use. Often active business and professional men suffer from sudden morbid drink impulses, which, after a short opposition, they give way to, and conceal themselves during the period of gratification. These insanities are not limited to the impulse for drug narcotism, but are noted in sexual, nutritional, and other morbid conceptions, which hold the mind in abeyance until gratified.

The sexual impulse is very common and persistent, and its resistance is a most painful, concealed struggle in many cases. Its gratification is often followed by intense fear, sorrow, and mental depression. The drink craze and sexual impulse are often associated, and one or the other are dominant at the time. When the drink impulse dies away the sexual idea comes into greater prominence. The practical treatment of these cases are difficult and require great psychological and therapeutic skill. Often profound diversion of the functional activities of the body is effective. The sudden overwhelming of the mind and replacing of old conceptions with new and vivid ones, are often curative. In the study of inebriety, these symptoms are the most important in practical treatment. Temperance lecturers, whose stories of their sufferings become morbid exaggerations, are no doubt possessed with these drink ideas, which they attempt to weaken by intensifying the danger and enlarging on the grandeur of escape from them. Morbid impulses and insistent ideas prevail in all chronic cases, but so far they have not been observed and studied.

TEMPERANCE WAVES.

We called attention some years ago to the evidence that temperance revivals came and went in obedience to great psychological laws, also that there was a certain uniformity of growth up to a certain high level, and decline, like the move-

ments of the tides. For certain periods little or no activity in effort or discussion of the subject would be apparent, then a tidal wave would begin, and for several years rise to a certain point, then decline. From some very general statistics, this ebb and flow movement would seem to occur about every sixteen years. Beginning at a certain point and ascending for five or six years, then receding an equal length of time, followed by four or five years of inactivity, then a similar recurrence. During the past sixty years at least three or four quite widely extended temperance waves have been noticed, each one becoming more intense, and the quiescent period shorter. The pledge movement, the prayer movement, called the gospel temperance work, the political movement, and the quack movement, by gold cures, have all had their cycles and tidal waves and decline. Now another great wave is in sight, and coming in with more rapidity and intensity than any former movements. It is the temperance reform of educational institutions. The demand that teachers should by practice and example lead in reform work of this character. and their previous failure to do so, has started a new tide of activity, which is gathering force and power that is startling. Even among medical men the use of alcohol as a remedy is rapidly declining, and the danger of alcohol as a medicine is asserted and defended by facts and authorities which are rapidly increasing. The text books of to-day point out the influence of alcohol in disease, unknown to older writers. cal societies discuss the degenerative influence from alcohol with increasing frequency. Each temperance wave, whether social, religious, scientific, or political, brings the subject into greater prominence, and throws clearer light on the problems, and serves to eliminate the errors, and is evolutionary in the highest meaning of that term. The subject is larger than the men who sustain or oppose it, and behind all their efforts there are laws of evolution and dissolution that go on unchanged.

The delusions and theories which have gathered about alcohol and its influence on the race and civilization are breaking up. A literal ground swell and movement is seen, coming in on tidal waves, each one rising higher than the last, and each ebb shorter, and each flow more rapid and powerful. The teaching of the evils of alcohol in common schools is another tide, which will, by-and-by, break with tremendous force on the theories of to-day. A study of these movements from the psychological point of view is very startling, and a new realm of inquiry awaits the pioneer settler for occupation and development.

STAE SUPERVISION OF INEBRIATE HOMES.

Three years ago it was estimated that there were over three hundred homes and asylums for the care and treatment of inebriates in this country. Recently this number has fallen to less than one hundred. Of these nearly thirty receive mental cases of insanity and allied diseases associated with inebriety, and are managed by reputable men, many of whom are eminent in the profession. About a dozen are purely asylums for inebriates alone, all under boards of management, who are equally reputable. The remaining sixty are irresponsible organizations, using secret or other remedies of which the gold cure specifics are most prominent. These places spring up anywhere, and claim facilities and ability to restore the inebriate in a brief time, with a certainty unknown to rational medicine. The army of sufferers, unable to discriminate, accept these pretensions, and after a brief treatment find themselves worse and more debilitated than before. The claim of ninety-five or ninety-eight per cent. cures, are literally exactly From ninety-five to ninety-eight per cent. relapse in the first few months or years. The recent exposures of the managers of some of these gold cures, call attention to the urgent need of some legal control or responsibility in the organization and management of such places. The superintendent of a much-advertised cure near Boston was found to have served a long term in prison as an abortionist and to be a patent medicine street lecturer. Another so-called physician who managed a large pretentious gold cure, and went about lecturing and soliciting patients, was found to be a hotel swindler, with his portrait and history in the New York Rogues Gallery. A third physician, manager of a gold cure, who roused a great deal of religious fervor in the churches, and who was a praying devotee of some magnetism, was found to be a forger and bigamist. He escaped arrest by flight.

While these are, no doubt, extreme cases, yet all experience indicates a degree of irresponsibility, and class of doubtful, uncertain men, who have charge of these secret specific cures, that call for legal correction. All efforts to cure inebriates in asylums or homes should be regulated by state authority, and conform to some general rules, not as to drug treatment, but as to the character of management and surroundings. Every home should have some responsibility to the community that it will fairly and honestly attempt the cure of the inebriate, that the managers and physiciaus are not swindlers, and that disreputable practices and bad men may be restrained and prevented from taking advantage of the persons who come under their care.

PROSPERITY AS A FACTOR IN INEBRIETY.

A certain number of cases of inebricty never use spirits except when elated from prosperity and success. At other times they are strict abstainers, and often violent opponents of spirit drinking. The relaxation from effort and strain, and the first appearance of success, in the attainment of some ambition, is always followed by the drink impulse. Among the lowest classes the accumulation of money brings facilities for procuring spirits with leisure and opportunity for indulgence. With this class the anaesthesia of alcohol is the most agreeable mental sensation they experience, and however short it may

be the impression is very vivid on the memory. The pains and suffering after leave feebler impressions, and are more quickly forgotten. Higher up in the social and mental scale, prosperity in the accumulation of property, or the attainment of position, or particular object sought for, brings with it a certain reaction or relaxation of nerve force, which in certain unstable nerve centers is manifest in exhaustion. This condition, always vague and uncertain, is most quickly relieved by spirits. This anaesthesia seems to give power to realize the new conditions, and adjust them to the present. An unknown pathological condition encourages the use of spirits, together with mental feebleness, which responds to every contagious influence from without. A strong temperance advocate was elected to a high office. In the excitement of elation over the event he yielded to the invitation to use spirits. was clearly mental feebleness from reaction. tonished and could not explain his conduct after. States of insomnia and confusional, emotional activity follow, which alcohol seems to relieve. The successes of life are clearly manifest by very different mental conditions, from those associated with the fears and struggles to succeed. From this point of view some probable ideas of the reason are seen for this obscure factor in the causation of inebriety. One case under my care, where a strong temperance man of forty suddenly came into possession of a large amount of property, and became an incbriate in a few months. An ambitious lawyer was elected to Congress, and drank to great excess during his term of service, then came under my care, recovered and became a temperate man until death, ten years later. Before his election to Congress he was a total abstainer. A third case, after passing a life of fifty years of total abstinence, began to drink to excess, on the sudden prominence from wealth from inheritance. Λ mother went from the country to spend a few months in the home of her daughter in the city. She began to use spirits and continued up to death. The joy and satisfaction of her

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daughter's home seemed to have been the exciting cause. Grief is followed by the same effects, and many cases are noted where this condition has been the active exciting cause. Joy seems more exhausting to an unstable nervous system, and alcohol acts as a sedative, steadying the trembling neurotic activities. It seems more difficult to escape alcohol and other narcotic infection, in prosperity, especially when it comes on suddenly, than to avoid it in the stress of adversity.

THE TEMPERANCE CAMPAIGN AGAINST COL-LEGES.

The indifference and laxity of college authorities concerning the use of alcohol and the presence of saloons has roused up a campaign, which will organize and crystallize what has been a latent temperance sentiment, and of the feeling of alarm in the minds of conservative people. The denials and contradictions as to the evils pointed out only bring the real facts into greater prominence. Bevond all doubt a great reform wave has begun. Fathers and mothers will demand some degree of protection for school children and college students: the same as corporations and capital demand total abstainers to manage their interests. The battle is not between organized temperance people (or so-called fanatics) and the old institutions of learning; it is the coming of new truths concerning alcohol and its influence on the world of to-day, and the refusal of schoolmen and teachers to accept these facts and adjust themselves to the new conditions. It is educators against new truths and new facts in science, which to accept require strain, effort, and change. Practical business men recognize these facts, and now the battle is coming up for their general recognition. Every medical man is watching this movement with expectant interest. It is a practical advance of great psychological importance, and not the inspiration of any one man or paper.

OPPOSED TO INEBRIATE ASYLUMS.

Fifty years ago a prominent man urged the folly of asylums for inebriates because they did not strike at the root of the evil. Now this same argument is repeated as if it was new, and affirmed with great detail and earnestness. For twenty centuries reformers and moralists have been striking at the root of inebriety, and their efforts have been practically beating the It was not until asylums were organized and the inebriate was studied scientifically that any progress has been made. Within the last half century asylums where inebriates are gathered have revealed some of the great laws which govern the origin and growth of this malady. The drink craze is only a symptom, and the removal of alcohol only takes away one of many causes. Banishing alcohol as a beverage is not striking at the only root of the evil. Declare all inebriates unsound and incapable of having the liberty of others; show to the public the disease which follows the use of alcohol; and the inebriate would disappear from our streets at once. This must be done in asylums, by men who have only the facts to discover and teach to others. If the ardent reformers would concentrate their efforts on asylums and laws to force men to go under treatment, we should have data and facts which would change the entire course of the temperance cause. The world is now waiting for facts concerning this evil and its causes, and the inebriate must be housed and studied as a sick man, then we shall be able to realize the beginning and progress of this Inebriate asylums are the natural outcome of a wider and more practical knowledge of this subject. They will teach us preventive measures, and bring into prominence what is not known, and enable us to deal practically with the inebriate. Opposition to asylums for inebriates sounds like the utterances of the old Harvard chaplain, who all his life denounced insanity as a disease down to his death in 1880. Modern advance in this field to him was retrograding.

Dr. A. M. Ritter of Milo, Ohio, January 29, 1898, writes: "I wish to speak especially of the merits of Papine, as an analgesic and sedative. I have had success with it when all other remedies of like character had failed. One case in particular of intestinal indigestion, in a child twelve months old, attended with a great amount of pain, and extreme nervousness, and insomnia. The remedy worked like a charm in relieving pain and giving rest. The remedy was given in five-drop doses to begin with, as required to give rest and relieve pain. Papine was used in this case for at least six months, in increasing doses, without doing the least harm. It has been now three months since Papine has been discontinued, and the child is in perfect health. I consider Papine one of the most valuable remedies as a pain-reliever and nerve sedative in well-selected cases.

F. A. Rew, M.D., Imboden, Ark., says: "My experience with S. H. Kennedy's Extract of Pinus Canadensis was so decidedly satisfactory and gratifying that I prescribed it with a positive assurance that benefit will follow its use. On the principle that 'all astringents are tonics,' I use the Pinus Canadensis in small doses in pneumonia, bronchitis, typhoid fever: indeed, where the mucous membranes need a tonic, and recognizing the similarity between nucous membranes and the external skin. I use it in erysipelas, nervous forms of eczema, and wherever the skin needs a tonic. It is all I need in many cases of ophthalmia and genorrhea. Its special therapeutics would fill many pages, and I am satisfied that we will yet find new uses for it."

Dr. Norwell, Surgeon, Royal Infirmary, Edinburgh, writes: "Antikamnia is a specific for almost every kind of headache: it acts with wonderful rapidity: the dosage is small: the dangerous after-effects so commonly attendant on the use of many other analysis are entirely absent; it can, therefore,

he safely put into the hands of patients for use without personal supervision; it can be very easily taken, being practically tasteless."

Maltsyme, a new preparation of malt, which appears to have value as a starch digester. Combined with hypophosphites, is found to be valuable in the many cases of general debility from alcoholic poisoning. Chemically and physiologically it is almost an ideal preparation, and it exceeds any other form of malt which has been put on the market.

Clinical records of Arsenauro and Mercauro, from medical journals, is a very interesting story of the value of these drugs in their new forms. The nerve tests of the effects of these minerals bring a degree of certainty unknown to older writers. Metallic alteratives in medicines are now known by positive uniform results which cannot be mistaken. Arsenauro, Mercauro, and the bromides of gold, as prepared by Charles Roome Parmele Co., New York city, are certainly working a revolution in rational therapeutics, and this excellent brochure is a good sign of this change.

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Victims of inebriety often give a history of chronic constipation which existed long before they became addicted to the use of alcohol; and there is almost invariably a neurotic taint in the direct ancestry of such cases. And it is often found that the progeny of such inebriates have a tendency to constipation, even when not having a strong tendency to inebriety.— Dr. Williams in Medical Record.

A French Society for the Prevention of the Abuse of To-bacco has just elected its officers for the ensuing year, and to judge from their number the society must be a large and flourishing one. They are: President, M. Decroix; vice-presidents, Dr. Hache, Dr. Leyssenne, Dr. Petibon, and Colonel Schuhler; secretary, Dr. Gélineau; treasurer, M. Auzoux; keeper of the archives, M. Ravenet. Besides these there are a host of other officers whose names can be of interest only to members of the society.

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VOL. XX.-15

LIST OF ALL THE LEADING WORKS

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AND PUBLISHERS. AND THE PRICE FOR WHICH MOST

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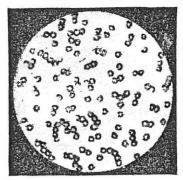
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Vol. XX.-16

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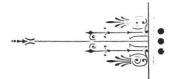
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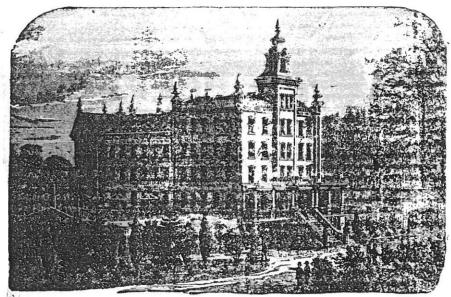
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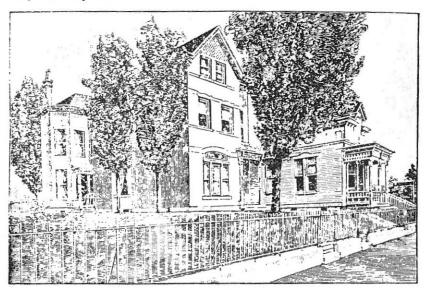
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