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The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF MEDICINE AND SURGERY

VOL. VI. TORONTO, SEPTEMBER, 1899. NO. 3.

Original Contributions.

THE PRESENT ATTITUDE OF THE MEDICAL PROFESSION TOWARD ILLEGAL PRACTITIONERS.*

BY THOMAS J. HILLIS, M.D., NEW YORK.

THE law assumes, and the people take it for granted, that the advertising quack is a legal practitioner of medicine, and that when he advertises himself and his ability in the newspapers he is only exercising one of the inalienable rights of his citizenship. Later, we will examine and determine the quality of this right, only to find that he, too, is an illegal practitioner. For this reason there is confusion in some minds about terms as applied to quacks and abortionists. Some people very properly regard both as the veriest sort of knaves, as well as quacks; others, again, look on the professional advertiser as rather worse than his friend the abortionist, for the reason that the latter may be acting in good faith toward his patient who is in a dilemma, and while breaking the law, makes an honest effort to allay her anxiety of mind and relieve her of her burden. If she threatens to destroy herself if her child is not done away with, and if the abortionist takes this threat in good faith, there may be some moral justification for his act, as the child is sinless and prepared to stand trial for crimes it has not committed. The mother, on the other hand, has sinned by breaking the moral law, and is prepared to sin again by offering her life as a sacrifice for this transgression.

*Read before the New York County Medical Association, February 20th, 1899.

The advertising quack cannot be said to be animated by any such motive as is thus attributed to the abortionist, for, to the discerning eye, his advertisement is only what he wishes could be accomplished rather than what is or can be. The former is dealing with possibilities; the latter is trading on the credulous and fools. Technically the illegal practitioner is doing something contrary to law. The law condemns him for so doing, and brands his offence as a crime. For this reason this criminal pursues his vocation with extreme caution. He throws out his feelers before he takes a step and thoroughly surveys the field. So shrewd is this illegal practitioner, and so careful in the technic of his diabolical practice, that he is very rarely caught. True, some of the more conspicuous ones have cheek and impudence enough to advertise cautiously, often in religious weeklies, about their success in treating certain diseases peculiar to women. Others flood the practitioners' mail with their business cards, which are very carefully worded, but nobody is deceived for a moment as to their meaning and import. His object, no doubt, in sending his cards to physicians is this: Physicians are very often approached by their regular patients and others about a trouble of which he makes a specialty, namely, procuring abortions.

The family physician hesitates; he is weak, avaricious, and hungry for money, and would dare to try, but he fears to fall, so he shares the profits by indirectly referring his patient to him who relieves without inconvenience or danger. That sly specialist may, by his daring and dexterity in his art, command an income of fifty thousand a year; and it is current gossip that there is in the borough of Manhattan about a dozen so-called physicians who actually exceed this mark. Across the way, and in the same street with one of these specialists in diseases peculiar to women, is a competent and thoroughly equipped physician, respectable and well thought of, who works very hard for an income of less than a thousand a year.

The abortionist when discussing this poor man's business affairs disposes of him briefly and laconically, by saying, "The fool does not know how to catch on." In marked contrast to the abortionist is the advertising quack, who hires space in the newspapers by the year, and who is as well known to the business managers of those newspapers as a child is to its mother, or a deacon to his Sunday School class. They know that he is an impostor, who uses their paper as a medium to procure money under false pretences, but as it is to their interest not to antagonize him they leave him quietly in the care of the moralist and the social purist; but he is safe there, for, as a matter of fact, he has them in his pocket, and their physiognomies adorn his flaming and lying advertisement in the morning papers, where, over their signatures, they bear testimony to the efficiency of a nostrum of which they know nothing, and about whose physical properties they are perfectly ignorant. The ways and means by which the unscrupulous advertising knave

contrives to reach the heart and conscience of the deacons, the moralists and the governors, whom he trots out from time to time on dress parade in the newspapers to trap the unwary, the writer would prefer to leave to conjecture, but such will not satisfy the inquirers after facts nor placate the searcher after truth, who will, after investigation, say: "The fraud was a mutual benefit affair and division of the profits of dishonor." The man of the world will declare: "The quack fixed it with his glorifiers and the community swallowed the bait"; so the procession moves on and on, while the advertising quack makes the minister, the deacon, the governor and the senator dance together, or in turn, to the music of "Punch and Judy" in the show he has got up to enrich himself.

Here we have, to the shame and lasting disgrace of human nature, the pillars of the church, the leaders of the bar, and the senators in the forum bearing witness to the efficacy of worthless trash, that they are made to say in the vernacular of the newspaper doctor has made them well when their family physician declared there was no hope; that the grave was the only refuge now. As a matter of fact, the family physician said nothing of the kind, nor was he consulted in the matter at all, it being a question of connivance or dollars with the parties concerned. This man, the so-called legal practitioner, makes a fortune by proclaiming to a wondering and confiding world the efficacy of his magic salve and the potency of his electric belt.

Minus the newspapers, his salve has probably not more value than an equal weight of axle grease, nor has his electric belt any potency other than that which can be found in the belly-band of a mule's straddle. The secret of the successful swindle lies in the wide publicity given to his vulgar eulogies of himself, the number of fools in the world, and the way one can be made to impose on one's self. Another fact worth noting is that most of the newspaper cures are done by men who are not physicians at all, but who are clever business sharps who see an opportunity to make a dollar, and embrace it. These sharps have keen business instincts and are veritable human bloodhounds on the trail for the almighty dollar. They transact their dishonorable dealings very often through a dummy, nominally a doctor, whom they push into the field of observation as a decoy; this dummy, and there are many like him, is only an expression of the will of the bloodhound, who keeps himself in the background, and who is the body and breeches, soul and inspiration of the whole advertising scheme. He gets others to furnish the money while he edits the wily programme and directs the crooked partnership. The poor physician is the hired tool and the cover from behind which the clever rascal, who is not a doctor, bleeds and cures the public. This rascal procures a charter through his tool who is nominally a doctor, from obliging legislators, and organizes himself and his partner in iniquity into an institute, a college, or a medicine company, as his fancy or his instincts may direct. He begins business by opening an account

with the press and helping a poor church to pay its mortgage. Later he is elected trustee in that church and director in a trust company. Then we have the illegal practitioners—the abortionists; that is their name, and child-killing is their vocation—pursuing their calling under the very eyes of the law and growing rich with rapid strides, while nobody challenges the source from which their wealth has come. The advertising rogue and schemer gave from his abundance to the little church around the corner, and like a brand from the burning, rescued it from the clutches of the sheriff, whom we have seen, seize it for debt. Now it is the abortionist's turn, and he is ready to aid the good clergyman, who is ill at his humble lodgings from lockjaw acquired through persistent effort at denouncing imposture and hypocrisy from his pulpit, and his terrible warnings of the judgment to come. That abortionist, as much for diversion and joke as for the hope of reward, sends round his valet with a cheque for $25 as a New Year's offering to the afflicted and impecunious servant of God. The humor, pathos and generosity of this philanthropist appeal as strongly to the comic opera singer as it does to the student of human nature. He heaped coals of fire on his enemy's head, and by this clever move he has transformed a conscientious, and what might prove a dangerous, enemy into a life-long friend, for at court he was there to bear testimony to the good character of his benefactor; but the case for the people broke down, which case will be described with more particularity presently.

How a Criminal Evades Punishment.

A patient, a lady of twenty, calls at a respectable practitioner's office; her eyes are red from weeping; she is in distress, and good-looking. It has been observed that it is the latter type who is oftenest in distress. She tells the physician with a glimmer of sunshine flashing through the halo of misery that has encompassed her like a fog, as she raises her eyes coyly from the depths of her despair, but they don't meet his, that she does not know what is the matter; she is sure there is nothing, but is anxious that something be done for her at once, or she will jump into the river, or drown her sorrow in an ounce of carbolic acid. She repeats she is sure there is nothing the matter, but admits in answer to a question by the doctor that she saw Arthur but once, just once, and then only for a minute; that she is certain, as the time was so short, nothing could have occurred. A furtive glance around the office, then a moment of suspense and strained attention like a frightened hare, as if the walls had ears, and her mother on the other side listening to the conversation.

A hot tear, and a suppressed exclamation of surprise as she reads the doctor's answer in his face before he speaks, and again she reiterates her innocence. The physician advises her to go to her mother, make a confidante of her—she will doubtless advise her to marry her lover, go to housekeeping and immediately settle

down. Her eyes glow with a genial fire at the mention of Arthur's name as she throws back with kindly but offended air, "I will not marry him now if he were hung with diamonds, neither will I tell my mother, but I know what I will do," and she straightway leaves the office.

That night, under cover of darkness, she entered the office of Dr. W., chaperoned by a female friend, who is not a stranger to trouble like hers, and is an adept in extricating others from like troubles. Five days later there was a funeral in Harlem. It was that of a lady, young and beautiful, so the papers said, who had died suddenly from inflammation of the bowels, by eating too freely of rich candy that brought on an attack of acute indigestion, which extended downward, invading the peritoneum and causing death. It was with difficulty these particulars were obtained by a reporter for the press, as the family was prostrated and in no condition to be interviewed by the news gatherer.

Dr. M., a regular practitioner, who was in the pay of Dr. W., signed the death certificate; it had a suspicious look and was rejected by the Board of Health. Then came arrests and indictments. Society is shocked, and the gossips are active and happy. The District Attorney's assistant said he had a strong case; that virtue must triumph and crime be punished was the motto he chose when taking office a month previous. He said he would show the people there was no mistake made when he was placed in charge of the criminal department of the city's legal bureau.

In court, at the trial of Dr. W., this well-intentioned Assistant District Attorney cut a sorry figure, for in his legal fencing with the criminal expert hired by the defence, he was outclassed, outpointed, and floored every time. When he finally capitulated to this luminary of the criminal bar, he looked very much like one who had been dragged through a threshing-machine, or shot a mile through a pneumatic mail pipe. While he was clearly defeated, he managed by some legal legerdemain of a clever colleague to have the case called a draw if certain conditions were complied with and the time was opportune. The opportunity came, the conditions being favorable.

The coroner's physician, on whom so much depended, is uncertain and goes to pieces on pathological anatomy in cross-examination by the medical expert for the defence. The coroner, himself, is rather undecided now, though he was sure when taking the ante-mortem statement of the dying girl, that she was rational and declared to him that she recognized her end was near and that she was about to die. Gossips say that they saw the coroner and the legal expert for the defence early in the day together quietly discussing the case. The bolder of them said it might mean something, as it was known the coroner was a politician and a political heeler of the third order before he became a high city official. Of course this, even if it were true, was unkind, as this honorable functionary was elected because of his special fitness for this office;

further, he swore before a high priest of the law that he would serve the people well. Besides, we know that gossips' tongues will wag and Dame Rumor is no respecter of persons, not even the sacred personality of a New York coroner.

The faithful policeman, the strong man of the prosecution, is very weak and confused on the witness stand, and gives his testimony with much hesitation. On cross-examination he admits he mistook some other man for Dr. W., between whom there is now, he thinks, no resemblance, though it was very apparent then. Other witnesses for the prosecution disappeared as if the ground opened and swallowed them. Immediately before their disappearance some of them were seen in company with a friend of the accused physician. At this juncture, who that has no pity for the able Assistant District Attorney, now, in this the hour of his discomfiture, particularly for the vows that he vowed, and for the defeat of aims so exalted. There is now only one honorable course open to him and he embraces it—to make a public apology to the defendant in the case, Dr. W., for the unpleasant notoriety he has given him and the humiliation it must bring him to be associated with anything flavoring of criminality, so he then and there in open court, gave Dr. W. his word of honor that such a blunder should not again occur during his incumbency of the office of assistant district attorney.

He said in the early history of the case he was enthusiastic of immediate conviction, but later developments made it plain that his case had not a leg to stand on. This fact, he continued, prompted him to make the apology public, and further, make to Dr. W. any reparation he could. Then came the hand-shaking and congratulations of the crowd of friends and retainers that surrounded Dr. W. and his quick-witted attorney. They, with one voice said, the aggrieved physician should sue the city for slander. At this the lawyer winked his left optic, and arm in arm walked into the air of freedom with his much-abused, but sinless, client.

It was thought wise by the writer to preface the attitude of the medical profession toward illegal practitioners with one or two illustrations or examples of how these men defy the law and escape punishment.

An occurrence of the kind described is not infrequent, so that the profession has got used to it, and therefore pays little attention to the burlesque on justice enacted every now and then in coroners' jury rooms and even in high courts of law. The attitude of the profession may be said to be one of suspicion toward the legal machinery of the criminal department of the city government, and of contempt for the quacks and disgust at their methods. With the state of affairs that has existed, and which still exists, it has long ago concluded to wash its hands and stand aloof from the whole matter, and leave the quack and the illegal practitioner severely alone, to pursue their disreputable calling as unmolested by them as they are by the city authorities.

The respectable element of the medical fraternity, which nominally means every registered physician within our metropolis, is not by any means as large as is supposed. Leaving out the apologists, active allies and imitators of the advertising quacks and abortionists, the number of really honest and upright physicians is disappointingly and surprisingly small. This will not be wondered at when we recollect how easy it is to obtain membership in a medical society, and that hundreds holding memberships advertise for, be it remembered, there are other means of advertising than the newspapers. Some of the kind alluded to, having a surgical operation of the most ordinary kind to perform, enlist the services of a reporter, who writes up the operation with great flourish and with headlines of blazing type; he says it borders on the miraculous and is the boldest and most heroic operation yet undertaken by any physician of the age, and modestly winds up by saying, "It was performed by Dr. A. after a prolonged consultation with Drs. B. and C., who all three have a high standing in the medical profession, and who are members of several foreign congresses and correspondents of honorary societies abroad, besides being members of all the prominent home societies."

This puff in the newspaper is bought and paid for by the parties interested, though they pretend to be unaware of its publication and to be shocked when their attention is called to the matter by a respectable practitioner, and speak incoherently and vaguely of sueing somebody; but privately they order advance sheets and proudly but stealthily circulate them among their friends and endeavor to make friends and patients out of strangers on the strength of the exhibition of the article they have inspired, and so industriously distributed.

So much has this practice been in vogue that our ranks are full to-day of men, young and old, who are eager to figure as surgical pioneers and medical prodigies, posing as popular idols in the field of experimental surgery, and are hungry to have the most ordinary case talked of, written up, and discussed with joy and wonder by the masses, to whom such an appeal is a revelation and by whom such men as they hope to be launched into prominence and reap a reward that their talents never entitled them to, for, talk as we may, hero-worship has a hold on the masses and is deeply rooted in the heart of human nature. The popular heart will respond alike to the brilliant achievement of the scalpel or the bugle blast of war.

No man is more likely to get a big vote than the soldier who has won fame on the battlefield, even if in order to become possessed of the latter he waded knee deep in human gore, nor is any physician more likely to spring into popular favor than he who was advertised as the man who did the marvellous operation, even though it was a pretence and a sham, and that for such he was repudiated by the respectable element of the profession.

The attitude of the profession towards the illegal practitioners,

feeble and childish, of course, has made them bold and defiant, and enables them to throw back our disrespect and scorn with interest on our heads. They say the justification of their work rests in its success and its general approval by the people. It is conceded that the illegal practitioners are a financial success, but the means employed to bring about this success are questioned and unanimously condemned by us; but condemnation to these men amounts to nothing if it is not accompanied by a sentence of hard labor in the penitentiary. However, and unfortunately, such a happy result as this is well-nigh impossible from the manner in which they juggle with justice.

These illegal practitioners rest on their laurels and take things easy, knowing our weakness and lack of cohesion. Since these scoundrels—the quacks and abortionists—are growing influential as well as rich, we must now bestir ourselves in order to shake off the effects of the Rip Van Winkle sleep which has paralyzed, dazed and muddled us for so long.

These medical charlatans, who, hanging on the flanks of our profession and feeding on its vitals, have spread a repast for themselves on the bosom of the people whom they claim as their own, will soon come to be looked upon as a necessity, and no longer amenable to any legal restraint.

The penalty on the statute books for their crimes will become inoperative and obsolete as it will be counter to public opinion, and will lie in the legal archives of the State, like dead leaves on the woodland, a jest for the illegal practitioners as the leaves are a plaything for the winds that blow through the forest. Then the illegal practitioners will claim to practise their unrighteous calling and not even the respectable practitioner will have a voice to challenge or combat that right.

Now, the danger signal must be planted on every hill-top and the call to duty sounded through the camp, that the yeomen still in the medical profession, growing fewer every year, be up and active; if not, the illegal element with the constant re-enforcement of those who are deserting us, and who have already stolen our dollars, will very shortly elbow and crowd us out altogether. A little more headway to the forces of quackdom and they will ride roughshod and in triumph over prostrate but well-intentioned professional opinion.

The most dangerous plight or condition a person can be placed in is, to be the object of negative resistance; it is practically a condition of inertia and helplessness where a person or thing is at the mercy of an active force. This is just the position of our profession at present—at the mercy of the power and momentum of the illegal practitioners. These men are all pushers and hustlers, with coats off and sleeves rolled up and in the attitude of pugnacious defence toward any and all who come along to dispute their right to occupy the choicest rooms in the medical household.

Gentlemen of this medical society, these men—the illegal

practitioners—are striking at us from the shoulder and improving daily in their method of attack. What sort of defence are we of the regular profession making against their well-directed efforts? Are we putting up any fight? No, but we intend at some future time to go into training in order to learn how to defend ourselves against these expert fencers.

This procrastination on our part and putting off to another day is fatal to our interests; we must not wait for a future day but act at once by seizing the first weapon that comes to our hand and hurling it at those insolent pretenders and bullies, who, like all bullies, are cowards at heart. The good intentions which have been the stock-in-trade of our profession, can offer but poor resistance to the active and organized opposition of these illegal practitioners. Our intentions have been hitherto, and are now, feeble and inert when directed against such wily foes. Saint Augustine, when describing some of the aspects of an analogous case, said, "Hell is paved with good intentions, while it is conspicuously lacking in good actions."

The Attitude We Should Assume Towards the Illegal Practitioner.

The remnant of what is left of a once proud and honored profession should put its good intentions to practical account by getting together and offering or presenting a united resistance to the constant encroachments of the illegal practitioners. We should combine against our common enemy, and as he is a shrewd and unscrupulous foe, fight him with his own weapons, or as the saying goes—fight the devil with fire. We know that the claim of the newspaper doctor exists only on paper, because he has always failed to make good his advertised promises, though technically this self-eulogized blow-hard of newspaper notoriety is classed with legal practitioners. He is, as a matter of fact, as illegal in his methods and just as criminal as the abortionist, with this difference: the latter, who may not be a quack, is one who, as a rule, makes good his promise, since, in a majority of cases, he accomplishes what he sets himself about to do, and generally keeps faith with his patient, who is not, as some would have it, his victim, but his tempter and accomplice. The law simply commands that a thing shall not be done by a medical man to whom it sees fit to grant the right to practise within the precincts of its jurisdiction. The physician who takes the risk and breaks the law of the State has an opportunity to get rich; at the same time he exposes himself to all the penalties to which a broken law appeals.

Now, while the State has a right to punish the abortionist for breaking the law, it has also an obligation to protect the innocent honest practitioner in the lawful pursuit of his calling; however, the general practitioner does not care to figure as a mendicant, sitting at the feet of the State, begging its protection, or soliciting alms from passers-by. He must, however, in order to exist, demand

of the State that it sees to it that its officials are not venal and color-blind when a case is brought up for final adjudication as to the guilt or innocence of a suspected abortionist.

The attitude the profession should assume toward both the quack and the illegal practitioner, whose business methods are known to us to be vicious and opposed to public policy and good morals, is one of outraged honor where latent and pent-up disdain is converted into energy and liberated through practical channels; it should be practical enough to assume the aggressive and take on itself the form of active hostility. As was hinted at before, we must take those men seriously and fight them to a finish. If the advertising quack can accomplish what he claims he can, and is as expert at the art of healing as he says he is, then we will have to say good-bye to the general practitioner and the whole brigade of vaunted specialists, who figure so conspicuously on the Medical Boards, and arguing from the standpoint of the triumphant quack, it will be good riddance of bad rubbish.

The medical profession with its chosen leaders, and under the banner of stalwart conviction, should take the offensive by making open war on the illegal practitioners, for, as was related before in a previous part of this paper, though the advertising quack is nominally a doctor, and is accepted as such by the constituted authorities, he, is nevertheless, in strict interpretation of the word, a law-breaker and a public offender; for, in a manner not very difficult to prove, it can be shown that he is a sharper and impostor, who has always and is now receiving money under false pretences, which is a crime in the eyes of the law, to be punished by fine and imprisonment. Then the abortionist and the quack stand together at the head of a homologous series, far down which can be seen a crowd of regular practitioners humbly gleaning where they have reaped. Now, the abortionist and the doctor of newspaper notoriety, notwithstanding the superficial legal distinction, are standing moral criminals on the same platform, and are equally guilty of high crimes and dark and shady transactions. They are both a menace to the public health and to progress and prosperity of the State. On these lines the illegal practitioners must be attacked, until they are driven from the field, placed behind bars and the law vindicated.

The attitude of the medical profession, then, as it should be, must be one of personal effort with constant watchfulness and cautious advance; we must not make the mistake of underrating our foe; he is unscrupulous, merciless and well supplied with money, which he has wrung from the public by fraud and imposture, and is prepared to use it any time he gets into the clutches of the law, to bribe weak and venal officials, and frustrate the ends of justice.

Our previous attitude, though one of scorn, will not any longer suffice; that was all right as far as it went, but it did not go far enough. The profession is now suffering from its lack of energy and want of aggressiveness in the past, and to-day realizes the fact

that it held these fellows too cheaply, allowing themselves to be trampled on and robbed of their rights by knaves and scoundrels who have grown fat on the proceeds of infamy and false pretences. These men should have no recognition, as they have always been out of the race when honor, decency and good citizenship were the prizes to be won. If the advertising quack can cure consumption and restore motion to ankylosed and long-stiffened joints, he is able to do more than the surgeon and regular physician, and far more than the family doctor. The educated, trained physician is baffled by disease in the sick-room every day; he tells the family of his impotency in the matter, adding that he can make the patient comfortable, but that restoration to health is out of the question in a case so grave as the one now presenting itself to him. He recognizes the limitation of the legitimate practice of his profession, and lays no claim to the marvellous or supernatural in the treatment of disease. He is able to account for his success or failure in a given case in an intelligent if not always a scientific manner, and anticipates and defines fevers and allied conditions as the result of over-action or congestion in a part, or lack of elimination of waste products by diseased or insufficient organs.

When the regular practitioner halts on the threshold of the impossible, honestly declaring he can go no farther, and that as far as human effort is concerned, it is helpless to effect a cure, the newspaper quack steps in and claims that he can begin where the regular physician left off and bring the doomed man around to a condition of perfect health. Now, if he is able to do this by the exercise of any agency whatever, he has a right to get credit for his skill, since it has proved itself superior to the science of the regular physician, who should step down and out, and as he goes should pay a fit tribute to his successor, who is no longer his rival but his superior.

Now, since the quack's efforts are crowned with success, we must no longer address him by an epithet so unbecoming, but look up to him with respect, prompted by the awe that his magnificent work has inspired. With this happy condition, which is evolved from the brain of the advertising physician, inaugurated, the colleges should disband or be mustered out of service at once, since there is no further need for their graduates, because the curing and healing is done by men who have paid no attention to the teachings of such institutions, and who only laugh as they read over the curriculum of college catalogues.

If the things are true that the advertising physician says of himself there is no further need for us; we only block up the road to progress and should vacate gracefully, not having even claim to squatter sovereignty, as such would be an evidence of our failure and unfitness for the profession about which we know so little. Our signs will further be a finger-post and target for the raillery of the triumphant quack who is vindicated and redeemed, while it will furnish a subject of laughter to the doomed man who was by

him made whole. If that doomed man gets a new lease of life through the potency of the drugs dispensed at the hands of the physician who advertises of himself in the newspapers, he has a right to be thankful and a further right to tell the story of his rescue to his friends and neighbors, and to have all whom he can influence or appeal to through the press to go and do likewise. The State should recognize his worth, crown him with honor in life, and revere his memory when dead by practising his virtues.

Now, in this practical age and time of quick adaptation of means to an end, it should not be a very difficult task to find out definitely whether the advertising physician is really all he claims to be. The consensus of opinion in reputable and disreputable medical circles alike, is, that he is not. The public has also about the same opinion, but the opinion of the public oscillates, like the pendulum of a clock, and is often uncertain. It is shifty in medical matters and on the whole, in the safe keeping of the quack.

Public opinion, in matters pertaining to the public health, has always been of the nebulous order, where rapid changes and unstable conditions alternate, and is known to find its greatest expression in the field of bustle, clamor and excitement. Those varying public sentiments should be harmonized and crystallized to a concrete substance that can be acted on by common-sense and practical demonstration as to actual facts.

The public should be schooled to recognize that its own interests lie rather in the line of investigation and demonstration of the fallacy of chimera and superstition rather than the taking of them to their hearts and adopting them as their own without inquiry or thought of fraud or imposture. This is why the quacks and newspaper doctors are so rich, and the great body of regular physicians so poor.

Now, gentlemen, we of the medical profession have a double duty to perform—to point out to the people the error of their ways, and to thoroughly ventilate the methods of the quacks and abortionists, since we are willing to abandon the field of our professional labors if they prove their worthiness to public gratitude by demonstrating before an impartial tribunal the truth of their miraculous cures, with accounts of which the newspapers teem, they, in turn, failing in their purpose, should follow our example and cease from further robbing and fooling the public; but such a course on their part would be wholly foreign to their feelings and history of their callings.

Now, if we are able to impress the public with the fact that the quack did not cure the consumptive, whom we abandoned as a hopeless case, but on the contrary, lulled him with hopes, delusive ones, of course, until he drained every dollar from his slender purse, then found a pretext—and it was, that he failed to comply with the conditions which pointed to success—that he might the easier sneak from the responsibility with good grace, he, like us, abandoned the sick man, but not on lines converging towards ours.

The man who robbed this dying man is an advertising doctor who tries to escape the penalty for his dastardly act by tricks and devices and sleight of hand in dealing with the legal authorities, that his day of reckoning may be deferred indefinitely.

It is a difficult matter to send a man to the penitentiary, even though he be a bad man, about whom the following may be written by the District Attorney:

"DEAR DOCTOR,—I saw your advertisement, took advantage of the hope you held out, followed your directions, and am now well and happy, and rejoice to be able to testify to the virtues of your wonderful compound.

"Very truly yours,

"DISTRICT ATTORNEY OLDBOY."

Under this signature is the testimony of the pastor, who was afflicted with lockjaw, whom he formerly befriended; of these two men—the district attorney and the clergyman—he makes in turn a weapon of defence to beat off his enemies, and a magnet to attract new business. This can be better understood when we recollect that judges, bank presidents and bishops have very often been made the tools of designing persons, as clairvoyants and medical quacks. This is sometimes accomplished by an accident, oftener by well-laid plans. The advertising doctor is a good illustration of the latter; the abortionist a fair one of the former.

The way in which these men delude the public furnishes an interesting study in the science of criminology. It is little wonder the hard-working practitioner, who is worn out in his efforts to do good, and while doing so, scrupulously obeys the law, loses heart and grows despondent. To the right of him, to the left, and in front, are the quacks and abortionists; his position is a critical one. To go ahead is to invite disaster, and to retreat is cowardly; but if he retreats to protect his flank and rally for a final struggle, it is strategy, and that is what he must do. In order to make the attack successful he must recognize the measure of energy that is in him, go to his professional neighbor and tell him of his plans, fire him with his enthusiasm and ask his aid and co-operation, as well as his counsel, in organizing a circle with fire and soul enough to roll on in the direction of direct results and consisting of the whole battalion of available practitioners, which, of course, will include every form of honest specialism.

The effect of this action and organized opposition to the methods of the illegal practitioner would drive him from the offensive and give us a vantage-ground of inestimable value to pursue tactics looking to the unconditional surrender of that felon. This course would have been pursued long ago individually and no doubt collectively by an energetic and aroused professional opinion; but such opinion appears to be stifled and held in abeyance by frothy and colorless declamations from the lips of interested or ignorant laymen and lawyers, trotted into the halls and lifted to

platforms by men among ourselves who, by our carelessness, have elected themselves to office and organized themselves into committees, executive and otherwise.

These men have declared themselves guardians of our professional conscience and the keepers of the medical scroll; but we are not deceived by their suave and polite handshake, behind which we have discovered double-dealing and treachery. They are self-seekers and obstructionists, and altogether a very commonplace lot, without a single quality fitting them for leadership, if we leave out unlimited self-assertion.

Nothing whatever in the way of reform can be accomplished by this self-constituted directory, compared to which the illegal practitioners appear in a favorable light. At present they strut around and amuse the stage with their mutual feeling of good-will to each other and reports of experiences and triumphs.

It is now imperative that they be brushed off the stage to make room for the real reformers, who are prepared to try conclusions with the illegal practitioners, and would have done so long ago had they not been scared off by the loud cries of the self-constituted reformers, with a "wait to see what we will do." So far, however, the efforts of the reformers have awakened about as much ridicule in the breast of the populace and in the ranks of the profession as has the recital of the exploits of the three tailors of Dooley Street in a mirthful kindergarten of juveniles.

This resolution of active resistance we will at once enforce by throwing away the prudish reserve that has characterized the medical profession from time immemorial. It did not seem to have time nor disposition to resent an insult or right a wrong, even though inflicted on itself, so eager were its members to pursue their profession and follow landmarks, even though they have been pointed out as dangerous, mapped out under conditions that are at present inoperative. Yes, gentlemen, this prudish sense of personal reserve has emasculated the medical fraternity, and made its members an easy prey for the designing or ambitious, both inside and outside medical circles. Indeed, this same self-imposed reserve has always been a hindrance and a yoke about our neck to drag us down to the depths, often to shame and humiliation.

It has been a bugaboo and nightmare that has restrained our hands when our living and our honor were devoured and confiscated by a rapacious band of plunderers, known as advertising quacks and abortionists. We have been restrained from dealing with those social outlaws by an old etiquette imposed centuries long preceding, and which did not dream of or anticipate the boldness or effrontery that was to lie in wait for the profession. In it has been bequeathed to us a legacy of mortification and an inheritance of poverty. That professional reserve, imposed by the councils of antiquity—a traditional trait—has committed us to silence, and instructed us to bear great wrongs with resignation. The world is moving on, and we must move too, and the way for

us to move is to put away our old professional reserve, a relic of antiquity, in the urn with the ashes of departed friends, and live in the living present; and if it is necessary to fight to maintain a right, or right a wrong, to jump into the fray with a strong heart and hope of victory. The wavering remonstrances of impotency must be flung into the wastebasket with the profile of the governor who was cured of an incurable disease by the impudent quack and with the cards of the abortionist, which, through a vehicle of assumed respectability, he has been able to smuggle through the mails to our breakfast table.

To the determined man and cautious observer these creatures are not only vulnerable in the heel, but in every part of their cuticle, thick and impervious, though it is, to shame and every form of moral suasion. It can be easily proved that the advertising doctor secured the physiognomy of the governor and the clergyman, whom he didn't treat at all, by device and sharp practice, though they may not have been aware of the fact; he passes them through his many editions of the public press as those who have been cured by his infallible remedies, and as an invitation and a warning to those who need succor. The writer has knowledge of instances where emissaries of the quack are ever on the hunt for the simple or the mercenary that they may be used as a decoy to draw others into the enclosure, where they can be robbed and then ejected with the same immunity from punishment as the dive-keeper who administers knock-out drops to belated and muddled travellers who have been directed to his infamous resort by creatures in his employ under the very eye of the police and in the glare of the electric light. We see the young woman enter the door of the abortionist, and in a little while we will hear the chanting of prayers for the dead, or perhaps this rite may be denied her, and nothing left but a mole of earth and a pauper's grave. Let me ask you, gentlemen of this society, what occupation is more honorable and what calling more exalted than that of unearthing crime and dragging atrocious criminals to the bar of outraged justice? I know of none. Those men, as a disguise, call themselves physicians, that they may the more readily rob, and commit murder with impunity. The law has a strong arm, and is able to punish those men if their guilt that is so apparent to us can be proved in a court of equity. Let it be our mission to bring these scoundrels to the dock, and our pleasure to see them decorated with the regalia of the criminal—the stripes of the penitentiary uniform. The task is in every way one which can be accomplished by us if we only get our shoulders to the wheel, quit wrangling among ourselves, direct all our attention to the common foe, who, after all, consists only of a contingency of cunning and sneaking rascals, who will take to the woods the moment they see that we are sincere in our purpose, namely, to punish them for crimes they have committed and are still committing every day with impunity, under the very nose of a government which has promised to protect the innocent

and punish the guilty. In self-defence the government declares that it is powerless to punish these men because the proper evidence for conviction is lacking. Now, we will have to furnish this evidence, take the law at its word, and demand an exemplary punishment. We will succeed. The quack took money under false pretences from the men whom he fooled, by declaring he could cure an incurable disease; and the abortionist committed a murder, when he claimed sententiously to help a lady in distress.

We will now go into the open to do battle with the child-killer and advertising shark, who are both strangers to moral obligations, and outlaws and bandits against the interests of society, subsisting as they do on the misfortunes and credulity of mankind. These moral reptiles are ceaseless in their hunt for victims; they invade the sanctity of homes, to bribe the weak or persuade the wavering to be the subjects of a lying advertisement; they corrupt the press in order to have their false stories floated out upon a guileless and wondering world, which is almost struck dumb by the magnitude of their exploits. They command and receive aid from the clergy, the bench and the bar, while officers of the law wait on them with the fidelity of body-servants or footmen long in family service. The mission of the new medical dispensation is to point out to the people that the quacks and abortionists, illegal practitioners all, are their enemies as well as ours. Evidence enough to make this plain can be easily furnished if we apply ourselves to the task with half the zeal they do to their atrocious calling. We can accomplish this by making ourselves thoroughly acquainted with their manner of operation and the underhanded devices they call to their aid to placate or evade the law. That their sins will find them out is excellent reading for the Sunday School superintendent, as it has been a precedent and an excuse for the attitude of the medical profession in the past; but it has worked poorly so far as it relates to the illegal practitioners and quacks.

We now recognize the long-suffering of our trusting and patient brothers, and our attitude henceforth and to the end will be as avengers of our brothers who have suffered, and of the profession which lies prostrate and bleeding from the dagger-thrusts of medical thugs and assassins, who are registered in the archives of the State as regular practising physicians. We have repudiated them, and will resent the insults they have put upon us by speedily giving them their quietus. The attitude of the profession, then, to the illegal practitioners, as it should be, and as it will be, is like that of a household apprised of the intentions of a burglar, which is robbery and murder, a watchful and determined armed resistance.

51 Charlton Street, New York.

THE PLEA OF INSANITY IN MEDICAL JURISPRUDENCE.*

BY JAMES RUSSELL, M.D.,
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THE plea of insanity is so frequently raised in our criminal courts, especially in trying capital crimes, that I need offer no apology for presenting a paper on the subject. The success with which the plea is urged in trying even the most atrocious and revolting crimes has aroused in the public mind a feeling of doubt as to whether the law is being properly administered and the ends of justice sufficiently served. As the plea of insanity is usually supported or opposed by medical testimony in the witness box, the issue of life or death to the prisoner and the enforcement or miscarriage of justice may be largely in proportion to the skill and honesty with which the medical witness submits his evidence.

It may be said that such momentous issues are usually settled in court on the testimony of the medical expert in mental disease, and that the subject is therefore of greater interest to the psychologist and student of mental science than to the general practitioner, and yet we know from experience that every physician is liable to be called upon to testify in regard to the mental responsibility of a person charged with crime, from a coroner's inquest up to a general court of assize. It becomes every physician then to acquire such a general and even special knowledge of the subject as to prepare him to acquit himself creditably in the witness box without bringing personal discredit on himself or the profession which he represents.

CONFLICTING TESTIMONY.

The old adage, that there are two sides to every question, is never more clearly demonstrated than in the unseemly confliction of medical testimony in the witness box, even by medical men supposedly eminent in their profession. A prisoner is on trial charged with the crime of murder. If he or his friends be possessed of sufficient means, the plea of insanity is set up, the most eminent criminal lawyer is engaged to conduct his defence, a large array of witnesses are summoned, including one or more medical experts, to sustain the plea. The Crown presents the case to the court and jury, supported it may be by the most positive evidence of guilt, and then the battle for truth and justice begins. One expert swears to one set of opinions, another swears to the very opposite. What each one is to swear has been all prearranged before he enters the witness box. The counsel for the defence is an adept in expert testimony himself, and has read up the authorities on the

*Read before the Ontario Medical Association, June 13th, 1899.

subject and been coached by the expert witnesses he has summoned as well. All the intricacies and subterfuges of medical and legal lore are presented to the jury to sustain the plea of mental irresponsibility, a large amount of technical evidence is submitted of which the jury know little or nothing, they become mystified by the confliction of medical evidence, doubt arises in their minds, they are thrown largely on the mercy of the court for direction, they retire to consider the case and return with a verdict of "not guilty," because of insanity.

Now, I do not mean to say that the verdict is an unjust one in every case—far from that; but I do say that justice often miscarries through the unseemly confliction of medical testimony, and our noble profession is not only discredited by the courts but by public opinion as well. The difficulty seems to be that the man of science, it may be unconsciously, degenerates into the advocate and allows his mind to be warped and prejudiced by the exigencies of the case and the determination to succeed of the side which summoned him; worse than all, shall I say, if his sordid nature has been appealed to and he is moved to testify in proportion to the size of his fee.

It may be said in justification that as mental alienation has not reached the standard of a positive or exact science, there is room for a wide divergence of honest opinion in regard to the complex problem of what constitutes normal or abnormal mentality. I freely admit that no scientist has ever been able to demonstrate the exact relation between mind and matter, that we cannot explain how nerve matter produces consciousness and probably never will; the histology of the nerve cell is still a matter of conjecture, and biology has not demonstrated a physical cause of life, but it is not necessary to have reached a finality on these psycho-physiological problems in order to agree upon what constitutes normal mental life. We each express ourself to the world according to certain mental, moral and social standards which may vary to a certain degree according to our environment, but every serious variation or departure from these standards is recognized by the psychologist as having its physical basis in some degeneration or malformation of brain, either hereditary or acquired, which makes the person so affected more or less irresponsible for his conduct in life.

Legal Test of Insanity.

There has been a long disagreement between the professions of law and medicine as to what constitutes mental responsibility in criminal offences. It is obvious that some legal test should be formulated into law or precedent by which to interpret this condition in the administration of justice. It has always been a matter of regret that, in framing a law which has necessarily to interpret a condition of mind peculiar to mental science, the advice of medical experts on the subject had not been taken.

The famous McNaghten case which was tried in 1843, was the

occasion of fixing a test which has been incorporated into English law and applied ever since in fixing the question of mental responsibility for the commission of crime.

Daniel McNaghten was tried at the Central Criminal Court in March, 1843, for the wilful murder of Edward Drummond, the private secretary of Sir Robert Peel. The judges before whom the case was tried were Lord Chief Justice Tindal, Mr. Justice Williams, and Mr. Justice Coleridge. The leading counsel for the prosecution was the Solicitor-General, Sir William Follett; whilst Mr. Cockburn, afterwards Lord Chief Justice, conducted the defence. Evidence was given to show that the prisoner shot Mr. Drummond in the back without any previous altercation on Mr. Drummond's part.

It appeared that the intention of the prisoner had been to shoot Sir Robert Peel, and that with that intention he had watched his house; and that seeing Mr. Drummond come out from Sir Robert Peel's house in Whitehall Gardens, he followed him and shot him under the mistaken belief that he was shooting Sir Robert Peel. Dr. Munro, who was the principal medical witness for the defence, testified that he had examined the prisoner, who said that he was persecuted by a system or crew at Glasgow, Edinburgh, Liverpool, London, and Boulogne, that the crew followed him wherever he went, that he had no peace of mind and that he was sure it would kill him. Mr. Cockburn then asked: "Is it consistent with the pathology of insanity that a partial delusion may exist, depriving a person of all self-control whilst the other faculties may be sound?" Witness: "Certainly; monomania may exist with general sanity." Dr. Munro was then cross-examined by the Solicitor-General, who asked: "May insanity exist with a normal perception of right and wrong?" Witness: "Yes, it is very common." Solicitor-General: "A person may have a delusion and know murder to be a crime?" Witness: "If there existed antecedent symptoms I should consider the murder to be an overt act, the crowning piece of insanity."

Re-examined by Mr. Cockburn: "You have not the slightest doubt that McNaghten's moral perceptions were impaired?" Dr. Munro: "Not the slightest; I think a delusion of this nature carries a man quite away. I mean that his mind was so absorbed by the contemplation of his fancied wrong that he did not distinguish between right and wrong." The jury returned a verdict of "not guilty" on the ground of insanity.

Very few days elapsed after the trial before the matter became the subject of debate in the House of Lords, and on the 6th of March Lord Brougham commenced the discussion by saying that in the event of the Lord Chancellor, or the Lord Chief Justice not agreeing that it was necessary to bring in a measure, or make some proposal relative to the law relating to crimes committed by persons alleged to be laboring under partial insanity, he should ask their lordships' attention to the subject.

The Lord Chancellor said that he had already turned his atten-

tion to the subject with a view to remedy the evil. Lord Campbell said that Lord Brougham used the words partial insanity, and it might be thought that persons laboring under partial insanity were relieved from all responsibility, but this was not the law. Lord Lyndhurst observed that those who are acquainted with the subject know how difficult it is to decide to what extent the moral sense and the moral feeling that guide men's actions are influenced by delusions. He also said with reference to the question of the advisability of attempting to frame a precise definition of insanity: "The result would be that your lordships would be satisfied that any attempt at a definition of the particular disease insanity would be altogether futile, and that the only course we can pursue is to lay down some general and comprehensive rule, and to leave those who administer the laws of the country to apply that rule."

Lord Brougham on the other hand said: "If the perpetrator knew what he was doing, if he had taken the precautions to accomplish his purpose, if he knew at the time of doing the desperate act that it was forbidden by law, that was his test of sanity; he cared not what judge gave another test, he should go down to his grave in the belief that it was the real, sound and consistent test." "He further maintained that they could only know one kind of right and wrong,—the right is when you act according to law, and the wrong is when you break it."

As a result of this discussion the House of Lords resolved to put certain questions to the judges. These questions were five in number, and were answered at length, only one judge dissenting. I regret that time forbids the reading of these questions and answers and must refer you to the law reports. The gist of the answers is embodied, however, in the answer to the second question, which is as follows:

"That to establish a defence on the ground of insanity it must be clearly proved that at the time of the committing of the act the accused party was laboring under such a defect of reason from disease of the mind, as not to know the nature and quality of the act he was doing, or if he did know it, that he did not know he was doing what was wrong." I need not say that the literal interpretation of this test of insanity would send every lunatic charged with a capital offence to the gallows. To the credit of the judges, be it said, many of them in both England and America have refused to recognize this legal test of mental responsibility, and yet less than three months ago, I heard a Canadian judge quote this test in directing the jury in the case of prisoner charged with shooting with intent where the plea of insanity was raised.

So eminent an authority as James F. Stephen in his "History of the Criminal Law of England," admits that the answers given by the judges when carefully considered leave untouched the most difficult questions connected with the subject and lay down propositions liable to be misunderstood. His words regarding self-control are also very important and are as follows: "The proposi-

tion then which I have to maintain and explain is that, if it is not, it ought to be the law of England that no act is a crime if the person who does it is, at the time when it is done, prevented either by defective mental power or by disease affecting his mind, from controlling his own conduct."

Mr. Justice Hawkins in 1885, at a murder trial, said: "It would be absurd to suppose that the prisoner could be held responsible for his actions, but the law with respect to the responsibility of criminal lunatics appeared to him to be in a very unsatisfactory state." Again he stated: "The judges generally had expressed similar opinions before, that the whole subject should be reconsidered and that they should have some better definition of what constituted a defence on the ground of insanity."

At the Chester assizes in 1884, before Mr. Justice Cave, the counsel for the prosecution was about to address the jury as to whether the prisoner was capable of appreciating the difference between right and wrong. But his Lordship replied, "No. The question is whether he was insane at the time. If a man is suffering from a delusion that his wife is going to poison him, or is unfaithful to him, and he attacks her with a scraper, it is as clear as possible that he is mad. In this case the man without doubt knew the difference between right and wrong, and thought he had done an act for which he would be sent to the gallows."

At the trial of David Davies, at the Glanmorganshire assizes, in 1888, Mr. Justice Stephen is reported to have said, in his charge to the jury: "I wish if possible to show you what the law is in regard to cases of this kind, more for the sake of giving general information on the subject than for its general application to this case. It is an opinion held by a certain number of medical men in respect to the law obtaining in these cases that it is unreasonable and unjust. I do not desire to enter into the merits of the dispute, except so far as to express myself sorry that such a difference of opinion should exist between the two great professions—the medical and legal professions. It is said that according to the law a man is responsible for his acts when he knows that the act is wrong, and that is true. Now, medical men frequently say that many persons who are really mad do know that the act is wrong. He then proceeded to lay down certain principles, defining what constituted a knowledge of right and wrong, for the purpose, he said, of removing a misconception between two great professions."

More than half a century has elapsed since this legal test was formulated, and great advance has been made during that time in psychology and mental pathology as well. The time has come for the repeal of this antiquated and unscientific law, and the substitution for it of a law based on the latest exposition of mental science. Every physician who has experience in the care and treatment of the insane knows that a large proportion of them have a rational knowledge of the nature and quality of every act they perform, and can also distinguish between right and wrong in the acts which constitute the sum of their daily experience.

Every person, sane or insane, commits acts which he knows to be wrong, but the difference between the two is this, that the sane person has the mental power to resist doing wrong while the insane person may not, and therein lies the whole test of mental responsibility.

Psychological Test of Insanity.

That man expresses himself to his environment, normally or abnormally, in direct ratio to the physiological or pathological integrity of brain matter is a well demonstrated fact in mental science. The delicate and complex organism of the brain, with its wide divergence of natural gifts and endowments, both congenital and acquired, afford a wide scope of mental activity and intellectual expression of man in his relation to his fellowman. Amid such diversity of gifts and endowments it is difficult to set up a universal standard of normal mentality and say that every variation from that standard is evidence of insanity. We are forced to generalize from long experience and advancing civilization man's ethical relation to his moral and social environment. As men of science it is our business to interpret man's ability or disability to conform to those laws on a physical basis of disease, either congenital or acquired.

We do not pretend to explain the mysterious relation between the nerve cells of the brain and consciousness, but we do know that normal consciousness can only exist as a condition of healthy brain matter—by consciousness I mean a knowledge of our existence and our relation to the world in general. Two great functional processes are the concomitants of this condition, viz., ideation and volition, each represented by its sensory and motor system of nerves by which man manifests himself rationally or irrationally to the world. Every sensory impression received from the outside world through the channels of the senses is conveyed to the brain and results in a concept or idea, which may be either stored up in consciousness as a memory or discharged through the motor system in an expression of speech or other muscular act. When a proper equilibrium exists between these two mental processes the person may be said to be in a condition of normal consciousness or sanity.

That there is a controlling, comparing and reflecting centre which presides over these mental activities we have abundant evidence. This is the reasoning inhibitory centre which adjusts and determines every mental and physical process. The theologian will say that here presides

> "A Divinity which shapes our ends,
> Rough hew them how we will;"

while the materialist scoffs and says it is only the outcome of molecular activity. It is not our purpose to enter into a polemic discussion about immortality, but content ourselves with tracing the mortal through the devious paths which beset him, and find out

when he ceases through physical disease of his brain to be responsible for his acts.

It may be said that all insanity is the result of a disturbance in this equilibriating power. The mental equation between thinking and acting is unbalanced either in regard to quantity or quality and is therefore plus or minus. The delicate structure of the brain and its membranes is peculiarly susceptible to functional disorder and disease. It may be only functional from imperfect nutrition, it may be necrotic from insufficient blood supply, or it may be sclerotic degeneration from a local inflammatory process, the result of toxemia. Whatever the cause, it at once manifests itself in mental or motor disturbance in direct relation to the pathological cause.

Delusions.

It may be said that every insane person who commits crime, is impelled to do so through the indulgence of one or more delusions. These delusions may be acute or chronic. The acute form of delusion is usually that of persecution, jealousy or poisoning, and is often associated with hallucinations of hearing. Each one of these types is represented at present in the Hamilton asylum, and I shall instance a few cases to illustrate.

One had the delusion he was persecuted by the Freemasons, and shot his supposed persecutors, killing one man and wounding others. He was acquitted on the plea of insanity.

Another in a fit of jealousy shot his sweetheart going home from church because she jilted him and went with another fellow. Also acquitted on the plea of insanity.

Another shot at his physician who was giving him medicine, under a delusion that he was poisoning him. Also acquitted and sent to the asylum.

Chronic delusions are peculiar to the paranoiac and may be of a religious or persecutory type, or perhaps of perverted affection. A woman at present in the Hamilton asylum strangled a fellow-patient to death because the Lord commanded her to do it.

Another woman in this city strangled her three children to death, under the apprehension or delusion that they might grow up to be wicked.

A young woman shot her sister, with whom she lived in a town near by, on terms of natural affection. Her sister became engaged to be married, and she indulged the delusion that her sister's affection would be estranged from her to her husband, and she preferred to kill her, rather than have her sister's affections divided.

According to legal test each one of the cases cited would have been sent to the gallows. They all knew the nature and quality of the act, and they also knew that what they did was wrong, for they have all told me so; therefore, that is no test of their responsibility. Each one of them was impelled by an imperative idea

which he or she was powerless to control. The equilibrium between ideation and volition was destroyed, the higher centre of reason and inhibitory power over the will was gone, and the person's mind became dominated by an irresistible impulse from which he could not escape. The suicidal impulse, I believe, is very much akin to this, except that there may be no delusion. The deed may be done under a sudden impulse, especially from alcoholism, but more often, I believe, it is premeditated for a longer period. The victim is the subject of an impelling force to self-destruction, which he may successfully resist for a longer or shorter period. Some unfortunate circumstance may arise which destroys the balance between the impelling and resisting forces, and the deed is done.

Monomania.

Monomania or partial insanity was first used in the nomenclature of the subject by Esquirol more than half a century ago, and has ever since been recognized by alienists as a distinctive clinical form of insanity. As the name indicates, a person may be insane on one subject, and perfectly sane on every other, and much discussion has arisen as to the degree of responsibility in a person affected by this form of mania. At the present day the best authorities deny the existence of such a form of insanity. They say that its clinical manifestation is only the first link in the chain of mental degeneration, which ends by due process of time in terminal dementia; that it has a physical basis in pathological disease of brain tissue which is progressive, and will eventually involve the whole centre radically or sympathetically. Sir Charles Hood, who had McNaghten under his care for ten years, testified before the Capital Punishment Commission in 1865, that he was, undoubtedly, insane, and that his mind gradually decayed from the ordinary course of brain disease. That this is the clinical record of a large proportion of so-called monomaniacs is undoubtedly true, and yet every one who has had large experience in the treatment of the insane can point to many exceptions to this rule. I have known cases of monomania which were due to purely functional disorder which ended in recovery. I also know of cases of monomania that are stationary and not progressive, and who enjoy perfect physical health.

I propose now to cite two cases at present in the Hamilton asylum to illustrate the two mental conditions I have indicated.

Case 1. E. C., farmer, aged 45, admitted to the asylum from the County of Simcoe, July 18th, 1891. His general appearance is that of a respectable, intelligent farmer, and a class-leader and Sunday School teacher in the Methodist Church. The medical certificates certify that he is suffering from monomania, that he has the delusion that his wife is unfaithful to him. On examination I discovered that he held this opinion strongly, but he protested that it was not a delusion, that he had seen it with his own eyes, and gave dates and occasions and names of men that he had seen in

crim. con. relations with his wife. His friends took up his case, and sent a lawyer to see me, who assured me it was a put up job on the part of his wife to put him in the asylum to get him out of the way. As I had no means of satisfying that it was a delusion, and as he was perfectly sane on every other subject, I decided to give him the benefit of the doubt, and I discharged him as not insane, after he had been twenty-one days in the asylum. He returned home and horsewhipped his wife, and several of his neighbors were called in to protect her, and among them were the men whom he alleged had criminal relations with his wife. He then entered an action against these men, claiming $10,000 damages. He testified in the witness box himself against these men, and gave dates and occasions on which he had caught them in the very act. I was summoned as a witness at the trial, and after hearing the evidence had no hesitation in swearing that he was suffering from monomania. It came out in evidence that he had a revolver with him, which he stated was for the purpose of protecting himself against these men, and there is little doubt he would have used it had he considered it necessary. The case broke down, and he was immediately put under arrest, and sent back to the asylum on April 7th, 1892, where he still remains. He has undergone a gradual process of mental degeneration, and has developed many other delusions which renders his case a hopeless one.

CASE 2. G. N. A., a farmer, aged 47, admitted to the Hamilton asylum, March 5th, 1892, and certified to be a religious maniac In religion he claimed to be an Israelite, a disciple of Prince Michael, and had followed him to Detroit, where he got into trouble and was arrested. His friends brought him back to Canada, and he was sent to the asylum. He has a fixed delusion that he is the Messiah, but on every other subject is perfectly rational. Is very intelligent and trustworthy, and takes a general interest in everything that is going on, and reasons soundly on every subject outside his delusion. He is an intense egoist, but as he believes himself to be the wisest man living, it is not inconsistent with his delusion. He is careful not to thrust his religious views upon people, and to those unacquainted with his delusion, he passes as a perfectly sane man. He enjoys perfect physical health, and has shown no evidence of mental degeneration during the seven years he has been in the asylum. He writes letters frequently to his friends, and invariably signs himself Joseph, The Messiah. Only on one occasion was he ever known to sign his real name, and that was when applying for a vacant position at the asylum, showing that he distinguished between business and religious affairs.

HOMICIDAL IMPULSE.

I propose now to show the intimate relation of cause and effect between chronic alcoholism and the homicidal impulse, or as I prefer to call it, transitory mania. I call it transitory in the sense that if the person is confined and the alcohol is withheld, and too

great damage has not been done to the brain the person recovers. The question of mental responsibility for a criminal act while in this condition is a long and vexed one. That the person is *de facto* insane while in this condition cannot be doubted, but whether the person should be held responsible for a criminal act induced through a voluntary habit which he has power to control is another matter. The law is generally adverse to acquittal when crime is committed from insanity produced by alcohol, and properly so, but there may be cases where it would be a hardship to apply an inflexible rule. There is no better test of the strength and stability of a man's brain than in the way it is affected by alcohol. Some men can drink to excess for years with comparative impunity, while others are born into the world with a weak, unstable brain, perhaps of hereditary taint, or a neuropathic diathesis which makes them peculiarly susceptible to alcohol or any other toxic agent. It would, therefore, be scarcely fair to interpret crime committed by the latter class in the same terms of responsibility which would attach to the former class.

It is in such cases as these that the evidence of the medical expert is valuable in determining the degree of responsibility. A hard and fast law which has no scientific basis of interpretation may do great justice to a weak and irresponsible class.

I shall now cite four cases which have recently come under my observation to illustrate my contention that homicidal impulse is frequently a transitory mania induced by chronic alcoholism which terminates in recovery by abstinence.

CASE 1. U. L., aged 33, single, a farmer living eight miles from the town of B. One morning he took his gun and walked into the town, and stationed himself on the main street and began to shoot indiscriminately at every person who came within range of his gun. One man was fatally shot and others were severely wounded. He was tried for murder and acquitted on the plea of insanity. On the 15th of July, 1896, he was sent to the Hamilton asylum, four months after the commission of the deed, and has remained there ever since. The evidence at the trial went to show that he had been intemperate for years, though the prosecution failed to prove that he had been drinking on the day of the shooting. Some time before he had been in the town in a drunken condition, and had an altercation with a policeman who tried to arrest him. The medical evidence went to show that he was a paranoiac and had fixed delusions of persecution.

His appearance and condition when admitted to the asylum was that of a good-looking, bright, intelligent-looking man, of good address and affable manner, and he has maintained that impression throughout the three years he has been an inmate of the asylum. He is polite, industrious and exemplary in his conduct in every respect, and has never required the slightest discipline.

When admitted he underwent a searching examination by myself and medical staff, and we failed to elicit the slightest evidence

of insanity. He disavowed all recollection of the deed, but whether this was feigned or real it is impossible to say. I am of opinion that a condition of subconsciousness or double personality is quite compatible with the frenzied mental condition he was in at the time of the shooting. He admits that he was a steady drinker and often got on sprees with the boys, and also kept liquor in the house. That he was peculiarly susceptible to its toxic effect, the result of an emotional and neuropathic temperament, I verily believe, for complete abstinence has enabled him to resume his normal mental condition, and he is now perfectly sane.

CASE 2. R. F. T., aged 39, employed as hostler, was tried at the Toronto assizes last January for the murder of his wife by fracturing her skull with a hammer. He was acquitted on the plea of insanity and sent to the Hamilton asylum on February 10th last. His appearance on admission was that of a dull, phlegmatic person of a rather low intellectual type. He was submitted to a thorough examination, and after being assured that any statement he might make would not jeapordize his future in any way, he gave a full history of his life and all the circumstances which led up to the murder. He admitted he had been a hard drinker for years, and did not properly provide for his wife and family. That in consequence of these habits his wife had turned him out of the house and forbidden him to enter it again. He had made repeated attempts to enter the house for the purpose of seeing his children, but each time had been forbidden by his wife from seeing them. He determined to have revenge upon her and began to premeditate murder, and at the same time intended to kill her mother, with whom she lived. His first impulse was to shoot them, but he had not money enough to buy a revolver, so he bought a hammer as more within the compass of his means, which were never very flush, for he admitted he spent the most of his earnings for liquor.

The medical evidence went to show that he was subject to hallucinations, masked epilepsy, etc., and that he would quickly degenerate into a condition of hopeless dementia. He has now been four months in the asylum and has shown no sign of insanity. He is very quiet and industrious, and adapts himself to the ordinary routine of asylum life without a word of complaint. I have not the slightest doubt that the prolonged use of alcohol debased this man's moral nature and weakened his will power to such a degree that he became the victim of an uncontrollable impulse which he was powerless to resist. He is now thoroughly sobered up and has resumed his normal mental functions, and expresses the deepest contrition for the terrible deed he committed.

CASE 3. G. W. C., a farmer, was tried at the fall assizes for the County of Lincoln last year, charged with shooting with intent. The history of the case in brief is this: He was a prosperous fruit farmer, but of late years became addicted to drink; his business was neglected, which led to financial embarrassment and family feuds. In a dispute over business affairs between his wife

son and himself, he drew a revolver out of his pocket and fired first at his wife, the ball shattering her arm at the elbow; then he shot his son, the ball striking against a hand file in his vest pocket which deflected the course of the ball and saved his life. He then tried to shoot himself, but the ball passed through the left sleeve of his coat between the elbow and shoulder.

At the trial the insanity plea was raised and was sustained by medical evidence. The jury disagreed and the prisoner was remanded to jail to await a new trial at the spring assizes last March. By order of the Attorney-General I went to examine him a few days before the trial. I found him perfectly rational, but he denied all recollection of the shooting. I was summoned as a witness by the Crown, and testified that after ten months in jail he was perfectly rational, and that in my opinion the act was a homicidal impulse the result of chronic alcoholism. The jury found him guilty with a recommendation to mercy, and he was sentenced to six years in the penitentiary.

What I wish to point out is the unequal administration of the law in the three cases already quoted. In the first case one man was fatally shot and others were maimed, one almost fatally. In the second case the prisoner brutally murdered his wife with a hammer. Both prisoners were acquitted on the plea of insanity. In the third case no person was killed, one person suffered only temporary injury, and yet the prisoner was sent to the penitentiary for six years.

Now, I believe the mental condition in each of these three cases at the time the deed was committed was alike, or nearly so, and that the cause which led up to that condition was also alike; and yet the first two, who committed murder, are putting in a comfortable time in the asylum in a condition of perfect sanity, while the latter case is serving the penalty of his crime in the penitentiary.

CASE 4. B. P., aged 32, a carter, was tried at the last assize in Hamilton, charged with matricide. In a quarrel with his mother he seized an axe and inflicted several fatal blows on her head, from which she died very shortly. The plea of insanity was set up, and Dr. Clark, of Toronto Asylum, and myself, were ordered by the Attorney-General to examine him on behalf of the defence. I was summoned as a witness at the trial by the defence, but was not put in the witness box, I presume because it was thought my evidence was not favorable to their plea. I found the prisoner of a low intellectual order, and his moral sense of a still lower grade. He at first denied all recollection of the deed and was ready to fence and equivocate, but after a sharp examination by Dr. Clark and myself he confessed to the deed and told us all about it. He expressed himself in the most brutal terms about his mother, justified the deed and said it should have been done long ago. He admitted he had been a hard drinker for years and had been drinking the day the murder was committed. He expressed no fear of death and said he might as well die now as later.

No medical evidence was offered by the defence, and the trial only lasted about four hours. He was found guilty and sentenced to be hanged on the 23rd of June.

I propose now to draw a parallel between this case and Case 2, to show how differently the law is administered under somewhat analogous circumstances and conditions. In intelligence and moral sense they were each on about the same plane. I have no knowledge of the heredity of Case 2, but in Case 4 it was of the worst possible character; his mother was a hard drinker, his moral and social environment from his birth upward was bad. They have each a brother in the asylum, one in Toronto and the other in Hamilton. The motive in each case was admittedly revenge from their own lips, and equal in brutality; the one knocked his wife's brains out with a hammer, and the other knocked his mother's brains out with an axe.

The trial of Case 2 lasted for several days, and the defence was sustained by strong medical testimony. The prisoner was acquitted on the plea of insanity and sent to the asylum.

In Case 4 the trial only lasted four hours, no medical testimony for the defence was called, the prisoner was found guilty and sent to the gallows. Now, I do not mean to say that the latter sentence was an unjust one, but I do say after a thorough examination of the latter case the day before his trial, and an equally thorough examination of Case 2 a few days after his trial, that one or other of the verdicts was unjust.

A Medical Commission.

I have long thought that a medical commission composed of men of high standing and long experience in their profession, should be appointed by the Crown to examine all prisoners charged with capital crime where the plea of insanity is set up. I am also of opinion that when insanity is alleged, a sufficient length of time should elapse between the commission of the crime and the trial to enable the examiners at intervals to study the nature and progress of the case and thereby reach a conclusion beyond the region of doubt. This would abolish the too often unseemly confliction of medical evidence on opposite sides of cases, each making admissions and statements under the tortuous cross-examination of clever counsel which they never intended to make, and yet so prejudicing the case for or against the prisoner as to make the issue one of life or death.

It would also abolish the tendency of medical witnesses to unduly identify themselves with the side which calls them, and perhaps unconsciously to allow prejudice to sway conviction. It would be a protection to the poor man who has neither money nor friends to engage clever counsel and able medical testimony in his behalf. It would also satisfy the public mind, which is ever sensitive in regard to the righteous punishment of crime, that justice has been done and the law vindicated. There is a growing feeling

in the public mind that too many guilty criminals go unpunished by the success with which the insanity plea is urged in court. Any measure which would tend to disarm this opinion and increase public confidence in the justice and integrity of our criminal courts should command our wisest and best consideration.

SOME OPINIONS ON "NO EVIDENCE IN AMERICA OF PRE-COLUMBIAN LEPROSY."

BY ALBERT S. ASHMEAD, M.D., NEW YORK.

I SUBMIT the following opinions:

From D. S. Lamb, M.D., Washington, D.C.:

"'No Evidence, etc., Leprosy,' read with interest. Have you examined the mummies in the Army Medical Museum? I presume, however, that they would show nothing new."

From Gustav. Bruhl, M.D., LL.D., Cincinnati, Ohio:

"I have received your very interesting paper on 'Pre-Columbian Leprosy,' and read it with the greatest pleasure. It strikes me that your arguments are very forcible and convincing. My sincerest thanks for the welcome gift."

From Prof. Henry C. Mercer, Archæological Department University of Pennsylvania:

"Please accept my best thanks for your valuable paper on 'The Non-Existence of Pre-Columbian Leprosy,' which I am reading with much interest and pleasure."

From Rev. L. W. Mulhane (Author of "Leprosy and the Charity of the Church"), Mt. Vernon, Ohio:

"I thought my name had passed from your busy brain, but it has not, I am glad to say. Your interesting pages on 'No Evidence in America of Pre-Columbian Leprosy,' read with pleasure. Let me say, I admire your persistency in keeping at your proposition, and piling proof upon proof. . . . . The supposed leper girl here in Ohio died last week—older one—*vide* my book, page 30."

From Prof. Alfred Steele, M.D., LL.D., 3900 Spruce Street, Philadelphia, Pa.

"I have read your recent pamphlet on 'The Leprosy Question,' and with much interest. You seem to me to have made a substantial plea against the opinion that leprosy existed in America at the time of Columbus' voyages. It seems to be as thorny a question as the American origin of syphilis. The origin of all communicable diseases is mysterious. I have tried unsuccessfully

to discover the *causa causans* of typhoid fever. I do not mean the specific microbe, but that which produces the microbe."

From Clarence B. Moore, 1321 Locust Street, Philadelphia, May 15th, 1899.

"I have been prosecuting my work all winter among the mounds of the Alabama River. I find, while south, it is inadvisable to have printed matter forwarded, as I am going from place to place, and I am very likely to lose it This must be my excuse for not acknowledging before your interesting 'No Evidence in America of Pre-Columbian Leprosy,' in which you make a very strong case, and which I have read with much pleasure."

From Dr. Felix Regnault ("Syphilis in Peruvian Art"), *Le Correspondant Medical*, May 31st, 1899.

"When searching for remains in the cemeteries of ancient Peru, one finds near a mummy all the objects which it used during life. Pious hands placed near it what was necessary for the eternal voyage. Drink in particular was necessary in a dry country, and so great care was exercised in placing within reach a number of drinking vessels. These earthenware vessels were shaped like human beings. Similarly the Egyptians placed little statues in tombs, and the Greek tiles found in the tombs of Tanagras excite our admiration even to-day. Historians agree that these Egyptian and Grecian images were the surviving doubles of the departed. Death was not certain until these little statues had disappeared. This belief in a double, which was widely spread among all nations, existed in Peru. To satisfy it they found it suited their purpose to change a drinking vessel into a double, that is to say, into an image resembling the departed. These earthenware statues also have an appearance of truthfulness to nature, which is pleasing to an artist. They are of varied kinds, from the child and the woman to the old man; from the fat man to the thin one; with all the facial expressions representing sadness, joy, anger, etc.

"Sometimes these figures have ear pendants or have the nasal septum perforated for the passage of a ring. (Numbers 2,131 *Vit.* (sic) XVII., and 4,402 *Vit.* XIX., Trocadéro Museum.)

"Some earthenware specimens even show signs of disease. We have already shown (V. Number 110) a double hare-lip. Syphilitic lesions are also quite common. It is well known that the latter disease was brought from America, where it was very commonly disseminated, so much so, indeed, that the Mexicans had deified it under the name of the God Nanahuatl. And Mantegazza relates ("L'Amour dans l'humanité," p. 123) that in the guano on the Chinchas Islands figures in wood have been found exhibiting on the neck a serpent devouring the virile member. The serpent also devoured the face, as one may observe in a series of figures preserved in the Trocadéro Museum. These five Peruvian vases, presented by Mr. A. Drouillon, come from Mocha. All of them

exhibit in varying degrees destructive lesions of the upper lip and nose.

"In the first one the extremity of the nose (septum and alæ nasi) is destroyed. There is no other change. The rest of the nose and the upper lip are intact.*

"The second had suffered from a limited destruction of the middle of the upper lip; a portion of it in the shape of an angular notch, the top of which is close to the septum, has disappeared, exposing the gums and the teeth which have remained sound. The borders of the lesion are clear-cut and appear cicatrised; the nose appears sound, although the alæ nasi are very not ably elevated.†

"The third subject has suffered from a more serious change. The upper lip is eaten away up to the nose, exposing the red and bleeding gums. A full set of teeth are present, but the tip of the nose is gone; the nose itself is extremely short, and looks upwards.‡

"The fourth earthenware specimen is most interesting. There has been necrosis and excavation of the superior maxillary bone, which has sunk beneath the level of the inferior maxillary bone, and the latter projects in front. A tough, inextensible scar tissue has been formed there, which exposes the teeth and closes the openings of the nostrils. The lower eyelid of the right eye, drawn down by the scar tissue, exposes the ball of the eye, while the left eye is normal.§

"The last specimen of earthenware represents a mother holding her child in her arms. She also exhibits an excavation of the superior maxillary bone; but the root of her nose is destroyed and its sound tip is sunken.‖ This shape of nose is well described by Mr. Fournier.

"Similar earthenware figures are common enough; there are some in the La Plata Museum. A fine collection of photographs from the latter museum is shown at the Trocadéro. In Number 32,141 is seen an individual who has lost his nose; in 32,144, a person whose face is covered with a smooth, even, tough skin resembling sclerous tissue. His mouth is contracted and reduced to a very small opening; the lips, having lost their elasticity, can neither open nor shut, and the teeth remain exposed. Certain kinds of lupus look like this representation. In America, Mr. Ashmead (CANADIAN JOURNAL OF MEDICINE AND SURGERY, March, 1899) has studied similar specimens of pottery, which have been found at Huaco, Peru.

"Mr. Virchow was of the opinion that on these pots he recognized the signs of leprosy. Mr. Ashmead thought that they really

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*Peruvian vase from Mocha (Trocadéro Museum). The extremity of the nose is destroyed.

†Limited destruction of the upper lip.

‡The upper lip is eaten away.

§Scar resulting from necrosis of the superior maxillary bone.

‖Nose excavated at the root.

represented syphilis, because in these pots, as in ours, the upper lip is retracted and eaten away, a characteristic which does not exist in leprosy; the face does not show any tubercles and the hands, which are so often affected in lepers, are intact. The pots of the Trocadéro Museum offer stronger proof still in favor of syphilis; the multiple lesions of the nose are characteristic of that disease. If there is any doubt, it is in favor of lupus rather than leprosy in the fourth subject. Similarly the subject from the La Plata Museum, with retraction of the skin of the face, might also have been affected with lupus.

"A last argument is supplied by an examination of thousands of pre-Columbian skeletons. Not one of these exhibits a lesion traceable to leprosy, and many of them show signs of syphilis.

"The skill of these Peruvian artists who have succeeded in giving good representations of the ulcerative lesions of syphilis, is worthy of admiration."

From Vicente Restrepo, Bogota, Colombia (article, "Fue Conocidæ la lepra en America, antes del descubrimients?" May, 1899).

"In April, 1895, there was raised in Berlin,* the question whether leprosy existed in America before the discovery. Giving origin to this debate, the fact had been noted in Peru of some ancient vases of clay which were of human form, with mutilations on the nose and upper lip. The subject has since been discussed by wise Europeans and Americans (*sic*). Dr. Juan de Dios Carrasquilla took an active part in the debate, sustaining the negative and affirming that the alterations of the face which were observed in various pieces of Peruvian ceramics, could not be attributed to leprosy." (Dr. Carrasquilla took no part at all in the debate in the Leprosy Conference of Berlin on Dr. Ashmead's paper, "The Question of Pre-Columbian Leprosy in America, with some Huacos Pottery." Virchow and Polakowsky alone spoke. Nor did Carrasquilla take any part in the Anthropological debates in Berlin Anthropological Society.—A. S. Ashmead.) "Excited by this friend to an expression of my opinion on the point so interesting to science and history, I furnish the word, which gives it what it is worth. 'Colombia' is the country of the world where leprosy makes greatest ravages. This dreadful calamity has invaded all the departments of its extensive territory, and is propagating itself in alarming progression. Was this evil known to the aborigines of our country? I contend negatively without any hesitation. Read the chronicles and all the documents relating to the conquest, and in them there is not found any mention of leprosy. Examine the works of ceramic and of gold of the natives, and there is not seen any human figure which recalls, even to-day, the mysterious evil. Inspect the vocabularies of the native languages, and it will be remarked that they do not contain proper words to designate leprosy, and so for carate, scrofula, pleurisy, fevers, llagas and

* By Dr. Albert S. Ashmead.

other diseases. Even more, the pure tribes which exist to-day in the nation were free of the afflictive plague, as can be proved by the reader of the numerous writers of narratives of the foreign and Colombian travellers, who have visited them." . . .

"I am in accord with the author (Ashmead: 'No Evidence of Pre-Columbian Leprosy,' CANADIAN JOURNAL OF MEDICINE AND SURGERY), and to end it only remains for me to say two words on the pieces of Peruvian pottery that I have mentioned at the beginning of this article, and whose [illegible]s, published in La Plata, Argentina, by Dr. Robert Lehmann-Mitsche, I have seen. The eminent Dr. Hansen has expressed his opinion on these pieces in these words: 'As regards the photographs of Peruvian vases, I can only say that the faces do not present any signs of leprosy; the noses appear mutilated on the extremity, tubercles do not exist, nor phenomena of anesthesia.' (Private letter to Dr. Ashmead.)

"Other physicians and savants have written holding the same opinion: Brinton, Ashmead, Polakowsky, Glück, Sommer, Valdez-Morel, Carrasquilla, Lehmann-Mitsche, etc. Hence the human figures represented on the Peruvian vases do not show leprosy. I leave to the savants to decide whether they are artificial mutilation or some other known disease."

Saline Solution Quickly Absorbed.—S. Marx, M.D., of New York, declares that it is remarkable how much salt water the colon will quickly and almost greedily absorb. In a case of collapse after labor, one pint of saline solution was injected hourly for twenty-four hours, and being readily absorbed the patient quickly rallied.

An Unfeeling Jest.—From St. Louis, Missouri, to India and back is a long way, but the *Indian Medical Record* for February 1st is responsible for the following: "Doctor," said Pat to Dr. Marks, of the St. Louis City Hospital, "I hain't had no feelin' in this yere leg for twenty years." "Well, let's see it," replied the doctor. And Pat, pulling up his trousers, exhibited a wooden leg.

Epididymitis.—Twenty cases of epididymitis successfully treated by the local application of guaiacol, one cubic centimetre of the drug being painted over the cord, and one cubic centimetre dissolved in two cubic centimetres of glycerin over the inflamed testicle. It is usually necessary to renew the application every day for several days.—T. CLIFFORD PERRY, *Medical Record*, January 7th, 1899.

Another Accusation Against Tea.—Tea and coffee are accused of producing many evil effects on the vital functions of the human body and doubtless with good reason. The most recent accusation against tea is that its continued use is a frequent cause of rheumatism, owing to the fact that its alkaloid, theine, inhibits the excretion of uric acid and urates, thus laying the foundation of the lithemic diathesis.

Medicine.

... IN CHARGE OF ...
J. J. CASSIDY, M.D., AND W. J. WILSON, M.D.

CURE OF MORPHINE, CHLORAL, AND COCAINE HABITS BY SODIUM BROMIDE.

BY NEIL MACLEOD, M.D., SHANGHAI.

IN the *British Medical Journal* of July 10th, 1897, two pronounced cases of morphine habit were recorded as cured by treatment with bromide of sodium administered, so far as I am aware, in a novel way. Further trial of the treatment there described has met with equally satisfactory results in cases of morphine, chloral, and cocaine habits, and an improved method in the use of the bromide has been adopted, so that large doses of the different drugs were cut off within three days without suffering, and the length of the treatment somewhat curtailed. The cases are recorded in the order of their occurrence.

CASE 3. A Chinaman, aged 32, was educated in America, where he contracted the chloral habit. This habit had lasted four years when his parents brought him to me for treatment. They described him as crazy at times, wandering away from home improperly clad and in all weathers; bemoaned his loss of several lucrative posts in consequence of the habit, and expressed their willingness to submit him to any treatment which would afford a prospect of removing the craving for chloral. The patient himself, a broken-down-looking subject, desired relief, but acknowledged that no reliance could be placed on his promises of assistance towards that end. Circumstances prevented his remaining in the hospital, and I hesitated to undertake the treatment without European nurses in a Chinese house, but his parents, to whom I explained that he might injure himself when the effect of the bromide was passing off, and that careful nursing would be required, undertook all responsibility, and guaranteed that he would never be left alone. As I feared, the mother, who was responsible for the bromide administration, did not give it in the doses and at the times ordered, but I was enabled to determine with certainty that thirty-three drachms were given between November 9th and the 13th, during and after which time no other drug was given. He slept continuously from the 13th to the 21st, taking about two pints of milk daily. During this time no communication with him was possible. Until December 1st there were the same feeble motor, mental, and emotional manifestations as described in the first paper, recovery

being slower and delusions of fear more marked. When he recovered his power of locomotion, notwithstanding repeated warnings that he was to be watched carefully in reference to stairs, windows, and veranda, there being delusions of persecutions at times, on December 10th he succeeded in getting through a window and fell from the first floor, fracturing the left tibia and fibula. He was removed to hospital, and the leg was put up in a plaster splint. He returned home on December 30th, quite recovered from the effect of the bromide and without any return of the chloral craving. He has remained free from it for a year, and for some time has been occuping a responsible well-paid post.

No reliance could be placed on his statements as to the dosage of chloral in twenty-four hours, as he continued to drink from a chloral draught when under its influence. It was obtained from a Chinese source. Comparing this with the two previously recorded cases, I suspected that the slow development of the bromide sleep was due to the method of administration This suspicion was confirmed in the next three cases, where the drug was pushed more boldly, with the result expected, and further justified in two other cases to be later referred to, in which the bromide sleep was produced in the treatment of other abnormal states. As will be seen, it was possible for the morphine to be withdrawn more rapidly than in the first two cases.

CASE 4 was one of the morphine habit, in a lady aged 48, whose medical attendant furnished me with the following remarkable history:

Family History.—Father died, aged 70, of cerebral hemorrhage. Mother living, aged about seventy, subject to migraine. (1) Brother, paroxysmal oinomania, suicide. (2) Brother, alcoholic. (3) Brother, paroxysmal oinomania. (4) Brother, alcoholic. (5) Brother, good health, sound nervous system. (1) Sister died, aged about forty, of pulmonary tuberculosis after many years' suffering from hysterical disorders, anorexia, etc. (2) Sister died, aged about thirty-five, of morbus cordis, consequent on rheumatism; sound nervous system. (3) Sister living, in good health, was laid up for two years with a knee-joint affection, probably hysterical. The patient herself is the eldest of the family. History of alcoholism in previous generations and collaterals.

Early History.—Shortly after the onset of menstruation she suffered from hysterical edema of the breasts. She has all her life been subject to periodic illness from neuralgia, in various sites, most often gastric. About twenty years ago was laid up for many months after an injury to the knee, the long duration of which was probably dependent on neurosis. First married in 1875, and lived in Japan till her husband's death in 1884. She never became pregnant during that time. About 1880 she suffered from hysterical edema of the feet, which she has had in slight degree occasionally since then. She became a nurse in 1885, suffering only from migraine at each menstruation. Morphine had to be given in 1890

for severe trigeminal neuralgia with and without facial cramp, or for gastric pain and vomiting, requiring larger than medicinal doses in 1893, in which year she became pregnant, and severe vomiting set in, requiring morphine in increasing doses, up to four and five grains, before confinement, and continued till April, when it was discontinued, with the aid of bromide, and only given during the next two years during menstruation. "In the second month of pregnancy she became insane, the insanity taking the form of morbid jealousy and of intense dissatisfaction with all her surroundings. In the autumn of 1894 paroxysmal oinomania became a serious trouble. An irresistible craving for alcohol would seize the patient. The gratification of this craving would give rise not to drunkenness, but to *mania a potu*, transitory acute mania, lasting perhaps twelve hours. In one of these attacks she thrust her hand through a window, in another she threw a lighted lamp at her medical attendant. This tendency to alcoholic excess was not entirely new, and earlier in the year she had tried to shoot herself in an outburst of excitement probably due to alcohol. In 1895 she put herself through the 'Keeley' treatment for drink habit, with apparently complete success, for she has been quite free from the craving from that date." In August, 1896, severe facial cramp set in, continued through 1897, becoming gradually replaced by uncontrollable retching, independent of the presence of food in the stomach, and worse at the menstrual periods, requiring increasing doses of morphine. In the autumn of this year regular menstruation ceased. From January 1st to October 6th, 1898, the average daily dose of morphine, as ascertained from the entries in a diary, was 12.6 gr.—the maximum 22 gr. and the minimum 6 gr.—injected.

I saw the patient for the first time on admission to hospital on October 7th, 1898, 12 gr. of morphine having been already injected that day. Between 4 and 8 p.m. 6 drachms of bromide were given. Ordinary diet ordered.

October 8th (second day). Slept all night; 6 gr. morphine injected in two doses; 9 drachms bromide given between 9.30 a.m. and 10 p.m.; awake all day.

October 9th (third day). A good night; 2 gr. morphine injected: 1 oz. of bromide between 9 a.m. and 10.30 p.m. From this date no drug of any kind was given except an aperient pill occasionally. Milk only ordered.

October 10th (fourth day). Slept all night through an alarm of fire causing disturbance in the hospital. Stupid; speech thick; cannot stand without assistance. Asked for morphine at 10 a.m., but the request was immediately forgotten and never renewed.

From this date till October 15th (ninth day) she slept continuously except when roused for food or for evacuation of bladder or bowel, but even then could not be described as awake. She would put out the tongue at command, could not speak, or but a few words indistinctly, and was completely helpless. Regular sugges-

tions of evacuating the bladder and bowel were made by placing the patient on the commode. During this time she moved on three or four occasions as if to get out of bed, and with support under the arms would walk a few steps aimlessly.

October 15th (ninth day). Muttering indistinctly. She recognizes and names me.

October 16th (tenth day). Speech more distinct; scared; somewhat noisy in the evening; easily controlled.

October 17th (eleventh day). Slept all night; tongue, hitherto coated, now clean; wrist-drop, cannot hold a book, cannot read; speech distinct enough to reveal delusions.

October 19th (thirteenth day). Sitting in a chair; full of delusions; easily controlled; walking unsteadily; memory past and present dislocated; sleep irregular and sometimes delayed but good and sufficient; delusions continue, gradually becoming fewer until October 28th (twenty-second day), after which date they ceased.

On November 7th menstruation reappeared with an attack of migraine, tolerably severe, and preventing her from taking any food all day.

On November 10th she informed me that she had been longer without morphine than at any time since February, 1890.

December 2nd. Two other attacks of migraine and one of trigeminal neuralgia have passed without use of or desire for morphine. There has been a gain in weight, and the patient returns to Japan declaring herself better in health than for years, there being a very manifest improvement in her general appearance, and no inclination to retch or vomit with migraine.

December 9th. A letter from her husband reports her walking about the streets with her daughter for the first time in the latter's lifetime.

CASE 5 seen in consultation with Dr. Milles, one of cocaine and morphine habit of several years' standing, in a highly nervous, excitable man, of whose sanity there was considerable doubt. I recommended proceedings similar to those adopted in Case 4, which produced after three days four or five days of continuous sleep, no drug of any kind being given after the third day. Sleep was followed by the stages described in the other cases, recovery of locomotion, speech, and memory being more rapid, no craving for morphine or cocaine being manifested, although its absence was noticed by the patient, contrasting markedly with his first day in the hospital, when his demands for morphine were urgent enough. Four weeks after leaving the hospital there had been no relapse.

CASE 6. A medical man, aged 37, wrote to me on November 30th, 1898: "I first got addicted to the habit in 1889 after the Burmese war, during which I got an attack of dysentery, for which another surgeon gave me morphine injections, and kept it up till 1891, when I took leave home and placed myself in a home. In two months I had quite given up the habit, and kept from it till last May, when owing to trouble, worry, and depression I again

started. I nearly succeeded in recovering again in August, when I took a trip in a sailing ship, and was at sea forty days. My supply ran out in fifteen days, and I had none for the remaining twenty-five days, but I resumed it when I landed. During the first half of last month I daily took as much as 30 gr. of morphine with 15 to 20 gr. of cocaine. The last ten days I have come down to 5 gr. daily. . . . I came up here from Hong Kong. . . . I know if I continue as I am now doing that a few months will finish me, and I would submit to any means you could suggest. . . . One thing I cannot bear, the sudden and total deprivation, and I nearly committed suicide at Hong Kong because —— who I placed myself under tried that plan." Family and personal history other than that referred to in the above quotations good, with the appearance of an enfeebled, excitable man. He was admitted to hospital on December 1st, 1898, having himself injected 6¼ gr. of morphine on that day. Syringe and supplies given up. There being some diarrhea, milk only was ordered. The stools from this day were natural; 1 ounce of bromide was given in 2-drachm doses before bedtime.

December 2nd (second day). Slept all night a dreamless sleep; 2¼ gr. of morphine injected seemed to satisfy him. In discussing the risks of the treatment with him, I pointed out that I could not say it was free from risk, but that so far in the seven cases I had dealt with I had not had reason for anxiety, adding curiously enough that the intercurrence of, say, a pneumonia would be dangerous. Prepared for all risks, he drafted and executed a will that evening; 10 drachms of bromide taken before bedtime.

December 3rd (third day). Part of the night restless; ¼ gr. morphine given. Slept nearly the whole day; the eyes were observed to be flushed. After bedtime the nurse, not understanding that the bromide was then to be suspended, continued it in drachm doses through the night at intervals for restlessness.

December 4th (fourth day). Awake at morning visit and afraid he would not have enough morphine. Injected a grain and ordered the bromide to be stopped—36 drachms having been given. He slept quietly all day, but became restless at 10 p.m., remaining so till 2 a.m., when he slept.

December 5th (fifth day). Could be roused and took his milk. Coughing through the day and spitting over the bedclothes. Slept all day.

December 6th (sixth day). A quiet night till daylight, when there was very rapid breathing, embarrassed if lying on the back or right side, eased if lying on the left. 9 a.m. Temperature 102.8°; pulse 96, good; respirations 88, shallow and regular. As examined lying on the left side, no dulness, but numerous moist sounds audible behind. Noon. Temperature 105.2°, pulse 100, respirations 96; dulness at right base was made out at 3 p.m., and extended at 9 p.m. right up to the apex behind (lying on the left side).

December 7th (seventh day). Died at 8.45 a.m.

Post-mortem examination revealed consolidation of right lower lobe, the tissue sinking in water; a similar though less advanced condition at the left base; 15 to 16 ounces of bloody fluid in the right pleural cavity, and a few ounces of similar fluid in the left; numerous old, more or less stretched, adhesions over the anterior, lateral, and basal surfaces of both lungs.

In this case more bromide was given than necessary, I think, during the third night, the nurse not understanding that the bromide was not to be given after bedtime. The recent journey from the warm South into our cold weather, the enfeebled health consequent on the habits, and the bromide may have acted as predisposing causes to the acute lung ailment. The respiratory centres showed no sign of depression from the bromide, their response to the pneumonic poison producing respiratory movements as rapid as one sees in infants. Its action in repressing cough was manifest, and probably when the flushing and restlessness at night were present, had there been no bromide, the cough would have attracted attention. Had he not had bromide, he would have had morphine, which cannot be said to be without danger in pneumonia.

The results in these cases, though few, were so marked and constant that they seem to me to promise fulfilment of the following claims for the method of treatment: (1) The withdrawal within three days of even large doses of the drug causing the habit; (2) the certainty that this will cause no suffering; (3) the patient cannot deceive those dealing with him in the matter of secret administration, nor can he enlist after the third day the aid of attendants; (4) any physician with the aid of vigilant nurses can deal with the case in any hospital or private house, no special institution is needed; (5) there is no risk of substituting another drug habit, and the craving will be lost whether the patient desires it or not.

Whilst nothing has been observed in these cases, which pointed to disturbance of vascular, respiratory, or alimentary systems to a degree causing anxiety, they are too few to determine that the treatment is without risk. Intercurrent maladies in the course of treatment may be dangerous, but here we have to choose between the apparently temporary risk of the bromide, and that from the more prolonged use of the morphine or other drug. With regard to ultimate recovery of locomotion, memory, etc., so far, each case has been quite satisfactory in that respect, with the one exception of a blank representing the period under bromide. When memory before treatment, as in Case 4, has been defective, and also the power of concentration of attention and prolongation of that effort, these have markedly improved. As a psychological experiment, the rapid retrogressive changes in the functions during the first few days, the vegetative intermediate state and the slow evolutionary progression of recovery are full of interest.

The treatment is directed against the morphine or other habit, in which the craving for the drug is so strongly reinforced by the slightest demand for the relief of pain, sleeplessness, etc., that it

appears impossible to resist it. The treatment removes this craving, and if the disorder is functional, the bromide rest, the changed dietary, the cutting off of all ordinary surroundings more completely than is possible by other means, may not be without beneficial effect on the pain, etc. For those in whom other treatment has failed, and for all who are willing to submit to this method, it offers what appears to be a certainty of deliverance from the craving without suffering, which is more than can be said of any other method of treatment of which I am aware. By the time the patient has become capable of making the drug which has caused the habit the object of thought, it has actually become disassociated from his comfort, and the new relationship a matter for astonishment.

That this use of the bromide may prove beneficial in other maladies is suggested by two other cases. One of these, a lady forty-eight years old, suffered from an attack of acute mania occurring in a Japanese hotel in the interior of Japan, where the sounds from the other inmates drove the patient frantic. Without forcible restraint, a two days' journey by hammock and boat would have been impossible. In the bromide sleep all irritation from light and sound ceased, but, as no assistance could be had in nursing the patient through such an illness on the spot, in this sleep she was carried twenty miles in a hammock swung on two chair poles, lay asleep on the deck of a small steamer for several hours, spent a night in another Japanese hotel, was put on board a steamer, carried 500 miles, and placed in her own bed in her own house, where she awoke two or three days later none the worse for the journey. She passed through stages similar to those already described, and, when the effect of the bromide passed off, there was not a trace of mental disturbance, and she is still well over a year later. The part played by the bromide in securing sleep and rest amid such surroundings, and the aid to transportation were sufficient in my opinion to justify its use. How far its effects had to do with the rapid recovery from the acute mental ailment is difficult to estimate. The profound bromide sleep was a great contrast to the excitement of mania, and secured a prolonged condition of complete mental rest where it was much needed. The circumstances under which the illness broke out demanded stringent measures.

The second case was one of uncontrollable vomiting, a feature in neurasthenia, the subject of which was a lady doctor, sent to me by her brother, also a doctor, from the interior of China. As the vomiting seemed to me to be of undoubted nervous origin I suggested a trial of the bromide. Given by the rectum it caused such irritation that it could not be retained, irritation not confined to bromide, as was found later. Given by the mouth it took longer to produce its effects because of its frequent rejection. The stomach, however, seemed more tolerant of the drug than of other things, and after five or six days sleep set in, but not so profound as in the

other cases described, with cessation of the vomiting habit. When recovery from the bromide was taking place the vomiting again manifested itself but much less than before treatment, and to an extent not causing any anxiety. I regretted not having pushed the drug effect to a greater degree, but not being certain of the amount retained, and as its effect appeared greatest sometimes two or three days after the last dose, I was afraid to continue it in this case. She is now, three months later and after a trip to Japan, apparently quite well.

It is noteworthy that the loss of alcoholic craving in the second case was pointed out by the astonished patient himself. It may not be out of place here to add a sketch of the method of treatment, with some reference to the immediate results of the drug. Having taken the weight of the patient and ascertained that there is nothing to contra-indicate this treatment in the way of organic disease, the sodium bromide may be given in two doses of 2 drachms, in solution every two hours for the first two days, and 1 drachm during the third day. None is given after bedtime on the third day. Three ounces of the drug in all will probably suffice, but more may be given to induce deep sleep that may continue for five or six days and nights, during which time milk alone should be given. Every night and morning during this time, the patient should be placed on the commode for bladder and bowel evacuation, or oftener if there be any sign of soiling the bed linen. For a week or ten days after this sleep, the speech, which is at first indistinct, locomotion, which is of the feeblest or impossible, and the great confusion of ideas will all be seen gradually to improve, the mental condition, however, most slowly. Delusions, at first numerous, will lessen; memory will improve; sleep may then be irregular, but further treatment is undesirable. Solid food should be given as soon as it can be taken, and the bowels regulated, and after locomotion is recovered it is well to encourage the taking of exercise. The muscles may be observed to become tender, but this will pass off. Morphine may be given the first day in the habitual dose, halved the second, and none or but a small dose the third. Chloral may be cut off at once if there is a good sleep the first night. Cocaine may be dealt with like morphine. A case may appear well in three weeks, but at least other three weeks, and if possible longer, should be insisted on, as if for convalescence after a severe illness. An even, warm temperature of the room should be maintained. Warm night clothing for protection on getting out of bed or throwing off the blankets should be provided, and a nurse should be on duty day and night for at least the first three weeks. —*British Medical Journal.*

J. J. C.

Proceedings of Societies.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

THE American Association of Obstetricians and Gynecologists will hold its twelfth annual meeting in the Assembly room of the Denison House, Indianapolis, Ind., Tuesday, Wednesday and Thursday, September 19th, 20th and 21st, 1899.

The management of the Denison House (which should be addressed on the subject) offers the special rate of $3.00 without bath and $3.50 with bath, a day, American plan, to members and guests of the Association who attend the meeting. The Denison House will also provide an excellent room for the meeting.

OUTLINE PROGRAMME.

The Association will meet in executive session with closed doors on Tuesday, September 19th, at 9.30 a.m., for the election of new Fellows. The open session for the reading of papers will begin at 10 o'clock. Recess for luncheon at 1 o'clock p.m. Afternoon session at 3 o'clock; recess at 5.30 o'clock; evening session at 7.30 o'clock.

The morning session will begin Wednesday at 10 o'clock for the reading of scientific papers. Recess at 1 o'clock. Afternoon session at 3 o'clock. Adjournment at 6 o'clock.

At 6.30 p.m., Wednesday, the executive session will convene for the election of officers, and for such other business as may come before it under the rules.

The morning session will begin Thursday at 9.30 o'clock to continue until 1 o'clock p.m., when recess will be taken for luncheon. The afternoon session will be called at 3 o'clock and at 5 o'clock the closing ceremonies will be held. A full attendance is especially requested at the final session.

At 7.30 o'clock p.m., Wednesday, immediately after the executive session, the annual dinner will be served at the Denison House.

The cost for each cover will be $2.50, exclusive of wines. It is highly probable that former President Harrison and Senator Beveridge will make addresses at the dinner.

It is particularly desirable that every member who contemplates attending the dinner shall notify the chairman of the Dinner Committee (postal cards, addressed to the Secretary, are enclosed for

the purpose) as far in advance as possible, and likewise designate how many seats he wishes reserved.

The hours named in the foregoing schedule are subject to change by vote of the Association or Executive Council.

THE EXECUTIVE HEALTH OFFICERS' ASSOCIATION.

THE Committee of the Executive Health Officers' Association of Ontario has decided to accept the invitation of the city of London to hold it annual meeting in that city. The meeting will take place on Wednesday and Thursday, September 14th and 15th, 1899.

Dr. Hutchinson, the able Health Officer of London, is Vice-President of the Association, and as chairman of the local Committee of Arrangements will do all in his power to make the meeting a success. It is expected, also, that there will be several guests from the United States present to give papers and take part in the discussions.

It has been thought desirable to limit the discussion to certain topics. The following have been selected as more important, and all are requested to notify the Secretary of their willingness to either prepare a short paper or discuss specially any one or more of the following subjects:

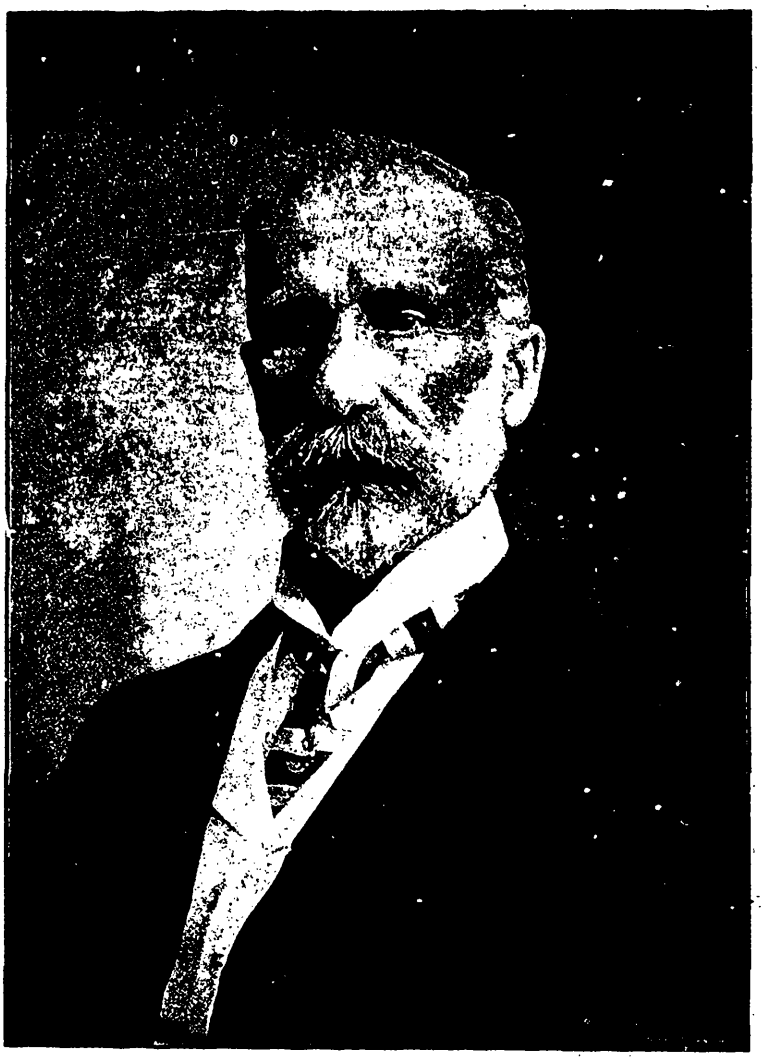
1. The duty of rural health officers and health boards in dealing with pulmonary tuberculosis.
2. The duty of city and town health officers and health boards in dealing with pulmonary tuberculosis.
3. Tuberculosis in cattle and its bearing on the health of the public.
4. Needs and methods for the ventilation of schools.
5. Street pavements and their relation to the public health.
6. Rural water supplies in their sanitary relatives.
7. The sanitary aspect of the construction of farm dwellings.

As the meeting is to be held during the week of the Western Fair it will not be necessary for members to obtain the usual railway certificates, as they may avail themselves of the rates in force at that time. The Committee hopes that all will make it a point to be present at this meeting, and bring with them any members of their local Board of Health who can come, as it wishes to make this a record meeting in point of numbers and interest.

All are requested to notify the Secretary at their earliest convenience of their intention to be present and of the subject they will deal with.

DR ALEX. MCPHEDRAN is building a very handsome residence on Bloor Street West, almost opposite Avenue Road on the south side. The excavations are well under way already and the doctor expects to be in possession by the 1st of March next.

THE LATE MR. LAWSON TAIT.



DR. W. F. ROOME

PRESIDENT ONTARIO MEDICAL COUNCIL.

The Canadian Journal of Medicine and Surgery

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VOL. VI. TORONTO, SEPTEMBER, 1899. NO. 3.

Editorials.

THE PROPHYLAXIS OF RAILWAY CARRIAGES AND DEPOTS.

HEALTH authorities in Canada, nowadays, would not permit a patient known to be affected with small-pox, scarlet fever, diphtheria, or cholera to travel by day-coach or sleeping car and if, by mischance, such a case were to occur, the cleansing and disinfection of the carriage would be expected to follow as a matter of routine.

Consumptive persons, however, occupy seats and berths without hindrance. This error is probably due to a survival in the popular mind of the now antiquated opinion, that phthisis is a purely constitutional disease and not contagious. Modern physicians, however, entertain a totally different opinion. Phthisical invalids are constantly travelling, and the railway companies should provide for their use compartments or carriages, so constructed that isolation could be practised in the first place, while cleaning and disinfection could be rapidly and economically accomplished after arrival.

The construction of the Canadian railway carriage, which is open from end to end, not only does not lend itself to such methods, but really makes them difficult and expensive. In the first place, a carriage filled with passengers and containing about sixty cubic feet *per capita* of air space, offers no barrier to the contagious sputa of a consumptive, who coughs quite freely in close proximity to his fellow-travellers and expectorates on the floor. Secondly, the thorough disinfection of such a carriage, in which one or two consumptive patients have travelled, takes a longer time and requires more material and labor than the disinfection of one or two compartments of a carriage. A compartment, such as is seen in a European railway carriage could, after occupation by a case of consumption, be disinfected in a rapid and economical manner. In order to secure the adoption of such a precaution by travelling consumptive persons, it would be necessary to pass a law, such as has been recently suggested in France by Dr. Vallin, forbidding, under a penalty, any person affected with a dangerous or contagious disease to travel in an ordinary railway carriage. Such a person would have to travel in a special compartment, which he would occupy alone or accompanied by persons charged with looking after him. On arrival at his destination, his compartment should be immediately designated by a ticket bearing the words "For disinfection" and should be rigorously disinfected. The placing of a ticket, bearing the words "Disinfected," would show that the carriage might be returned to the service. Movable spittoons, containing a solution of bichloride of mercury 1-1000, should also be provided in all day-carriages and in sleeping cars. Linoleum or some similar substance should be used as a covering on the floors of carriages, instead of cocoa matting and wool carpets, and as a matter of routine, all railway carriages should be mopped and rubbed with a damp cloth after each trip. In cleaning floors, dry sweeping should be used only as a preliminary to subsequent washing. If

the wooden floors of carriages are not covered with linoleum, they ought to be painted with oil and then, if thoroughly flushed and mopped each morning, can be kept in a satisfactory condition.

Notices should also be placed in carriages, informing the public that "In order to prevent the propagation of contagious diseases and particularly, tuberculosis, passengers are expressly forbidden to expectorate on the floor of a carriage."

A similar notice should be hung up in waiting-rooms and at the entrances of railway stations. Stationary spittoons, fixed on a metal stem, about a yard above the floor, should be placed in the waiting-rooms and at the entrances of railway depots.

Wherever wooden floors in railway stations cannot be replaced by asphalt, they should be made impermeable by means of a mixture of coal tar and heavy oil of pit coal and they should be cleaned with the mop at frequent intervals. J. J. C.

LAXATIVE BREADS.

NOWADAYS, the wheat used in making white bread is rolled between metal cylinders, so that the hull is removed and little but the starchy interior and a certain proportion of gluten remains. It has been found by experience, that the use of bread made from such flour renders the bowels constipated, so that, when people wish to get the bowels to act fairly and regularly, they give up the use of fine white bread and take whole wheat bread or common brown bread. The latter, which is sometimes made from white flour, to which bran and treacle are added, owes its laxative effect to these agents. The bran, being quite indigestible, exercises a slightly mechanical stimulation upon the mucous membrane of the intestinal canal, as it passes down; the salts contained in the bran help to excite the secretions of the intestine; the treacle also excites secretion, and possibly exercises a stimulating effect on the muscular fibre of the bowels.

Brown bread of this class contains the same amount of gluten and starch as the white flour from which it is made and is not more nutritious than ordinary white bread.

Whole wheat bread is sufficient to keep the bowels moving in persons, who would otherwise suffer from constipation. In milling wheat to make this kind of flour, after the outer layer of the hull has been removed in the cleaning process, all the contents of the

grain, gluten, starch, the neutral salts of the inner hull, and the wheat germs are rolled together. So that, for nutritive purposes, whole wheat flour is superior to white flour, from which the bran as well as a considerable percentage of gluten have been removed. Now, whole wheat flour is laxative in its effects; but the unsifted bran, present in the flour, does not altogether account for this characteristic. Whole wheat bread contains a special oil, the oil of wheat, which is originally present in the germ or embryo of the grain. This oil is caustic in its local action, even causing ulcers when applied to the skin. For internal use it cannot be given, except in capsules. When swallowed it causes violent colic and exerts a purgative action, as drastic as croton oil. Dr. Bovet, of Paris, who has studied the properties of the oil of wheat, thinks that the laxative effect of whole wheat bread is due to the oil of wheat which it contains, rather than to the bran.

On the other hand, Dr. Camescasse contends, that the flour manufactured from cylinders, according to the modern process, does not contain the germs of the wheat and, consequently, bread made from it would not exert any effort on the peristaltic action of the intestines.

It is quite likely, that, if people ground their wheat in a hand-mill and then baked their bread of this coarse flour, every germ of wheat would be preserved and bread, made from such whole wheat, would tend to keep the bowels of those taking it regularly active. It was, no doubt, a medicinal bread of this kind, which was found so useful by Dr. Camescasse, in treating the constipation of wet-nurses in Paris. We have seen and examined specimens of unsifted wheat-flour, manufactured from cylinders in Toronto and we have seen the germs of the wheat present in the flour. It would not, therefore, be correct to say, with Dr. Camescasse, that the wheat germs are all removed by the cylinder process of milling whole wheat flour. Some of the germs, say one-half of one per cent., may disappear with the outer shell of the grain, in the preliminary process of cleaning. In milling whole wheat flour in Toronto, after a thorough cleaning process, the grain is made to pass through a succession of cylinders, until reduced to the required size; but is not subsequently sifted and, therefore, both the bran and the wheat germs are retained. Bread made from this kind of flour, is pleasant to the taste and more nutritive than fine white bread. It relieves constipation by the action of the bran and also by the oil of wheat, both of which are retained in the flour from which this bread is baked.

J. J. C.

THE GRAVENHURST SANATORIUM FOR CONSUMPTIVES.

It seems but yesterday since invitations were extended by the members of the Muskoka Cottage Sanatorium Association to be present at the opening ceremonies of the Gravenhurst Sanatorium for Consumptives. Yet two milestones in its history have been turned, and the public interest in its success has been very practically manifested. The institution is of a national character. By that we mean Canadian, and consequently it was with great pleasure that we noticed in Dr. S. A. Knopf's recent book on pul-

ADMINISTRATION BUILDING, MUSKOKA COTTAGE SANATORIUM.
Erected through the gifts of late Hart A. Massey and W. J. Gage.

monary tuberculosis that a chapter was devoted to illustrations and descriptions of over forty of the prominent sanatoria for the treatment of tuberculosis all over Europe, the United States and Canada. The latter was very creditably represented by half-tones of the Gravenhurst main building and several cottages; but, while the author's proof-sheets have been drying, the wizard of practical sympathy has again waved his wand, and a group of cottages vying with each other as to utility and construction of artistic

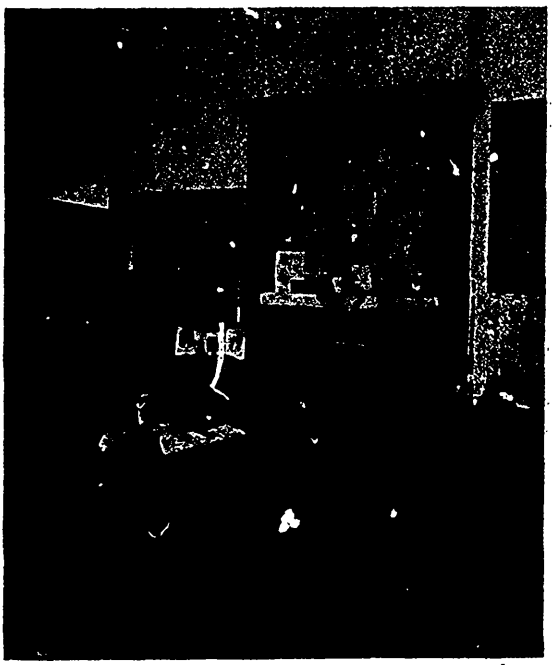
THE WM. DAVIES COTTAGE, MUSKOKA COTTAGE SANATORIUM FOR CONSUMPTIVES.

SUN ROOM ... SKOKA COTTAGE SANATORIUM.

design, have been added, and on Saturday, the 21st of July, they were formally presented to the Association.

A large number of prominent citizens and physicians from Toronto responded to the invitation and spent an unusually interesting day. The donors of the cottages were:

Mrs. Bull, of Toronto. In memory of her only son, B. Frank Bull, who died in 1895. "Rosemary" cottage, was the gift of Mrs. Jackson Sanford, of Hamilton, Ont., in memory of her husband, who died in 1898. This cottage is beautifully furnished and ready



INTERIOR VIEW OF B. FRANK BULL COTTAGE.

for occupation. Another was donated by Mrs. Mavor, since deceased, in memory of her husband. Mr. William Christie, of Toronto, has indeed given bountifully, his contribution being a cottage and $5,000 in cash. Still another cottage was presented to the Association by Mr. and Mrs. William Davies, of Toronto.

Perhaps to the man or woman strong and fully equipped for the "day's work" there comes a feeling of sadness when alighting at the Sanatorium wharf, as they think of those who are congregated in the beautiful buildings, but the scene is so full of life and

the patients so pleased with their surroundings and eager to tell of those who have been benefited by their sojourn, and how much they are gaining in weight and strength, that for the moment all sadness is cast aside.

In this haven, where so many are being nurtured back to health, the grim Reaper has recently found a trysting-place, and some have there fallen asleep expressing their gratefulness for the quiet and restfulness that pervaded their last days upon earth, far from the endless noise and throb of the city, and near to the heart of the universal mother—nature.

Canadians as a people are under a deep sense of obligation to those who have given so generously of their means for the alleviation of suffering humanity in this country, and also to the physicians and members of the Sanatorium Association who are giving so much time and thought to the management of this particular branch of crusade work against the dread malady.

Surely the intelligence should be heralded far and near, that the Gravenhurst Cottage Sanatorium is a Canadian institution and is intended for those (in the earlier stages of tuberculosis) unfortunate enough to need its shelter and treatment, all over the Dominion, "irrespective of creed or race." W. A. Y.

AUTOPSIES OF EXECUTED CRIMINALS.

At page 206 of this issue is a letter from Dr. R. R. Wallace and following it are some notes of the autopsy, made on the body of the matricide, Parrott, who was executed at Hamilton last June. We wish to thank Dr. Wallace and Dr. Balfe for their courtesy in sending us the notes of the post-mortem examination, which contain many interesting data. As our correspondent states, "No official autopsy was made; but, after the formal inquest was concluded, the coroner handed the body over to the jail surgeon to examine, if he wished."

We think that an autopsy should be performed on the remains of the criminal after every execution in Canada and that a pathologist of recognized ability should be deputed to perform this task. A report, containing the history of the criminal, together with a complete anthropological and anatomo-pathological study of the cadaver, should be prepared. Such reports, published in the medical and scientific journals, would increase our knowledge of the

relations existing between corporeal conditions and criminal tendencies, and would be of great interest to physiologists, alienists, medical jurists and educationists.

It is within the power of a coroner, who presides at the formal inquest held after an execution, to hand over the criminal's body for examination; but an autopsy, such as is here indicated, is not contemplated, and would not be performed, unless special provision were made for it. As legislation would be required to authorize such a procedure, it might be necessary to petition the Minister of Justice to introduce a bill for that purpose, or a resolution in favor of it might be discussed and, if approved of, adopted by the Canadian Medical Association. This bill should contain, among other provisions, a code of rules for conducting the autopsy, so that it would be performed under conditions, conformable to the present advanced degree of medical knowledge.

As society does not seem to derive any protective benefit from an infliction of the death penalty on a criminal, medical science ought, at least, to be permitted to reap some profit from a scientific examination and subsequent study of his mortal remains.

J. J. C.

EDITORIAL NOTES.

Cure of Jacksonian Epilepsy.—Dr. Von Bergmann exhibited at a meeting of the Berlin Medical Society, June 14th, 1899, a man twenty-six years of age, who had been cured of Jacksonian epilepsy by trephining. This man had in June, 1896, discharged two shots from a revolver into his head. When brought to the hospital blood was flowing freely from his wounds. Some few days afterwards, an abscess appeared in the right temporal region, which was opened, but healed slowly. About the end of June, the patient had convulsions, which began at the left labial commissure and affected the members on the left side. These convulsions, which were always accompanied with unconsciousness, returned frequently and then ceased to appear until the month of March, 1897. At that time, in spite of the complete cicatrization of the wound, the convulsions returned and became very frequent, and the patient complained of severe headache. An intra-cerebral abscess was suspected, and trephining confirmed this diagnosis. The improvement which followed this intervention was of short duration and, in July of the same year, trephining was done twice and on each occa-

sion a small quantity of pus was evacuated. These new operations, which resulted in the formation of a fistula, produced no amelioration. Dr. Von Bergmann saw the patient in July, 1898. He opened the skull and removed a sequestrum and this operation secured the disappearance of the convulsions. The X-rays, which were used recently in examining this patient's brain, revealed the presence of two bullets, one situated in the maxillary sinus and the other at the base of the skull. Their presence, however, did not excite the epileptic convulsions, which have ceased to appear, since the sequestrum has been removed.—*La Presse Médicale.*

Typhoid Fever Conveyed by Impure Water.—At a meeting of the Medical Society of the Hospitals (Paris), which took place on July 7th, 1899, Dr. Antony mentioned the following circumstance: Two regiments, garrisoned at Besancon, used the same water supply, which was contaminated. In March, 1895, one of these regiments, an artillery regiment, was attacked with typhoid fever during the prevalence of an epidemic of that disease. The other regiment, an infantry regiment, had no cases of typhoid fever. This fact, which appeared incredible, was explained in the following manner: An epidemic of la grippe having prevailed some time previous, as a precautionary measure, tea had been served out as the only drink to the infantrymen and, during the typhoid epidemic, the same practice was continued. This is the reason why the infantry regiment did not have a single case of typhoid fever. The history of these two regiments, in one of which the men drank unboiled water and caught typhoid fever, while in the other the men used boiled water from the same source and did not catch typhoid, has all the value of a real experiment. Commenting on this case, Dr. Widal remarked, that physicians were aware of the hurtful properties of impure water, but the people of Paris were not so well informed. No person in Paris should drink water, which had not been boiled or passed through a Pasteur filter.—*La Presse Médicale.*

Effects of Alcohol on the Body.—Experiments recently made by Professor W. O. Atwater, of Wesleyan University, show that alcohol is consumed in the body, evolving heat and energy and preventing waste. His experiments were carried out upon a man, placed in a respiration calorimeter. Pure alcohol was administered with water or coffee. The alcohol was taken with an ordinary diet of meat, bread, butter, milk, sugar, and

the like. The amount *per diem* was equal to about two and a half ounces of absolute alcohol, about as much as would be contained in five or six ounces or three average glasses of whiskey. Three important results were observed: First, the alcohol was oxidised, *i.e.*, burned as completely as bread, meat or any other food. Second, in this process all the potential energy of the alcohol was transformed into heat and muscular power. In other words, the body made the same use of the energy of the alcohol as that of sugar, starch, and other ordinary food materials. Third, the alcohol protected the material of the body from consumption, just as effectively as the corresponding amounts of sugar and starch. That is to say, whether the body was at rest or at work, it held its own, just as well with the one as with the other.—*The Sanitarian*

Influence of Confinement to Bed on Body Weight.—Drs. Toulouse and Marchand report on the influence of confinement to bed on the body weight of lunatics, who were treated in bed. Speaking generally, it may be said, that this method of treatment increases the emaciation of patients, tending towards a cachexia, for instance, paretics and stops the fattening of those who have a tendency to increase in weight, such as convalescents. Getting out of bed exercises contrary effects; that is to say, it favors a tendency to fattening, and diminishes a tendency to loss of weight.—*La Presse Médicale.*

A New Canadian Medical Journal.—*La Dosimetrie au Canada*, a monthly review of medicine and therapeutics, is published at Montreal in the French language, under the editorial management of Dr. J. L. Lemieux, with the collaboration of Dr. A. D. Aubry, Dr. E. M. Desaulniers, Dr. J. H. Brossard, Dr. A. O. Gervais, and under the business management of Mr. E. Lefort. As its name implies, this journal is intended to popularize the dosimetric system. We congratulate the editors on the neat appearance of the new journal and wish them every success.

Gargling.—M. Saenger, of Magdeburg, reports a number of tests and experiments with staining fluids, powders, etc., which have established the fact that only in very rare and exceptional cases does gargling bring the fluid in contact with all the surfaces desired. It does not reach the tonsils nor the back of the pharynx. It is also directly injurious, as it forces the diseased parts to excessive activity.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

HAMILTON, *July 3rd, 1899.*

Dr. J. J. Cassidy, Bloor Street, Toronto.

DEAR DOCTOR, Yours of the 27th ult. came duly to hand. I must apologize for a little delay in answering, but this was partly due to pressure of professional work during the past few days and partly to the necessity of seeing Dr. Balfe, the jail surgeon, in order to have his permission to send you such notes as I herewith enclose.

I wish to state that no official autopsy was made, but after the formal inquest was concluded the coroner handed the body over to the jail surgeon to examine, if he wished. The latter asked my assistance. So we two made the P. M. These notes I made out last evening from memory, and read them over to Dr. Balfe to-day. He approved of them, and I herewith copy them out for you. I regret that, for record purposes, a fuller report is not available, but as nothing of the sort was contemplated at the time, we simply satisfied ourselves of the gross appearances. If you desire any further information, and I can supply it, I shall be pleased to do so.

I am, yours sincerely,

ROB. R. WALLACE.

NOTES OF AUTOPSY.

Ben. Parrott was hanged at Hamilton, June 23rd, 1899, for the murder of his mother early in the preceding February. The execution took place in the jail-yard about 7.45 o'clock on the morning of the 23rd.

Parrott weighed about 160 pounds, was about 5 feet 8 inches in height, and had a drop of 9½ feet. The larynx and upper part of the trachea were completely crushed (the knot was placed below and slightly in front of the left ear, but with the drop came forward almost exactly under the chin). On taking firmly hold of the head with both hands great mobility could be detected between

it and the vertebral column; it could be moved laterally in either direction, or forward and back for almost the diameter of the vertebræ themselves, and the tips of one's fingers could be thrust into the space.

The scalp on incision was found to be abnormally thick; the calvaria was also rather thicker than the average, and was slightly asymmetrical in the occipital region. No unusual difficulty was met in separating it from the dura mater. The latter presented nothing worthy of note save that the Pacchionian bodies were very numerous and very adherent. The pia mater over the parietal regions presented a very noticeable milky appearance. In removing the brain from its situation, as the posterior part of the base was carefully raised the pons varolii, the medulla oblongata, and adjacent parts were seen to be of a deep red color—the site of a quite extensive extravasation of blood. Great care was here taken, as it was desirous to find out just exactly what gross damage was done the cord by the evident (externally) great injury to the vertebral column. It was soon seen that the spinal cord was completely torn through, about two inches below the lower margin of the pons, and was connected with the lower portion only by the pia mater. After the removal of the brain, and thrusting the finger through the foramen magnum, the atlas was found in its proper position in contact with the occipital condyles, while the axis was with the lower part of the column, and the odontoid process intact upon it. Still with the finger in the foramen the complete circumference of the axis could be traced, and no fracture of bone could be detected. The weight of the brain was exactly 50 ounces. The convolutions seemed to be rather broader than the average. Right half of the brain, sliced horizontally, presented perfectly healthy brain tissue, as also did the left half, cut vertically successively through frontal, parietal and occipital regions. The cerebellum, on slicing, appeared quite normal. The pupils were equal and about midway between extreme dilatation and extreme contraction.

The Physician's Library.

BOOK REVIEWS.

Twentieth Century Practice. An International Encyclopedia of modern medical science, by leading authorities of Europe and America. Edited by THOS. L. STEDMAN, M.D., New York City. In twenty volumes. Vols. IV., V., VI., VII., and VIII. New York: Wm. Wood & Co. 1896.

Vol. V. of this great series is devoted entirely to diseases of the skin. Among the contributors to this department appear the names of such men as Chas. W. Allen, of New York; L. Brocq, of Paris; Radcliffe Crocker, of London, Eng.; J. N. Hyde, of Chicago; M. Kaposi, of Vienna; H. Leloir, of Lille, France, and last, but not least, our old friend, Douglas Montgomery, now of San Francisco. The book is divided into several different sections. That on "The Anatomy of the Skin and its Appendages" is written by Chas. W. Allen, of New York. A section is devoted to "Parasitic Diseases," and is written by L. Duncan Bulkeley, of New York. "Erythematous Affections" is from the pen of H. H. Whitehouse, of New York. Dr. J. N. Hyde writes the chapter on "Eczema and Dermatitis"; Radcliffe Crocker, the one on "Squamous Affections"; Dr. Brocq, of Paris, on "Papular Affections," and Henry Whitehouse, of New York, the one on "Bullous Affections." The book has also several other sections, all dealing with different diseases of the skin and by several men of note.

The section devoted to eczema is presented by Dr. Hyde in a very clear manner and makes thoroughly instructive reading. He has taken up his subject in a way which does not make the story tiresome, but on the other hand, attractive. After going into the etiology and pathology, he discusses the symptoms of the disease and points out that there are four elementary types of eczema: erythematous, papular, vesicular and pustular. He says that the erythematous is best recognized on the face of elderly persons of both sexes. It is, however, seen in other regions of the body and in children as well as adults. It is characterized by the production of a diffuse infiltrated patch of a dull and a dusky red hue. There is no moisture or discharge, little, if any, scaling until the disease has passed its apogee, and scarcely any crusting. The itching is uncommonly severe, though not as bad as in the papular form of the disease. This form of eczema most frequently occurs either on the lower portion of the brow or near the root of the nose, and may frequently be confounded with erysipelas. Eczema papulosum is one of the most common and most annoying of all forms of the disease. It occurs chiefly on the extensor aspect of the limbs, back of the trunk and neck, and on the buttocks. Eczema vesiculosum occurs always where the skin is thinnest, and is a rarer form of the malady. It never becomes chronic. Eczema pustulosum was in the old treatises named impetigo, and is very commonly observed in a portion of a large patch of eczema which exhibits in other localities non-pustular symptoms.

The author also divides eczema into several other classes, squamosum, seborrheicum, rubrum, parasiticum, marginatum, neuroticum, diabeticorum, intertrigo, fissum, verrucosum, sclerosum, acute, chronic and infantile. The treatment of this disease the author divides up into hygienic, internal and external. After pointing out that laxatives and cathartics play a very important part in the treatment of many cases, owing to there being an element of both

constipation and dyspepsia in all such classes of patients, shows that such drugs as strychnine, phosphorus, the mineral acids and ergot have proved of the greatest value. He points out that Crocker employed counter-irritation over the vaso-motor centres with marked benefit, using such as mustard, dry heat and friction. Dr. Hyde lays great stress upon the fact that the methods adopted in the treatment of this disease by charlatans and quacks, the administration of "blood-purifying remedies," composed chiefly of iodide of potassium or the "purely vegetable" nostrums, not only fail of securing the end desired, but in the long-run work disaster to patients. Under the local treatment of acute eczema, the combination of camphor with the other materials used for dusting powders is to be recommended on account of the anti-pruritic effects of that drug, as follows:

℞ Pulv. amyli..... ℥i.
Pulv. zinci ox. ..... ℥ii.
Camphor pulv. ..... ℥ss.
Make an impalpable powder. Sig. For external use.

The Lassar paste is very commonly employed, and is to be recommended. Put up according to the following, the author has found particularly good:

℞ Zinci oxidi..... ℥ii.
Talc. ..... ℥iii-iv.
Acid salicylic ..... grs. v-x.
Vaselin..... ℥ss.
Make an impalpable paste. Sig. For external use.

The glycerine jellies and varnishes, as suggested by Pick, of Prague, may be medicated in any way so that any desired ingredient may be applied to the skin, as for example:

℞ Gelatin ..... 15 parts.
Zinci ox. ..... 10 "
Glycerine . ..... 20 "
Water ..... 50 "
Mix by gradual heating. When used, melt and apply with a brush.

The section of Volume V., devoted to diseases of the hair and nails, is written by Dr. Douglas W. Montgomery, of San Francisco. Under this heading this gentleman has considered hypertrichosis, alopecia, cavities, fragilitas, crinium, piedra, lepothrix, Giovanni's disease, monilethrix, trichorrhexis nodosa, Hodara's disease and plica. In dealing with that all-too-common disease, known as alopecia, the writer says though arsenic is "cracked up" as being almost a specific, it can only act as such by taking the place of a good tonic, and he says that there is no reason to believe that this drug acts in alopecia the way it does in chorea and psoriasis. The author thinks that two minims of Fowler's solution, given after meals and well diluted, very often proves valuable. As to local application, acting on the theory that the disease is due to a widely distributed virus, with especial accumulation at the points where the symptoms manifest themselves, the author has himself adopted the following lotion with the best of results:

℞ Bichloride of mercury..... grs. iv.
Alcohol..... ℥ii.
Water ..... q.s. ad. ℥iv.

To be rubbed into the entire scalp, face, and neck every day. After this another solution is used, which is composed of

Bichloride of mercury..... grs. iv.
Alcohol..... } āā ℥i.
Spts. turpentine ..... }

To be rubbed into the bald patches and a little beyond every day.

Under "Disease of the Nails," Dr. Montgomery considers such conditions as congenital absence of the nails, traumatism of the nails, discoloration of the nails in argyria, onychauxis (hypertrophy of the nail), and winged nail. He also refers shortly to the affections of the nails in "diseases of the nervous system," *e.g.*, growth of the nails in paralysis, shedding of the nails in locomotor ataxia, affections of the nails in multiple neuritis, the nails in acromegaly, the nails in myxedema, the nails in syringo myelia, and lastly, in epilepsy.

Volume VI. is entirely devoted to diseases of the respiratory organs; Volume VII. to the respiratory organs and blood, and functional sexual disorders, and Volume VIII. to diseases of the digestive organs. The principal contributors to Volume VI. are Winslow Anderson, of San Francisco; F. H. Bosworth, of New York; Albert H. Buck, of New York; G. A. Gibson and Grainger Stewart, of Edinburgh, and Professor James, of London. Those contributing to Volume VII. are C. W. Allen, of New York; Jules Comby, of Paris; C. G. Cumston, of Boston; E. W. Cushing, of Boston; J. M. French, of Cincinnati; E. Fletcher Ingals, of Chicago; Alfred Stengel, of Philadelphia; H. B. Whitney, of Denver, and E. Main, of Paris.

Volume VIII. of the "Twentieth Century Practice" is particularly good. Over half of its contributors are foreigners, such as Johann Mikulicz, of Breslau; Hans Leo, of Bonn; Werner Kümmel, of Breslau; J. Ch. Huber, of Memmingen, Bavaria; and B. F. Curtis, of New York; Max Einhorn, of New York; R. H. Fitz, of Boston, and J. M. French, of Cincinnati. As already stated this volume deals entirely with diseases of the digestive system. It is subdivided into sections on diseases of the mouth, of the esophagus, of the pancreas, of the peritoneum, animal parasites and the diseases caused by them, and the treatment of the diseases caused by animal parasites. The section on "Diseases of the Stomach" is written by Max Einhorn, and is very complete, commencing first with the anatomy of the stomach, the physiology of digestion, diet, the various diseases of this organ, and concluding with the different neuroses, sensory, motor and secretory. Under "Diet," the author divides food into animal, vegetable and liquid. He classifies the following list of animal foods according to their digestibility:

	Fat per Cent.
Calf's sweetbread, calf's meat, codfish, pike, oysters...	0.4 to 1.
Beef, hare, spring chicken, pigeon, partridge.....	1 to 1.5.
Mutton, pork.....	5 to 7.
Goose, herring, salmon, eel	over 8.

The digestibility of food greatly depends upon the quality and preparation. Young animals have soft and tender meat, whereas the flesh of old ones is tough. The different portions of the body vary frequently in their digestibility. The time that has passed since the killing of the animal is also of importance. Fresh meat which is yet in its rigid state, is tough and therefore very indigestible. In the preparation of meat it is necessary to see that it is separated from all indigestible matter, fascia, tendon, and cartilages. By pounding the meat, the connective tissue surrounding the muscle fibres is torn. By chopping, scraping, or grinding the meat, its digestibility is increased. According to Penzoldt, the cooking of meat serves only to improve its taste, raw meat being more easily digested than broiled, fried or boiled. The application of heat also diminishes the danger of infection, as in that way microorganisms are destroyed. Eggs are specially rich in albumen and fat. Milk contains all the elements of a typical diet: 1. Albuminous substances in the form of casein and serum albumen. 2. Fats in cream. 3. Carbohydrates in the form of lactose and milk sugar. 4. Salts, chiefly calcium phosphate. 5. Water.

Vegetable foods all contain more or less carbohydrates, so essential to proper diet. Those rich in proteids are pears, beans, lentils. They form the chief source of the nitrogen of the food of vegetarians. Those foods rich in carbohydrates are,: 1. Cereals(bread made from ground grain, *e.g.*, wheat, maize,

barley, rice, and oats). 2. Vegetables, rice, potatoes, etc. 3. Green vegetables, cauliflower, asparagus, turnips, cabbage, and carrots. 4. Fruit, *e.g.*, pears, apples.

Under "Liquid Foods," the author claims that tea in moderation is a stimulant, containing an aromatic oil to which it owes its peculiar aroma, an astringent of the nature of tannin, and an alkaloid, theine. The composition of coffee is very similar to that of tea. Cocoa contains fats, albuminous matter, and starch, and must be looked upon more as a food. Beer contains 1 to 8 per cent. of alcohol. Wine, as made from grapes, contains from 6 or 7 (Rhine wine and red and white Bordeaux) to 24 per cent. (ports and sherries) of alcohol. Spirits obtained from the distillation of fermented liquors contain upwards of 40 to 70 per cent. of absolute alcohol. According to Rubner, the residue of the different food stuffs, that is, the indigestible matter, is smallest under a diet of animal food and highest under one consisting of vegetables. The author holds that the diet in health should not always comprise the most easily digested substances, for in this way the digestive system is weakened, and although it is not necessary to choose the substances which are hard to digest, it is certainly not necessary always to avoid them. The food should consist of mixed substances, and should always present a sufficient variety.

Curtis, who in Volume VIII., writes the section on diseases of the peritoneum, under "Appendicitis, and its Treatment," advises in mild cases the application of such as ice-bags, or a poultice if the latter is more agreeable to the patient. The ice-bag will relieve pain and lessen the hyperesthesia, while it does not obscure the symptoms in the same way as morphine, making it much easier to palpate the region when the parts have become thoroughly cooled by the ice-bags. If morphine is employed, it must be given in very small doses with the intention of modifying pain without removing it entirely, and of giving the patient courage to bear it. As to purgatives, it may be said, in a general way, that they are dangerous, even in the earliest stages. There is no doubt that the administration of purgatives tends to dissipate the inflammation, but the violent peristalsis which they set up is liable to rupture the adhesions and spread the infection, thus producing the condition which we are anxious to avoid. Calomel in moderate doses may be given, or small doses of the weaker salines. Strict rest must be enforced, and the diet as near starvation as possible, very small quantities of milk or beef tea only being allowed. If improvement is not then immediate, the question of operation must be discussed. Treves is in favor of delaying operation for five or six days, thus rendering the mortality lower; but as both Morton and McBurney hold, cases which die after five or six days have begun to die much earlier, and if we are to save them we must operate much earlier. The mortality of appendicitis is greatest just at the beginning of this period, including the period of sudden perforation cases. It is also high after the first week, when the secondary results of rupture of abscess or septicemia occur. Sormenburg claims that there is always pus from the moment of perforation. There is no question as to the advantage of waiting for a well encapsulated abscess to form if we were only certain that the encapsulation would take place. It is true that the adhesions during the first forty-eight hours are very slight and easily broken down, but there are no means of distinguishing between those cases in which strong fibrous adhesions will be formed and those in which adhesions will remain soft throughout, subjecting the patient to the constant danger of a spreading or a general peritonitis. W. A. Y.

Pulmonary Tuberculosis. Its Modern Prophylaxis, and the Treatment in Special Institutions and at Home. Alvarenga prize essay of the College of Physicians and Surgeons of Philadelphia, for the year 1898, revised and enlarged. By S. A. Knopf, M.D. (Paris and Bellevue, N.Y.), Physician to the Lung Department of the New York Throat and Lung Hospital; former Assistant Physician to Professor Dettweiler, Falkenstein Sanatorium, Germany; Vice-President of the Pennsylvania Society for the Prevention of

Tuberculosis: Fellow of the American Academy of Medicine; Laureate of the Academy of Medicine of Paris, etc. With descriptions and illustrations of the most important sanatoria of Europe, the United States and Canada. Octavo. Price, net, $3.00. Philadelphia, Pa.: P. Blakiston's Son & Co., 1012 Walnut Street.

It was after considerable pressure brought to bear upon the author of this work that he was induced to undertake to present to the profession something new in the prophylaxis and treatment of tuberculosis pulmonum. He was encouraged to do so by his friends after he had written his French thesis at the Faculty of Medicine of the University of Paris, "Les Sanatoria: Traitement et Prophylaxie de la Phthisie Pulmonaire." There is no question about it that, with the frightful inroads the "white plague" is making these days among mankind generally, and the awful development and increase in the death rate it is causing every day, it is safe to say that it is almost impossible that too much can be said or written on this branch of medicine. The author has commenced by giving in Article No. 1 some very interesting facts as to the history of tuberculosis, thereafter in several chapters going into the mortality from tuberculosis; proofs as to the curability; the communicability of tuberculosis, with the means to combat its propagation by individual prophylaxis; public prophylaxis in reference to the disease in man; and preventive treatment.

One of the most interesting parts of the book, however, is that devoted to the most important sanatoria and special hospitals for consumptives in Europe, Canada and the United States. This section is freely illustrated, most of the half-tones and line-cuts being exceedingly clear and distinct. In the European sanatoria, mention is made of Falkenstein Sanatorium, on the southern slope of the Taunus Mountains, no less than 1,300 feet above the level of the sea; Ruppertshain Sanatorium, near the village of that name in the Taunus Mountains; Brehmer Sanatorium, in Goerbersdorf; Dr. Roempler's Sanatorium, in the Giant Mountains; the sanatorium of Countess Pueckler, in Goerbersdorf; and others in Germany. The Tonsaasen Sanatorium, in Norway, is alluded to at some length. A chapter is devoted to the Royal Hospital for Consumption at Ventnor, in the Isle of Wight, and one to Brompton Hospital, in London. Under Canada, the Muskoka Cottage Sanatorium is given some space, with very fine half-tone plates of the main building and one of the cottages. These photographs were taken by Dr. N. A. Powell, of Toronto, and are exceedingly sharply defined. Under Canada, also, the Laurentian Sanatorium is devoted some space. This sanatorium, as our readers know, is near the village of Ste. Agathe des Monts, about 64 miles from Montreal. We are sorry that a better illustration of this institution is not given, as the line-cut does not do it justice. This section on Gravenhurst and the Laurentian sanatoria will, to a great many, be of additional interest. Amongst the hospitals for the treatment of this disease in the United States, and referred to in this book, are Glockner Sanitarium, at Colorado Springs, Col.; "The Home," at Denver, Col.; The Hygeia, at Citronelle, Ala.; Asheville Sanitarium; Free Home for Consumptives, at Boston; Sharon Sanitarium, near Boston; Rush Hospital for Consumptives; Pasteur Sanitarium, at Suffern; Loomis Sanitarium for Consumptives, at Liberty in Sullivan County, N.Y.; and Winyah Sanitarium, at Asheville, N.C. This latter institution was founded by Dr. J. W. Gleitsmann, of New York. It is under the direction of Dr. Karl von Ruck, who has made a name for himself through his efforts to stamp out this disease. The building consisted, when the book went to press, of a large building, with verandas, accommodating about one hundred patients. Recently plans have been decided upon for a much larger institution, to be situated in a grove of oaks and pines, twenty acres in extent. Winyah has a magnificently equipped laboratory for bacteriological research. The descriptions of the various institutions throughout the world are exceedingly interesting, and give a very clear account of what is being done for the treatment of this terrible disease. We heartily commend Dr. Knopf's work as being well worthy of purchase.

Medical Jurisprudence of Insanity, or Forensic Psychiatry. By S. V. CLEVENGER, M.D., Attending Physician Alexian Brothers' Hospital; Consulting Physician Michael Reese Hospital, Chicago; Associate Editor of *The Alienist and Neurologist*; formerly Medical Superintendent of the Illinois Eastern Hospital for the Insane; Pathologist of the County Insane Asylum, Chicago; Professor of Anatomy, Art Institute, Chicago; Lecturer on Physics, Chicago College of Pharmacy; Author of Comparative Physiology and Psychology, Spinal Discussion, etc. With an exhaustive presentation of the judicial decisions upon the subject, by F. H. BOWLBY, Counsellor-at-Law of the Publishers' editorial staff. Two vols. Rochester, New York: The Lawyers' Co-operative Publishing Co. 1898.

It is a long time since a work on the medical jurisprudence of insanity has been written in the English language—well over half a century. It is, therefore, little wonder that Dr. Clevenger's work has so far received the reception it has from the medical profession as a class. The main reason, of course, is that this work is not only a general medical text-book on insanity, but, in addition, a medico-legal treatise, with a digest of the English and American law. Vol. I. is divided into eleven chapters, commencing with definitions and tests of insanity; the classification of various authors; symptoms from asylum observation, giving the conduct of patients, pre meditation, design, superstitions concerning insanity, delusions, hallucinations, illusions, etc.; diagnoses; criminal cases; legal adjudications in criminal cases; civil cases; legal adjudications in civil cases; evidences of insanity; and, lastly, a chapter on witnesses and jurors. In the section on criminal cases the author, in referring to the legal criterion of responsibility, quotes from the Twenty-ninth Annual Report on Lunatic Asylums, Province of Ontario, 1896, giving the result of Dr. R. M. Bucke's examination of 1,034 patients in his institution at London, Ont. Dr. Bucke, after examining every patient resident in the asylum, found, out of 1,034, 763 able to realize and appreciate the nature and quality of an act of homicide and to understand that such was wicked; of the remaining 271, there were 121 able to express an opinion on the subject, but seemingly destitute of moral feeling, these disclaiming any sense of repulsion from such an act, as well as any feeling or knowledge of its wrongfulness. The other 150 could give no intelligible answers. The deductions made from the above, as also other, reports are most interesting in reference to the committing of acts of murder, the making of wills, etc., etc. In the chapter on civil cases, such subjects as political rights and the impropriety of permitting imbeciles to vote upon public questions are gone into. The subjects of impeachment, torts, defamation, false accusations, punitive damages, contracts, promissory notes, partnerships, patents, conveyances, ratification and life insurance, are considered separately. Chapter X. is devoted to Evidence of Insanity. This subject is divided into seven sections, the first dealing with the presumption and burden of proof; second, the measure of proof; third, the presumption of continuance; fourth, competency and admissibility; fifth, expert and opinion evidence; sixth, attesting witnesses; and seventh, books. Under expert and opinion evidence, the author goes on to show that the opinions of expert witnesses are generally held to be admissible in evidence, in all proceedings in which the question arises, thus to assist the jury to decide the question correctly. Previous opinions of experts are not generally admissible in evidence, though they are if they are in the shape of official records or certificates required by law. Vol. II. opens with an able chapter on Alcoholism, the second and third chapters dealing with the legal consequences of alcoholism and the decisions of the court as to alcoholism. A most instructive section of Vol. II. is that dealing with Head Injuries, in which the results of a blow on the head, fracture of the skull, sunstroke, epilepsy, etc., etc., are given in relation to subsequent insanity. One case is cited of a soldier who, at twenty years of age, had his left supra-orbital ridge shattered by a musket-ball, suffering the usual physical disabilities at the time, but, thirty years after, developed traumatic insanity—thus proving that it is not for some time after an injury such as that, that insanity can be excluded as a possible result. The proportion of insanity due

to blows and falls upon the head, overheating and sunstroke approximate, from among all other forms of mental disease, about 6 per cent. The chapters on Degeneracy and Periodicity are replete with information. Altogether, we must pronounce the book thoroughly complete, and a most valuable contribution to the medical jurist's library. W. A. Y.

The Gross and Minute Anatomy of the Central Nervous System. By H. C. GARDINIER, A.M., M.D., Professor of Physiology and of the Anatomy of the Nervous System in the Albany Medical College; Member of the American Neurological Association. Forty-eight full-page plates, and 213 other illustrations, many of which are printed in colors, a large number being from original sources. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1899.

There are few branches of medical science in which it can be said that there is a dearth of books written thereupon, but when it comes to the work of enumerating the number of volumes devoted to the anatomy of the central nervous system, it is safe to state that there is plenty of room for those properly versed in this department to expatiate upon. There is too little known of the anatomy of the medulla oblongata, or the cerebellum, or, again, the region of the third ventricle, to enable the clinician to associate symptoms of nervous diseases with anatomic facts, and correctly diagnose thereupon. One of the most interesting chapters in this work is that upon cerebral localization, by far one of the most important subjects to the up-to-date neurologist. The author makes the plain statement that is settled beyond dispute, that there are fixed areas presiding over motion, language and sight, as also of common sensation, most of the special senses and the higher intellectual faculties. He points out that the cortical area governing motion, known as the motor area, lies on each side of the fissure of Rolando, between the precentral and intraparietal fissures. It is by means of this tract that impulses of voluntary motion originating in this area are conducted to the muscles on the opposite side of the body, resulting in co-ordinating movements. Destructive lesions of this area produce paralysis on the opposite side of the body, with a resulting descending degeneration of the entire cortico-spinal part of the motor tract coming from that side, while irritating lesions cause unilateral convulsions of the opposite side. The author states that to Fritsch and Hitzig belongs the credit of first having established the fact that the application of the galvanic current to certain areas on the surface of the dog's brain gives rise to co-ordinated movements in distinct groups of muscles on opposite sides of the body, while stimulation elsewhere produces no result. It was Ferrier who first pointed out that electric irritation of the pre-frontal region, the temporal, occipital and part of the parietal lobes, was unattended by muscular movement, proving that these areas are not motor in function. The book all through is one which will be found of the greatest value, and will, without a doubt, prove a valuable addition to the literature on this subject.

An Introduction to Dermatology. By NORMAN WALKER, M.D. Bristol: John Wright & Co.

The work is essentially "an introduction to dermatology," carefully considering all the commoner forms of disease of the skin, while at the same time a brief reference is made to the rarer forms likely to be met with by the general practitioner. As a classification, the bugbear of all dermatologists, he sticks fairly closely to the "Histo-Pathology of the Skin" of Unna. In his preliminary remarks the author gives some good advice as to the methods to be employed in getting a history of the case and of finding out the subjective symptoms, avoiding throughout the use of leading questions. He points out, too, a common error that students and practitioners make in looking upon skin diseases as belonging to a category entirely distinct from that of other diseases—an inflammation is an inflammation whether it be in the skin or in the lung. Attention is directed to the fact that while skin eruptions are frequently due to an internal cause, they are mainly caused by some influence from without, and hence, in

arriving at a complete understanding of any given case, one must take into account all the possibilities. One section giving full directions as to the methods of applying external remedies and the reasons for these applications will prove most valuable to the advanced student and the practitioner, for we too often get into a hap-hazard way of treating these cases, and that largely through our ignorance. The author's definition of eczema is a rather good one, but is somewhat amusing, and admits a lot for a Scotchman: "Eczema is the term commonly applied to any wet or scaly inflammation of the skin, of the cause or nature of which the observer is ignorant." Is one to understand that so soon as we overcome our ignorance as to the "cause or nature" of a case of eczema it is then no longer eczema? The work, consisting of 243 pages, is easily one of the best on the market. The text is good, while the plates and diagrams are among the best we have seen. The plates of ringworm, favus, lupus erythematosus and alopecia areata in the frontispiece are particularly good. F. N. G. S.

On the Relation of the Nervous System to Disease and Disorder in the Viscera. Being the Morison Lectures delivered before the Royal College of Physicians in Edinburgh, in 1897 and 1898. By ALEX. MORISON, M.D. (Edin.), Fellow of the College; Member of the Royal College of Physicians in London; Physician in charge of out-patients to the Great Northern Central Hospital, and the Children's Hospital, Paddington Green; Physician to the St. Marylebone General Dispensary. Edinburgh and London: Young J. Pentland. 1899.

This series of lectures, now published in book form, will be quite an addition to the library of those wanting exact information upon the subject of visceral innervation. The author has divided his subject into (1) The Anatomy; (2) The Physiology; (3) The Pathology of Visceral Innervation; (4) The Disorders of Visceral Sensibility; (5) The Disorders of Visceral Motion, and (6) Body and Mind. There are few men in a better position than the author to write a book on this subject. He has treated it very concisely, the work being most readable from first to last. The book is printed on heavy paper, and the illustrations are particularly good.

Our Baby: For Mothers and Nurses. By MRS. LANGTON HEWER. Sixth edition. 1899. Bristol: John Wright. London: Simpkins, Marshall, Hamilton, Kent & Co., Limited.

This little work of 147 pages is well arranged, has a good table of contents and a good index. The whole book has been carefully revised for the new edition, and more detail has been given to the important matter of artificial infant feeding. The book is a *multum in parvo* for the mother or nurse. It contains no padding, gives just what is necessary and no more. We can heartily recommend "Our Baby" to both mothers and nurses. W. J. W.

Hay Fever, Its Successful Treatment. By W. C. HOLLOPETER, A.M., M.D., Clinical Professor of Pediatrics, Medico-Chirurgical College of Philadelphia, Pa., Physician to Methodist Episcopal Hospital, Physician to St. Joseph's Hospital, Fellow American Academy of Medicine, etc. Second edition, revised and enlarged. Philadelphia: P. Blakiston's Son & Co. 1899.

This small manual on hay fever is an excellent one. The author gives a digest of the literature of the subject as well as a detailed account of his own methods of treatment. The book is an excellent guide to the management of this widely prevalent and many-sided disease. A. M'P.

The Newer Remedies. A reference manual for physicians, pharmacists and students. By VIRGIL COBLENTZ. Philadelphia: P. Blakiston's Son & Co.

This work has passed through two editions. This, the third, has been revised and much enlarged. It is very concisely written and should be in the library of every busy practitioner. It is alphabetically arranged, thus requiring no index. The author has brought it thoroughly up-to-date, and has given us a little volume that will be as creditable to him as his famous "Manual of Pharmacy." A. J. H.

Selected Articles.

CHLOROSIS.

CHLOROSIS is an essential anemia most frequently met in young women, characterized by a very marked relative reduction in the hemoglobin of the blood.

As to etiology, it is a disease of women, and especially of young women. Yet its occurrence is not impossible in men of womanish habit and occupation, among whom Hermann Eichhorst especially instances tailors. Moreover, while it is especially a disease of young women, from about the age of puberty to twenty-four years, it is also possible in those who are older and younger. In the former it is known as chlorosis tarda, and as such is met in women between thirty and forty. ' Rather more frequent is its occurrence in children under puberty. Neimeyer held that girls who menstruated at thirteen or fourteen, in whom there was as yet no development of pubis or breasts, almost invariably became chlorotic. The disease occurs the world over, and is apt to be recurrent in the same individual. It is more common in blondes than brunettes, in the weak and delicate rather than the strong and vigorous. Yet this general truth is not without exceptions.

Among predisposing causes are overwork, especially in closely confined and ill-ventilated rooms, insufficient nourishment, exhausting drains, such as prolonged lactation and profuse menstruation. Menstrual derangement is, however, also a consequence, as well as a cause. Sustained or repeated emotion, especially such as arises from sexual excitement or masturbation, is a cause.

The frequent association of constipation with chlorosis led Sir Andrew Clark to suggest that it might really be a copræmia or poisoned blood due to the absorption from the large bowel of poisons of the nature of ptomaines and leucomaines. Such poison may readily interfere with the proper development of the hemoglobin of the blood disc without in a great degree causing its destruction. This view explains what seems a closer relation between chlorosis and pernicious anemia than has commonly been admitted, a relation consistent with the newer etiology of pernicious anemia as well as with features in its clinical course, and with the results of treatment.

Other than the changes in the blood to be considered under symptoms, there is no essential morbid anatomy to chlorosis.

Many years ago Virchow pointed out an imperfect development of the circulatory apparatus as more or less characteristic, that the

heart was small, the right ventricle sometimes dilated, the aorta and its larger branches poorly developed and thin-walled. Such a state of affairs, when present, is probably an accidental coincidence. There is no enlargement of the spleen or lymphatic glands. Imperfect development of the uterus and other genitalia has been noted. The rarity of fatal termination in chlorosis may limit our knowledge of the morbid anatomy, uncertain at best. Of these, the blood changes may be regarded as fundamental, though not absolutely constant. These consist in a decided reduction in the hemoglobin with a moderate oligocythemia, or reduction in the number of red corpuscles. Thus the hemoglobin value of each red disc is diminished. The usual range may be put at from 3,500,000 to little less than normal. Thus Thayer, in sixty-three consecutive cases, in Osler's clinic, found the average 4,096,544, or over 80 per cent.; and Liembeck found the maximum in one of fifteen cases to be but 3,600,000. In a few instances, however, in cases of acknowledged chlorosis, there has been found a more decided reduction in the erythrocytes. One has been reported as low as 1,190,000 per cubic millimeter. The hemoglobin, on the other hand, is much reduced, the average of Thayer's cases referred to being 42.3 per cent., which may be regarded as a fair average. This disproportionate fall in the hemoglobin, while not invariable, remains, however, a tolerably constant feature, producing sometimes a recognizable paleness of color when the blood is seen *en masse*. Along with the lowering of the hemoglobin, as would be expected, since it is a constituent of the hemoglobin, the iron of the blood falls. An increase of alkalescence, announced by Graeber as a constant symptom, has not been found by Kraus in his more exact methods of testing. As to remaining changes, the red corpuscles may be altered in shape to a moderate extent, constituting a small degree of poikilocytosis, or they may be larger than in health, when they are known as megalocytes. More frequent is an undue reduction in size of the corpuscles—a microcytosis. The red discs are sometimes appreciably paler than in health. A very slight degree of leucocytosis may be rarely present, an average of 8,467 in Thayer's counts as contrasted with a mean normal of 6,000 per cubic millimeter, while the blood-plaques in a severe case may also be increased. While the blood alterations in chlorosis are scarcely distinctive enough to be considered diagnostic, the other symptoms help greatly to a correct conclusion. The patient is most invariably a girl, generally between sixteen and twenty, who, although she may have been overworked, does not seem badly nourished; certainly she is not emaciated. She is, however, characterized by a peculiar pallor, often exhibiting a yellowish-green tinge, extending to the lips and especially the mucous membranes, and which is responsible for one of the names of the affection—green sickness. She is extremely weak, especially on exertion, and short of breath. She is subject to vertigo, palpitation of the heart, and even irregularity of the heart's action. Physical examination will sometimes

discover functional cardiac murmurs; also a systolic murmur at the apex, ascribed by Balfour to a relative insufficiency of the mitral valve due to dilatation of the left ventricle. Rarely a compensatory hypertrophy of the left ventricle has been noted, but never actual valvular disease. Sometimes a *bruit de diable* or humming-top murmur may be heard over the right jugular. Epigastric pain is also a symptom at times. It must not be forgotten that a chlorosis late in life, or a chlorosis tarda, does sometimes appear.

The diagnosis is based chiefly upon the age and sex of the patients, the peculiar greenish-yellow color, the paleness of the lips, and the decidedly diminished hemoglobin, unaccompanied, as a rule, with a proportionate reduction of erythrocytes. The same lost normal ratio between the hemoglobin and the corpuscles is also a characteristic of lead-poisoning, which has, however, superadded its own characteristic symptoms, and is almost restricted to adult males.

The epigastric pain mentioned as occurring in chlorosis resembles that more common in ulcer of the stomach. The anæmia which so constantly attends ulcer of the stomach, often in a high degree, is, however, different from that of chlorosis, there being a proportionate decline in the erythrocytes and their coloring matter. A not infrequent error of diagnosis in connection with chlorosis is the mistaking it for a decline—a pulmonary consumption, which it resembles in the pallor, the feebleness and shortness of breath of the patient. The absence of cough and the physical signs of consumption excludes that disease. On the other hand, evidences of tuberculosis should always be sought where the symptoms of chlorosis prevail, while latent cancer is also sometimes responsible for similar symptoms.

The prognosis is nearly always favorable when the disease is recognized and the proper treatment afforded. There are few results more satisfactory in therapeutics than those of a properly treated case of chlorosis. Time is, however, required, and too rapid a cure must not be promised, several months and even longer being sometimes required. The question whether a chlorosis will be transformed into that more serious variety of anemia, known as pernicious anemia, has been raised. This seems not impossible. If the view of Sir Andrew Clark be accepted, that chlorosis may result from the absorption of poisonous substances from the larger bowel, and if pernicious anemia be due to the absorption of more intense poisons from the small intestine, the difference is only one of degree. Both are characterized by defects in the cellular constituents of the blood. In the one, chlorosis, the coloring matter is chiefly wanting, although associated with this is usually found a small degree of morphological defect. In pernicious anemia both cell shapes and coloring matter are defective. In both diseases the oxygen-carrying office of the blood is interfered with, and thus

important vital processes embarrassed, the total suspension of which must be fatal.

Treatment is pre-eminently by iron. The carbonate of iron, in the shape of Blaud's pill, made by a double decomposition between the carbonate of potassium and the sulphate of iron, is at this day very popular, 1 to 3 grains (0.06 to 0.2 gm.) being given at a dose three times a day. But the tincture of the chloride of iron, or reduced iron, or one of the vegetable salts may be given. It is often said that iron is given in too large doses in the majority of cases for which it is prescribed. Most of it is unabsorbed, and therefore wasted. Nay, worse; that which is unabsorbed locks up the intestinal secretions by its astringency, produces headache, and makes the patient otherwise uncomfortable. But chlorosis is one of the few diseases in which large doses of iron are well borne. The reason is plain. It is the iron-holding constituent of the blood which is wanting, and the iron is needed to replace it. The blood is, as it were, hungry for it. A remedy which has, during the past year or two, been giving the best of effects and therapeutic results is Gude's Pepto-Mangan, in drachm doses, three times a day, after meals. This preparation furnishes organic iron and manganese to the blood elements, and will be found to increase the hemoglobin in the corpuscle very materially. If the blood be examined from time to time during the administration of this preparation, it will be found that the percentage of hemoglobin increases from about 30 per cent. up as high as 64 and 66 per cent. In chlorosis, under this remedy, the yellowish color after a while goes away, the breathlessness diminishes, headaches disappear, and lassitude and weariness become a thing of the past, and the young girl after the lapse of a few weeks will in every way materially improve.

Next to iron comes arsenic. The efficiency of iron is greatly aided by union with arsenic, which should be given in increasing doses, but short of toxic effects. But to give these drugs is not alone sufficient. Rest in bed, at first continuous, is imperative to secure a rapid result, and this must be associated with an abundance of good food. Daily massage, except during menstruation, is also a useful adjuvant. There is no condition in which the so-called rest cure is more efficient than chlorosis. With a return of color to the lips, or, better, with the growing increase in the hemoglobin, as measured by the hemoglobinometer, the patient should be permitted to be out of bed, at first a half hour to an hour only, but this should be gradually increased until she is up most of the day. For a long time, however, fatigue should be avoided.

To those who can afford it, a residence at the sea-side materially aids convalescence. Indeed, no condition is so rapidly improved at the proper time by sea air as chlorosis. To the poor, a well-regulated hospital treatment is a boon for which there is hardly a substitute.

JAUNDICE AND ITS TREATMENT.

A DISORDER, for the relief of which medical men are very often consulted, is what is ordinarily known as "jaundice," a complaint which, to the sufferer, is particularly distressing, and may result, if left unrelieved, in chronic hepatic disease. A patient, probably a male of about thirty years of age, comes with the history that he has been sick for ten days or so. He has a severe cough and complains of having been sick at the stomach. There is no swelling about the face or feet; no pain; bowels are regular, and tongue heavily coated. Upon examination, we find dulness marked just below the ribs on the right side, extending downward fully three inches, nearly to the umbilicus. Farther round to the side we get the normal resonance. At the point of most marked dulness we can easily map out a distinct mass, which corresponds to the location of the gall-bladder. If we examine a sample of urine from this case, we will find distinct evidences of containing a large amount of bile. You will observe a peculiar color and also a characteristic foam on top, both of which strongly indicate the presence of bile. When bile is eliminated through the kidneys, more or less albumen will always be found in the urine; so that albumen in the urine is at once presumptive evidence that there is something the matter with the kidneys; but it is not sufficient, you must have the other corroborative tests. Not only is the skin all over the body quite yellow, but the sclera is also tinged the same color; and if the patient be a negro, the pigment often appears as spots under the white sclera. The tongue is big and flabby, filling the whole buccal cavity. The patient evidently has a catarrhal condition of the common duct, blocking it up to a greater or less extent, and causing a reabsorption of the bile into the blood, giving him catarrhal jaundice. The albumen found in the urine is probably caused by irritation resulting from the presence of bile—something which frequently happens. It is a peculiar thing, but is a fact all the same, that a patient under these circumstances frequently complains but little. Most cases of this kind follow an attack of some dyspeptic trouble, some imprudence in eating or drinking They generally have a sick stomach, some nausea, some constipation. After a while they have an uneasy sensation in the region of the liver and stomach; and a few days later follow the symptoms described above. If such could be examined, it would be found that this man's feces were clay-colored. In order to discover exactly whether the foam or the color in the urine is due to the presence of bile, add a few drops of strong nitric acid and you will observe, if bile be present, a play of colors—green, blue, red and yellow. Another and possibly a still more commonly used test is to put a little urine in a test tube, and pour down upon it a watery solution of iodine, and if bile is present a green ring will form at the junction of the two fluids. As to the

treatment of such a case as this is: There is little or no fever, and not much distress; and by opening the bowels thoroughly, and limiting the diet for a while, such patients often make a complete recovery. A treatment which has been highly commended is to flush the bowel with cold water, that is, injection by the rectum of cold water, with the idea of stimulating peristalsis, thus perhaps removing the obstruction and allowing the bile to flow out into the small intestine. Whatever will tend to relieve the congestion or dislodge the concretion, if there is any in the duct, will generally be speedily followed by improvement. As to internal medication, one of the remedies *par excellence* is chionia. This preparation will be found unlike drastic purgatives in that it gently stimulates the liver, and relieves chronic constipation, thus preventing any accumulation and concretion at the opening of the duct. Chionia is best administered in teaspoonful doses three times a day. Good results are obtained from sulphate and phosphate of soda in hot water an hour before meals. In some cases nitrate of pilocarpin, $\frac{1}{8}$ to $\frac{1}{4}$ grain hypodermically, has acted well. As to removing the jaundice, which very often gives rise to great dryness of the skin, accompanied by itching, nothing succeeds as well as salicylate of soda in full doses, say, almost up to the point of tolerance, 30 or more grains a day well diluted. One thing which it is wise to remember is that it is perfectly possible to have jaundice from occlusion of the common duct without having a calculus, and which may be due only to thickened bile or thickened secretion from the common duct. It is therefore wise to be careful not to suspect a concretion or gall-stone in every case in which the symptoms outlined are present. Cases of catarrhal cholangitis are by no means infrequent, and are frequently confounded with malaria.

THE NEUROLOGICAL EFFECTS OF GOLF.

DR. IRVING C. ROSSE, late Professor of Diseases of the Nervous System in Georgetown University, is a most enthusiastic believer in the game of golf. In the course of a paper, "Golf from a Neurological Viewpoint," read before the American Neurological Association, he said:

"Doubtless from the sportsman's point of view and that of the hygienist, the value of golf is apparent, but its therapeutic value, not so well established, is practically an untrodden field and in need of an exponent.

"In the capacity of physician and neurologist it is impossible to familiarize one's self with the facts of the game in this relation without seeing its many advantages and acknowledging its merits as beyond all praise.

"To the neurologist who trusts to psychic, mechanical and hygienic influences rather than to drugs for treatment, the theme

is replete with magnificent possibilities of prophylaxis and even of therapeutics. We have a royal road to physical exhilaration in a game that can be played all the year round, independently of atmospheric vicissitudes, during all the seven ages of man, by delicate young girls as well as by strong athletes, and even by decrepit old men whose declining powers do not admit of severe exertion. It combines exercise, pleasure and fresh air without that risk of injury to heart, lungs or nervous system, as is the case in certain other exercises in which there is high blood pressure and arterial tension. There is absolutely no danger attached to the game, and consequently no accidents ensue. Unlike the bicycle, it is doubtful if such a thing as an accident insurance was ever paid for injury incurred at golf. Nor is the game contraindicated in heart lesions, arterial calcification, albuminuria, old age, childhood, or certain hysterical conditions, which would be aggravated by such exercise as bicycling, swimming, horseback riding, or mountain climbing.

"I may say that in all affections marked by slowing of oxidation or in those consequent upon intoxication by the products of organic disassimilation, the game of golf is to be recommended as the best method of bringing about a cure.

"The obesity and degeneration of middle age, when the biceps have diminished and one's energy is failing, may be helped by devotion to golf. The further tendency of the exercise is to eliminate the so-called diathesis, and thus do away with gout, lithemia, headache and dyspepsia, while its hygienic and therapeutic consequences are admissible in cardiac and pulmonary affections. Although moderation is advisable under such circumstances, there can be no doubt of the benefit derived in some cases of cough, nervous asthma and in affections of the bladder and prostate; but it is pre-eminently in functional nervous disease that our great Anglo-Saxon game is to be recommended both as prophylactic and curative. No exercise or recreation is better fitted for the mentally overworked, the hysterical, the melancholic; none helps to preserve the concerted action of eye, brain and muscle, known as the psychological moment; none, perhaps with the exception of swimming, gives one so good an appetite; there is not a more sovereign remedy for dyspepsia, and as to insomnia such a thing scarcely exists among the devotees of golf."—*Selected.*

Physicians Forbidden to Testify.—According to the *Medical News*, on March 13th Governor Roosevelt signed an amendment to the civil code which had passed both Houses at Albany. This amendment absolutely prohibits a physician from divulging any information he may have acquired in his professional capacity concerning any patient, either before or after the latter's death. For a long time the insurance law has permitted a physician to testify concerning the physical condition of a policy-holder.