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WINNIPEG, MAY, 1889.

**ABSTRACT OF THE LUMLEIAN
 LECTURES ON ENTERIC
 FEVER,**

*Delivered at the Royal College of Physicians,
 April 1889.*

BY JOHN HARLEY, M. D.,

Physician to St. Thomas's Hospital.

In considering this subject, I propose first of all to search for its origin, then to trace its association and relationship with other diseases in further illustration of its origin, and lastly to call attention to the treatment of the disease, the materials serving for this purpose being the cases which have come under my care in St. Thomas's Hospital during the last ten years and those whose histories are given in the Medical Reports of the War of the Rebellion of the United States of America. In considering the etiology of enteric fever, I shall not confine my enquiries to a narrow field, but shall be prepared to find a variety of influences accidentally combining to produce the same result—the development of enteric inflammation. We are all assured that filthy air and filthy food or drink are producers of enteric fever, and inferentially we may go a step further and concede that filth generated within will also produce it. Science, however, is not satisfied with generalities, but seeks to know the immediate cause, to isolate the simple factors, and then to ascertain how these can set up a specific morbid action; but the more the view is narrowed the greater do the difficulties become. Granted, for example, water which has filtered through cesspools

a little higher up the valley is the cause of an outbreak of enteric fever in the village below, what particular constituent of this fluid is it that produces the disease? Is it a chemical compound, or is it an organized body? If it be the former, it exists in such tenuity that the chemist fails to detect its presence; if it be the latter, it is a microscopic dot.

Micro-organisms exist in the clear limpid sewage filtrate which causes enteric fever, and they also abound in the stools of patients suffering from this disease. But what of these? Within the last few years the influence of micro-organisms in the production of disease has engaged the attention of a large number of observers, who have pursued this attractive study with an ardor which has never been exceeded in the progress of medicine. They have isolated and exposed to our wondering gaze the concrete essence, the absolute and visible germs of vaccinia, of variola, of scarlatina, of tubercle, of syphilis, of cholera, of enteric fever, and indeed of almost every other important disease, and they have employed their leisure in cultivating these dreadful germs, and they handle them with a freedom and impunity that the cobra charmers might envy. It is interesting to witness the effect of these revelations; the novelty and simplicity of the discovery, and the complete absence of everything like doubt or hesitation in the announcement one after the other of these discoveries, have made an easy conquest of medical opinion, and at the present time the bacteriological laboratory is a necessary adjunct, not to say an important department, in all the more advanced of our medical schools. In one little field of vision we may see, side by side, the germs of almost every disease, and the medical tyro readily enumerates the distinctive character of each of these seeds of woe, while he attributes to each its specific power.

But our admiration is not allowed to stop here. It has been shown that these agents may by successive cultivation, be robbed of their fatal power and brought into beneficent subserviency to human beings; and yet, further and more wonderful than all, a microbe thus tamed by culture, thus robbed of its fiendish power

and converted into a ministering angel, may be set on the track of an incubating disease, and it shall arrest even rabies in its baleful course, and, having arrested, annihilate it. Such are some of the very surprising results of our very brief acquaintance with micro-organisms. When we know them better and can consult their peculiarities, direct their antipathies, regulate their interactions, and, it may be, utilize their very gambols, who shall presume to say that we have not passed the "winter of our discontent," and reached a point whence we can decry a happier future for man and beast. But while a goodly number of intelligent observers, impelled by enthusiasm and unrestrained by caution, are attracted by the glare of these splendid discoveries, there are others of a slower and less credulous temperament; who, while they yield to none in their desire for truth, would have every observation leading to its elucidation tested with the most scrupulous care and rendered unassailable on every side. To minds of this world, objections present themselves which have been overlooked or but lightly regarded by observers of the other class. First, that the healthy body is endowed with a superabundant store of vitality, which enables it to resist the encroachments of the lower vegetable organism; and that it is only when a depression of this force sufficient to place the individual in a condition very near its extinction occurs, that the body is liable to their invasions. Secondly, time is a very necessary condition for the development of micro-organisms; and in the sudden transitions from health to disease occasionally witnessed there is no time for the growth and general dispersion of the micro-organisms. Thirdly, in the production of disease by inoculation something besides the germ is introduced—to wit, the animal fluid in which it floats. Fourthly, it must be conceded that in any given culture out of the body the micro-organisms are but the outcome of the changes going on in the albuminous medium. Fifthly, in the production by cultivation of those germs which are said to retain their virulence, no attempt has been made to distinguish between the action of the micro-organisms themselves

and that of the attendant fluid. To assume that it is the micro-organism and not the fluid which produces a given result after inoculation is to exclude one-half of the facts from the argument, and, it may be, the more important half.

From the foregoing considerations, I think it unreasonable to assent to the germ theory of disease, and I can only regard it as another of the many instances in medicine and out of it where cause and effect have not been discriminated. Setting aside, therefore, this theory, I shall endeavor to prove that the disease under consideration is merely the defect of derangement of function. I trace those variations of health which constitute disease to two causes, acting either separately or together—viz: (1) a variation of the external conditions of life; and (2) a diminution of the oxydising action of the blood, either from some fault of the hæmoglobin or of the protoplasm to be oxydised. Given pure air, and equable temperature and moisture, with muscular exercise proportionate to the nutrition of the body, the living being is attuned to the conditions of his existence; the fire within burns steadily and cheerfully, and the products are normal and proportionate in amount. Let disproportion now arise in any one of these conditions, and an abnormal and, so far, morbid state results. Within certain limits the healthy body can accommodate itself with facility to considerable variations in the external conditions, and those are the delicate who cannot readily do this, and who, in the transition process, are liable to develop abnormal action, or, in other words disease. These are truisms which in the present phase of medical thought will bear repetition, and, as I hope to show further on, they are very applicable to the subject which we have under consideration. In a large community there are many persons possessing identical constitutions, and of these there are, at any given time, some who are in an identical state of body; if these are simultaneously exposed upon the same soil, to the same heats and chills on the same day, we should expect in the main the same results to follow, it being in such a case both unnecessary and unreasonable to assume contagion, each case of

illness rather being an instance of the spontaneous origin of a distinct set of symptoms common to all, the necessary outcome of the reciprocal play of definite intrinsic and extrinsic conditions.

But as the question of contagion often arises in respect of enteric fever and its congeners, it will be necessary for me to say a few words on this subject. There are two diseases, syphilis and variola, in which we recognize a specific poison, capable when inoculated, of reproducing its kind; and this fact has taken such a hold upon the mind that whenever one or other of these diseases presents itself we have no hesitation in concluding that it has originated in contagion, and the idea of its origin *de novo* is not entertained. To my mind this seems very superficial and unreasonable, for it denies the uniformity and universality of the laws of nature. For the reason that I have stated in the earlier part of my lecture, endemic disease is continually apt to be regarded as contagious, and this is particularly the case with enteric fever. Dr. Collie, in his report of the Metropolitan Fever Hospital at Homerton for 1879, adduces evidence to show that the occurrence of four cases of enteric fever among the nurses was due to personal contagion from cases in the wards, but I am compelled to say that I regard his evidence as inconclusive.

The following case furnishes, I think, stronger evidence of the direct fecal convection of enteric fever than that contained in the above report. A girl aged nineteen, who had been in St. Thomas's Hospital for a month with gastritis, anæmia, and constipation, contracted enteric fever while still an inmate of the ward, the attack being of a severe character. Like most of our cases at St. Thomas's Hospital, there was constipation throughout, requiring the frequent use of enemata. She was treated by enemata the whole of the month before the enteric fever developed, and, there being but one instrument in the ward, it was used for this case in common with four enteric fever cases which often required it, and also occasionally for two or three other patients. That the disease was conveyed by the enema apparatus

was doubtful; the patient was certainly predisposed to an attack of enteritis, for obstinate constipation had existed for many weeks, and constipation is, I believe, the predisposing cause of many an attack of enteric fever; besides, none of the other three patients who used the enema apparatus were affected.

As I wish hereafter to speak of the relationship of enteric and scarlet fever, and as we are still considering the subject of contagion, I cannot refrain from narrating my own experience of scarlet fever in this respect. Scarlet fever is regarded on all hands as pre-eminently contagious, but although I have been endeavoring all my medical life to obtain proof of it, as yet I have failed to find it; but have acquired some evidence to the contrary. I have seen whole families affected, falling ill one after another, and I have witnessed, as I supposed, the operation of an endemic cause. I have never known imported cases propagate the disease, and I have never witnessed its spread, under the most favourable circumstances, among the convalescents in the fever hospital. During my connection with the London Fever Hospital I did not contract scarlet fever, though I had never suffered from it; but eight years after my connection with that institution ceased, I experienced a sharp attack at a time when I had not to my knowledge been in contact with any case of the disease. I am convinced that a chill was the sole cause of my attack, and I adduce it as an instance both of the spontaneous origin of scarlet fever and of its inability to spread, for neither my guests nor any member of my family caught the disease. Scarlet fever thus resembles common catarrh, springing up in households here and there, affecting some members simultaneously and others after intervals. The scope of these lectures will not allow me to pursue the subject of contagion further, and I hope I have adduced evidence sufficient to entitle me to keep this misleading hypothesis in the back-ground while I carry my inquiries into the etiology of enteric fever a little further.

Turning first to the histories of my own cases, I find that my clinical clerks have recorded the following cause: In fou

cases, two being males and two females, their ages ranging from twelve to forty, the onset of the disease was accompanied by the catching of a severe cold, with chills and headache; in six cases, five males and one female, their ages ranging from twelve to twenty-three, the illness began by getting wet through. The cases themselves were severe ones, as is proved by their prolonged stay in the hospital and the death of two of the patients. Shall we, in the face of such unbiased evidence, say that some other cause is needed to explain the origin and development of enteric fever? If we say that a wetting on a cold day, in either summer or winter, is not of itself enough to kill a strong man, we deny a daily experience. In killing him it causes a severe internal congestion, and this being so, why and how should the mucous surface, the more vascular internal skin, escape? The intestines, from their arrangement and the length of their bloodvessels, are the part of the body most of all liable to congestion, and yet modern medicine can only recognize the existence of an enteritis under the form of a specific fever, with its incubation period, its days, its specific ulceration, and its specific poison. Such metaphysical scholasticism is not science, but the very sublimation of presumption, for it takes things for granted which have never been proved, but, on the contrary, can be easily disproved. In order to open up a free and unbiased view of enteric fever, I have thought it necessary to declare my views thus strongly; it is nearly twenty-five years since I first broached them in the first volume of Reynolds' System of Medicine, but the influence of a scholastic training would, I felt convinced, prevent their recognition, and that nothing short of a military campaign would suffice to expose the true nature of enteric fever, by demonstrating its natural associations, and proving that its development is but a mere accident in the progress of those severe congestive strains of the internal organs which always happen to those who, imperfectly protected against diurnal variations of temperature, are exposed to the exigencies of warfare. Such evidence is now available, and is contained both in the history of the Franco-Prussian

War and that of the American War of the Rebellion, the latter of which I shall take for my present purpose. It is compiled from the reports of a great number of competent observers, and collated and revised with the greatest care; but the reader of this treasury of medical experience will not fail to observe that, with few exceptions, the labourers employed in its formation have been strongly influenced by the sophistry of the schools. Being bound by artificial restrictions, they are at their wits' end to know how to classify their cases: whether, for example, this particular one shall go among the malarial or the typho-malarial, or whether it does not properly belong to a specific typhoid. As a matter of fact, they—we, I should say—shackle ourselves with the prejudices derived from our teaching, and we weave a veil through which it is difficult to see nature. It is easy to learn, but next to impossible to unlearn, so indelible are early impressions. How careful, therefore, as expositors of nature, we should be that our teaching may be so true and simple that there shall be nothing of it to unlearn.—*London Lancet.*

CRIMINAL ABORTION BY INFILTRATION OF THE UTERUS WITH AIR.

BY SAMUEL B. WARD, M.D., PH.D.
ALBANY, N. Y.

Professor of Pathology, Practice, Clinical Medicine and Hygiene, Albany Medical College.

On the 19th of November last I was consulted by the district attorney of Rensselaer county with reference to giving expert evidence in a case to be tried before the Supreme Court in which the prisoner was indicted for manslaughter in the first degree. At the trial, which came off a few days later, the following facts were sworn to:

The attending physician, Dr. C., swore that on the night of the 18th of June, at about 11 o'clock, the prisoner came to his office and told him that a woman with whom he had been living, and who was three months pregnant, had, a few minutes previously, introduced into her uterus a rubber catheter into which he

had then blown air; that the woman uttered an exclamation of pain and fell over unconscious, and it was for this that Dr. C.'s services were required. The Dr. went at once to her bedside, and found the patient unconscious and pulseless, the heart-beat very faint and irregular, the forehead and extremities covered with a cold perspiration, and the respiration weak and sighing. Her condition grew steadily worse until she expired half an hour later.

The two coroner's physicians who made the autopsy agreed substantially as to the facts; they stated that there were no external evidences of violence upon the body; rigor mortis was well marked. At no point, either on the surface or in the interior, was there any evidence of chemical decomposition. On opening the thorax, the cavities on the right side of the heart were found empty, containing no frothy blood, and the left side of the heart was also empty. The lungs were everywhere congested, but nothing else abnormal was discovered in the chest. The uterus contained a fetus nearly four inches in length, when extended, and presumably at about the eleventh week of utero-gestation. The uterus was distended with air, the volume of air being about equal to that of the fetus and its envelope. The ovum was intact, the placenta not yet well formed, its adhesion to the wall entirely intact. On opening the uterus, air escaped, and two or three ecchymotic spots the size of a silver ten-cent piece or quarter of a dollar were observed, but at no point was the mucous membrane of the uterus lacerated. All the other abdominal organs were in a condition of health. The brain was not examined.

The hypothetical question was put to me, embracing very fairly the points above given, and I was asked what in my opinion, was the cause of death. My reply was, assuming all the above facts, that I believed the woman died from shock, the result of the introduction into the uterus of the catheter and the subsequent sudden, forcible dilatation of that organ with air.

The medical gentleman who was examined for the defence, though it was

difficult to see how his evidence tended to help the prisoner at the bar, swore that it was his belief that the woman died of air-embolism, the air obtaining admission to the venous circulation through the uterine sinuses.—*Albany Medical Annuals.*

COMPETITIVE EXAMINATIONS.

Professor Crookes, President of the Chemical Society, in his address, speaks as follows on competitive examinations:—

I must now ask your attention to an event of which none of you can be ignorant, though not exclusively relating to chemistry, bears closely upon it and upon the future of British Science. I refer to the protest against the examination system in education which appeared in November last. That protest had long been in the air. For years past men who take the trouble to observe and to reflect have come to the conclusion that competitive examination is injurious to the individual, injurious to the race, and that it starves original research at the very root. They have convinced themselves that if we flag in scientific investigation, that if a large and increasing proportion of professorships and of leading positions in industrial establishments, both in the home kingdom and in the colonies, are filled by aliens, the fault lies mainly with our educational system. Men trained chiefly to pass examinations either in theoretical or practical departments cannot equal those who have been schooled in actual research, trained to accomplish much and drawn inferences from facts. All the earlier protests were desultory, and calculated to produce no lasting impression; but the recent manifesto is the expression of the collective of many earnest representative men and women. Hence it cannot be slighted as the mere outcry of a faction, a sect, a school, or an interest.

A most satisfactory feature is the adhesion to the protest of men who formerly were in favour of competitive examination as the test for entrance into the civil or military service of the State. Prof. Max Muller, of Oxford, frankly admits he now considers competition to be a mistake, and avers that the failure springs not only

from the manner in which the system has been worked, but is involved in its very nature. But if this protest is to avail it must be energetically followed up, for I must repeat what I have before declared that the position of science in Britain is far from satisfactory.

Though the number of articles devoted to research in German transactions and journals exceeds those in our own publications, we must remember that the population of the German empire is greater than that of the United Kingdom by at least one-fourth; further, that the savants of Russia, of the Austrian empire, of Switzerland, Holland, and Scandinavia largely select German journals as their medium of publication. Not a few English and American scientific men follow the same course. Hence, as regards quantity, our share in the world's scientific work is more considerable than appears at the first glance. Further, I think that if deficient in quantity English research excels in quality. If we do less detail work we furnish a larger proportion of generalisations and laws than most of our rivals. As the discoverers of laws and generalisations, Black, Boyle, Dalton, Faraday, Graham, Joule, Newton, Wollaston, and Young are household words in the laboratory—yet none of these men were products of the examination system.

CEDEMA AS A DIAGNOSTIC SIGN IN CARCINOMA OF THE STOMACH.

M. C. Baert, of Brussels, writing in *La Clinique* on cancer of the stomach, calls attention to the frequency with which œdema of the ankles is met with in this affection after it has lasted a few months—a diagnostic aid which is by no means new, but is, he thinks, in danger of being too much overlooked at the present day. He gives a number of cases recently occurring in the various hospitals in Brussels in which œdema was present. In one of these cases the œdema came on as early as three months after the first symptoms of the affection made their appearance; in two other cases it was noticed after four months; but in most of

the other instances it was delayed till the lapse of from six months to a year after the onset. In one case, where there was no evident cause to which to attribute the loss of appetite and the wasting complained of by the patient, Professor Carpentier, noticing some œdema of the ankle, diagnosed carcinoma of the stomach, and found his diagnosis confirmed by the appearance a month afterwards of all the usual signs of the affection. Several of the cases presented a marked increase in the nitrogen excreted in the urine. With regard to the deficiency or absence of hydrochloric acid in the stomach in cancer of that organ, M. Baert admits that it is usual, but agrees with Wolff and Ewald in saying that this sign is by no means peculiar to cancer, as it is found in other gastric affections.

CREDULITY AND INCREDULITY.

It was an ancient copybook maxim that one of the many advantages of strict adherence to truth is that the veracious speaker always commands the credence of his listeners, which the inaccurate person never gains. Like many other wise maxims this is seldom realized in actual life. It is not the least singular feature of human credulity that falsehoods are more readily accepted than facts by the world at large. Whether the same inventive genius which inspires the creator of a falsehood enables him to present his fiction in an agreeable form; whether pure perversity induces the world to hearken more readily to fables than to realities, the fact is indisputable that falsehood is more believed than truth. It is easier, for example, to attract investors for some undertaking which promises a return of fabulous interest than to obtain capital for a safe investment which can offer only a moderate rate of profit. Physicians of high ability do not command the boundless confidence lavished on the inventor of quack salves and potions.

"Certum est, quia impossibile est"—the great army of swindlers of all classes lives by the application of this paradox; party politicians do not disdain to remember it. To appeal successfully to human credulity the first essential is to do so with suffi-

cient boldness. Many an ingenious falsehood has failed to win belief because it was not sufficiently untrue. The inventor of lies must give his fancy free range. The mere exaggeration of facts, the distortion of real occurrences, may gain some credence; but the world reserves the fulness of its confidence for the man who boldly takes it by storm and relates a plain fiction. When the swindler's dupes make their woes public, when the voter discovers that he has been utterly misinformed as to facts, lookers-on are inclined to ask of both, "How could you believe such incredible statements?" It is the fount of credulity that exists in everyone which predisposes the "general public" to be thus deceived.—*London Globe.*

MEDICAL EXPERT TESTIMONY.

BY PRESIDENT WARD.

Delivered before the New York State Medical Society.

(Concluded)

Moreover, it is certainly true that there are a few men in our profession who entertain opinions differing widely from those of the large majority. These opinions, expressed in private conversation or in medical meetings, result in very little harm, because they are estimated at once at their true value. But the holders of such opinions are precisely the men whom the counsel in a desperate case is desirous of retaining. By them he can show to the jury how uncertain and divergent medical opinions are, and throw doubt upon the reliability of the evidence procured by the other side. For instance, in a rural community I have heard a physician, whose fine personal appearance, army experience, large and successful private practice, and gray hairs gave weight in the minds of the jury to every word he uttered—every man on the jury knew him by sight and reputation, and a majority personally—I have heard this physician say that, in his opinion, "any man who used any splint in the treatment of any form of fracture was guilty of malpractice." Such monumental nonsense as this, is, of course, very rare; but the incident serves well to illustrate the abuses to which the present system of

obtaining and using expert evidence is liable.

The physician selected as an expert considers his case carefully; he reads up the various authorities, paying, of course, considerable attention to those whose views agree with his own, and mentally remarking what sensible men they were, while the impression formed of those who differ from him is not nearly so complimentary. He looks up the records of similar cases in medical journals, and finally goes on the stand well prepared to answer truthfully the questions previously arranged to be asked him on the direct examination. During this investigation of the case it is sometimes curious to observe how the expert's opinions will become strengthened in the direction of the side which he has espoused. Without any real additional arguments having been brought to light he will incline to give more and more weight to facts which seem to favor his view, and become more and more inclined to make light of, or even to ridicule, facts or opinions which militate against him. He often ends by being honestly persuaded that there ought to be no manner of doubt on points which are in reality very doubtful and which at the outset he willingly admitted so to be.

When the expert goes on the stand he is first questioned by the lawyer on whose behalf he appears. The questions are hypothetical ones, supposed to be based on the facts proven on the trial. As a rule this is fairly done, and the expert has no difficulty in giving honest, straightforward answers.

The direct examination completed, the counsel for the other side takes the expert in hand and his trials begin. In some cases, in the majority of cases perhaps, he receives perfectly fair treatment. The cross-examiner simply endeavors to bring out all the weak points in his view of the case, to show how very weak they may be; that they are matters of opinion and not of fact; that other honest men may take a different view of the case, and that an entirely different theory may not be wholly without foundation. Even though the treatment he receives be perfectly courteous the ordeal is a trying and disagreeable one. While he is honest and

frank in his answers he must be very cautious in the wording employed, resting assured that every slip will be taken advantage of, and every response stretched to its utmost limit of construction, even if it be not entirely twisted out of its original meaning, when the case comes to be summed up before the jury.

At other times, and especially if the counsel is conscious of having a bad case, the expert may be treated very differently. Instead of its being assumed that he is a gentleman who has taken the stand for the sole purpose of giving information of a technical character and telling the exact truth, it is assumed that he is there for the purpose of aiding the side which called him, and sometimes it appears to be further assumed that he is scarcely hampered by the ownership of a conscience; he is treated as though it was known that he was lying, and every effort must be made to catch him at it. Questions are asked which cannot be answered truthfully without conveying an entirely erroneous impression to the jury; a categorical answer is insisted upon, when such an answer without an explanation is virtually a falsehood; questions are asked which are capable of several different subsequent explanations; others which have, in the form in which they are put, absolutely no meaning at all. On one occasion I recollect a lawyer's laboriously going over all the organs and tissues of the body from the scalp to the toe-nails, and being informed by the medical expert that, in his opinion, no one of the organs was the subject of pathological change. He then inquired if this man was sound from head to foot what ground he had to claim damages. The answer was that the functions of the nervous centres were so deranged as to prevent the claimant from pursuing his vocation and supporting his family. The expert was then requested to state to the intelligent jury precisely where these "functions" were located and what they looked like. By this time the expert was so thoroughly annoyed, angry, and disgusted that he declined, for the moment, to answer any more "stupid" questions—and woe betide the expert who for a single moment loses his temper.

Sometimes the "stupid" questions are put for the very purpose which was reached in the instance quoted, of confusing, annoying, and angering the expert, or of catching him in apparent contradictions, the explanation of which, to the average layman on the jury, is always tedious and often impossible. At other times the questions are not intentionally "stupid," but are so simply by reason of a lack of medical knowledge on the part of the counsel propounding them. Your president last year, in his inaugural address, speaking of medical experts, said: "Their testimony is often of little value, on both the direct and cross examination, from the fact that the questions which they are called upon to answer are formulated by lawyers who have little medical knowledge; or if, as sometimes happens, a physician is employed to assist a lawyer, the lawyer not understanding the real import of the question which his monitor may suggest, perplexes the witness, and too often places his assistant in an undignified position, so that medical-expert testimony often disgraces our profession." When a lawyer is asking questions prepared for him by his medical expert for use in the examination, it is not uncommon to see a well-laid train of reasoning entirely destroyed by a single unexpected answer, when, in point of fact, the answer given is more favorable to his view than his medical friend had dared to expect or hope for, and the only trouble is that the counsel, not knowing enough of medicine to take advantage of it, abandons his argument just when success is within his grasp.

While medical experts are, as a rule, men of large experience in the practice of their profession, each of them must, on some occasion, have gone on the stand for the first time. The position is then to him novel and embarrassing. He is unfamiliar with the rules of the court, the audience is a strange one, and the counsel is not averse, if it suits his purpose, to take advantage of these circumstances. Sometimes the lawyer will undertake the process of brow-beating the witness, repeatedly reminding him that he is under oath; cautioning him to be careful about his statements; gesticulating violently; and sometimes succeeds in getting the

young man, if he is at all bashful, in such a condition of mind that it is impossible for him to recollect facts with which he is perfectly familiar, or to couch his answers in appropriate language. A favorite device with some is to ask the expert concerning all the possibilities of the case, not taking at all into account the probabilities. The timid expert is, perhaps, unwilling to admit a possibility, fearing that his admission will be afterwards misrepresented to the jury as expressing his opinion of what was a probability. Under such circumstances I have repeatedly heard good, honest, careful men deny the possibility of an occurrence which, in their cooler moments, and when they did not fear that their meaning would be misinterpreted and misapplied, they would freely admit. Indeed, since it is a matter of record that an iron tamping-rod, five feet long and three-quarters of an inch in diameter, has passed vertically through a man's skull, scattering his brain more or less extensively over a forty-acre lot, the patient living more than twenty-five years afterward, and the accident resulting in no great permanent disability other than the loss of sight of one eye, it is difficult to swear that anything is impossible; and yet an infinity of possibilities are not in the slightest degree probable.

One of the most unfortunate results of this condition of things is, that it is frequently impossible to get the most substantial and reliable men among us to go on the stand under any circumstances, or for any consideration, and their places are sometimes taken by ambitious men, with more assurance than mental balance or experience, who see an easy way of attaining a notoriety which they mistake for well-founded fame, and whose main object is to be on the winning side, if that end can be obtained without stretching their consciences beyond the breaking point.

Is the present system of obtaining medical expert evidence resulted simply in the annoyance occasioned to medical men, or the disgrace brought upon the profession by an apparent or real difference of opinion expressed on the stand, there would be great cause for complaint on our part, though we could not expect much sympathy from others. But it is

respectfully submitted that, above and beyond this, the present system does not tend to bring out the truth in the shortest and clearest manner; in fact, in many instances is believed to have resulted in a miscarriage of justice. Almost any lawyer of large experience in the conduct of criminal cases will tell you that he has been sometimes ashamed of the use which he has made of expert testimony, or else will gleefully chuckle over it. This matter was brought to the attention of this Society as long ago as 1879, when, in his anniversary address, Dr. Roosa so eloquently spoke of the evils attendant upon the present system.

Many remedies have been proposed, but up to the present time no action has been taken toward applying them. Dr. Loomis last year proposed that the questions to the expert should be framed by a medical man employed or appointed for that purpose. This would undoubtedly help matters to a certain extent, but would, after all, fall far short of accomplishing all that might be wished for.

A well-known judge of the Supreme Court has suggested that in each judicial district, a physician of eminence should be appointed by the court, whose duty it would be to appear as expert in every case where his services were required. This man would, upon the stand, be free from all the bias which arises from the fact that he is paid by one side or the other, and a great advantage would, without doubt, be gained. But he would be subjected to all the annoyances and vexations of the examination, and the plan would be manifestly impracticable on account of the varied acquirements demanded of the expert in different classes of cases. The same man can scarcely be expected to be an expert in chemistry, surgery, medicine and obstetrics, and, while the expert would be free from partiality toward either side, his evidence would probably be entirely satisfactory in only some one class of cases. Moreover, there are few medical men who would be willing to be placed in a position where the expression of their individual opinion virtually results in the imprisonment of a fellow-being for a term of years, or launches him into eternity. It is scarcely probable,

again, that this plan would meet with the approbation of the legal profession, who would, naturally, desire that the views of each side should be presented in their best light.

In most cases where medical expert evidence is required, at least two physicians are called to the stand, and in many cases a half-dozen. The remedy which we would suggest would be that, under such circumstances, a board of three experts should be appointed by the court; one on the suggestion of the counsel for the defence, one nominated by the counsel for the prosecution, and a third by the court itself; that these experts should be paid by the court and the charge divided equally between the two sides; that to this board of experts should be submitted in writing the questions involving medical matters; that the answers should be submitted in writing and sworn to, and that medical witnesses should not be required to go upon the stand. In the event of the failure of the board to entirely agree, a minority report might be admitted, and if each side desired to be represented by two or three experts instead of a single one, there would be no objection to such a course.

The adoption of this method would certainly result in obtaining from medical experts, opinions free from the bias which arises from the expectation of pecuniary reward from either side, the unseemly antagonisms between the experts on the stand and the cross-examining counsel would be avoided, and the ends of justice be more speedily and surely attained.—*Albany Medical Annals.*

BOOKS.

* **ALLAN'S MANIFOLD CYCLOPÆDIA.**—We have received the fifth volume of the above, which in every way keeps up the prestige of the work. It is full of useful and minute information, even to the biography of Brassey, the English engineer millionaire. Between billiards and travel the beginning and ending of this volume, there is a vast amount of interesting and instructive matter.

MANITOBA, NORTHWEST AND BRITISH COLUMBIA LANCET.

THE establishment of a powerful crematory for the disposal of the refuse of the city is now under the consideration of a committee of the corporation. It is further suggested that it may be utilized for the cremation of human remains and thus make an end to the expense, formalism and semi-barbarism which in this the 19th century still surrounds the act of sepulture. The cremation of human remains has now been some time before the general public, who, however, are far from being familiarized or fascinated with the process and it has been resorted to in comparatively few instances, and yet from every point of view setting aside the morbidly sentimental aspect of it, the process of cremation for the mortal remains of the human race will advantageously compare with the ordinary practice of civilized people, that of burial. Taken in its hygienic aspect, it would be difficult to contend that a mass of animal matter reduced in a very brief period of time to a handful of harmless ashes, the whole process unattended with any possible untoward effect to the living is not preferable to the decomposition and foul putrefaction slowly taking place by which a human body is reduced to that dust from which it was created, exhaling noxious germs and pestiferous gases which surely permeate the surrounding land and atmosphere. Considered as a safeguard to the health of the living, cremation of the dead must commend itself as in every way preferable. And though happily the eye cannot penetrate to the secrets of the tomb and follow those loathsome changes, which are too surely occurring in the reduction of the body to that from which it sprang, yet oftentime the mind imagines it and the unwelcome thought is banished as one too harrowing and repulsive to be dwelt upon. While the ashes of a cremated relative or friend enclosed in a monumental urn may be regarded with feelings of pain, no disgust or horror will intermingle. Considering the two processes of sepulture and cremation in a pecuniary

sense, we may ask who are ever the gainers by death, passing over heirs and legatees? Though the mortal remains be that of the peer or "the bones rolling over stones of an unfortunate pauper whom nobody owns." The undertaker fattens on all. The pomp and parade and hired trappings of woe in many cases a cloak for rank hypocrisy, bring to him the shekels his soul loves. The scant sum, perhaps the sole possession of the widow and the orphan, is swallowed up in providing for what the remnant of a barbaric custom demands, "a decent funeral." The woe of the bereaved ones, the respect for the deceased, and the love which clung to him or her is by custom supposed to be typified by the number and character of the plumes, the bows, and the fandangoes which are in very truth a mockery to that frame over which the worms have now entire mastery. On the plea alone then of ending this senseless custom the expense of which in numerous cases presses so heavily on the survivors—cremation versus burial scores a point. Some persons argue that the Creator's intention was that man should return to dust but the words of our burial service may be remembered when the body is consigned dust to dust, ashes to ashes to refute that line of reasoning. Though it will take time, possibly a long period of time, before cremation of human remains is generally adopted, we believe that time will yet come. And in this and other countries during the inclement winter season, when interments are with difficulty performed, another argument in its favor might be adduced.

We regret to be obliged to call our readers' attention to the non-payment of subscriptions. On our lists are the names of *two hundred* gentlemen who have had the LANCET posted to them regularly from its first issue in July, 1887, to the present time. One more number will complete a two years' issue, and yet we have not received a remittance from one of them; no doubt this is entirely due to inadvertance. The amount for two years' subscription is the trifling sum of four dollars, which, however, when multiplied by two hundred becomes a serious sum to

be owing to a recently established journal. The expenses of printing, etc., are much heavier in Winnipeg than in other places, and it will be out of the Editor's power to carry on the journal at the loss which the non-payment of so many subscriptions entails. If therefore there is not a reasonable response to this appeal, The Manitoba, Northwest and British Columbia Lancet will cease to circulate so soon as its present annual engagements are fulfilled. Should the journal be allowed to collapse it most assuredly will be to the detriment of local medical men, for the professional journal is often the sole defence which guards the great body of the Profession from the inroads of quacks, empirics, and qualified but unscrupulous men, who care not how they obtain practice. The unmasking of charlatanism and the fear of publicity of unprofessional conduct keeps many within bounds who would otherwise rampantly transgress all medical ethics. The future of this journal is now in the hands of those gentlemen who are indebted to it.

CANADA MEDICAL ASSOCIATION MEETING FOR 1889.

The meeting of the Canada Medical Association takes place at Banff in the month of August. The members arrive in this city on the evening of one day and will not leave until the afternoon of the following. Steps are already being taken to give our confreres of Eastern Canada a welcome to the Prairie City and to tender the hospitality of the Manitoba medical profession to them. The number of visitors will probably exceed two hundred, so that the Profession throughout the Province should combine to do them honor and give according to their means for this purpose. Both the local government and the municipality of Winnipeg may be very fairly asked to give their quota towards carrying out this very laudable intention. The visit of so large a body of educated men at a time when hundreds of thousands of acres of crop are fast maturing for the reaper must engage the traveller's eye, and can only eventuate in material benefit to th

Province. Let not our brethren leave Manitoba compelled to acknowledge with wonder her vast capabilities, but with a remembrance that hospitality is not one of the virtues to be found there. We feel sure that it is only necessary to bring before the members of our profession in Manitoba the fact that these gentlemen purpose paying us a visit, to enlist their warmest sympathies and support in the promotion of any scheme which may be decided upon to give to the Canada Medical Association a warm and generous welcome. We are willing to receive any subscriptions which may be forwarded to us for this purpose, and will hand them over to the committee which will be shortly formed to superintend details.

WINNIPEG GENERAL HOSPITAL.

Dr. R. B. Fergusson operated at the Winnipeg General Hospital last week for irreducible hernia, which was found to consist of omentum. It was ligated in the usual manner and cut. The patient, a powerful, healthy young man made an excellent recovery.

MISCELLANEOUS.

COCAINE AND LANOLIN FOR EURNS.—Dr. Wende recommends a preparation made of these substances. It excludes the air and quiets the pain. The cocaine should be pure and the mixture freshly prepared.—*J. de Med. de Paris.*

CHOREA.—Prof. H. C. Wood says that antipyrin is a more successful remedy than arsenic. With the latter the average duration of treatment is sixty to ninety days. With antipyrin he has succeeded in completely arresting convulsive movements within one week.

TO LIMIT MARRIAGE.—A bill has been introduced into the legislature of Kentucky which prohibits marriage with an idiot, lunatic, pauper, vagrant, tramp, gambler, felon, or any person rendered physically helpless or unfit for the marriage relation, or any person with a violent temper.

EFFECT OF COFFEE ON THE URINE.—Dr. Dumont's observations prove that after the use of coffee the amount of urea contained in the urine is increased, and that it decreases again to the previous amount as soon as the coffee is omitted.—*Lancet.*

DOCTOR, you owe it to yourself and to your family, as well as to your profession, that you send out your bills regularly, and collect closely from all those who are able to pay, and to strictly refuse further attention to those who are able to pay but neglect or decline to do so.—*Medical World.*

ACCORDING to a Reuter's telegram from Sydney, the commission appointed to examine M. Pasteur's method of destroying rabbits, have issued their report, in which they state that, while chicken cholera is fatal to the rabbits inoculated with the virus or fed with infected food, the disease does not readily spread from animal to animal.

PEPSIN IN SURGERY.—Douglass (*Med. Record*) has used locally with success pepsin as a digestant to remove the slough and membranous base of ulcers. He has also found it of service in the removal of cicatricial tissue. It causes solution of the cellular elements of the tissues. He applies it in the form of scales, or in an ointment with lanolin.

ANTIPIRIN CONTRAINDICATED DURING MENSTRUATION.—Huchard (*Revue Gen. de Clin. et de Ther.*) relates that he has noticed severe chills, cyanosis and syncope following the administration of antipyrin during the period for the relief of dysmenorrhœa. He does not now prescribe the drug during the first two or three days of the flow.

M. GOLTZ, *Jour. Amer. Med. Ass'n.*, is still engaged in studying the functions of the brain. Among other experiments he has destroyed extensive areas of the cerebra in dogs, without killing the animals, and in one case a dog lived five months after the whole of the left hemisphere was removed, but showed modifications of character and mental enfeeblement. Goltz advises surgeons to be more bold in cases of cerebral tumors.

LONG BEARDS.—In the March number of the *Popular Science News* you have a sketch of Coulon, whose beard is long. Mr. E. Johnson, photographer in this place, has a very long full beard—four feet eight inches—and has photographs of several persons of that sort. Among them is Mr. Edwin Smith, of Adrian, Mich., whose beard is eight feet long.—A. M. WILBUR.

IODIDE OF POTASSIUM AND SYRUP OF TOLU.—M. Leprince finds that the yellow tint sometimes obtained in mixtures of these substances is caused by the more or less constant presence of carbonate of potassium in the commercial iodide; the carbonate acts upon the resins contained in the tolu, and also, though less strongly upon cinnamoin, one of the ethers present.—*Repert. de Phar.*, Jan. 10, 1889.

THE SALE OF METHYLATED SPIRIT FOR DRINKING.—The great evil arising from the indiscriminate sale of methylated spirit was formally brought before the Edinburgh Town Council recently, when it was remitted to the Lord Provost's Committee to consider as to whether the Government should be asked to introduce a measure to regulate the manufacture and sale of methylated spirit, in order to prevent the continuance of its use as an intoxicating liquor.

FEMALE PHYSICIANS.—The theory has been advanced that women who are masculinized in their tastes, who prefer men's ways and occupations, for which women are especially unfit, such as that of physicians, are probably in reality of imperfect development; that their genital organs will be found to exhibit a tendency to hermaphroditism. This is probably the most fatal blow yet struck by the opponents of female physicians; and it is absolutely fiendish to spring such an idea, now, when so many ladies have already committed themselves by taking up the study.—*Medical Times*.

EFFECT OF GLYCERIN ON THE SECRETION OF VAGINAL MUCUS.—As a result of observations made to ascertain whether the local use of glycerin withdraws fluid from the vagina, Herman concludes: "1. That when the vaginal secretions were not

abundant, the local use of glycerin increased them. 2. That when the vaginal secretions were already abundant, the local use of glycerin did not increase them." These results were obtained with cotton-wool plugs soaked in glycerin, and with glycerin and gelatin pessaries. The amount of glycerin used was weighed, as was also the amount of vaginal discharge.

PREMATURE LABOR.—Method of Inducing by Dilatation of the Genital Canal.—The apparatus consists of a conical bag made of silk and caoutchouc. Its greatest circumference is 32 centimetres, and it is 11 centimetres in length. The bag is anointed with vaseline and introduced by the aid of forceps, passing well beyond the cervix. It is indicated in certain cases of hydrannios after rupture, in cases generally calling for speedy delivery, such as heart disease, grave albuminuria, cases of shoulder-presentation in which version is impossible, and in retention of the placenta and placenta prævia.—*Dr. C. Ribes, in An. de Gyn.*

INTUBATION WITH A SOFT RUBBER TUBE.—Williams (*Med. Record*) asserts that the majority of deaths in diphtheria, within the first two days, occur in consequence of obstruction to respiration caused by the closure of the fauces from tumefaction of the tonsils and the uvula; the larynx remaining intact. He reports a case of this character in which he thinks he averted a fatal issue by the timely introduction of a soft rubber tube beyond the obstruction, leaving one end just at the larynx, and the other six inches outside of the mouth. The tube was in use for seventy hours. It was removed occasionally for cleaning and when food and medicine were given. The child made a good recovery.

TWO CASES OF LAPAROTOMY.—Dr. Pinard recently read a note at the Academy of Medicine on two cases of extrauterine pregnancy having evolved to the full term, for which he performed laparotomy in both cases about two months after the death of the fœtus. The patients did well after the operation and were quite cured. Dr. Pinard employed

a saturated, watery solution of naphtol, which he prefers to all antiseptics in vogue, as being less dangerous, at least in these cases. In a third case which had been previously communicated to the Academy, Dr. Pinard practised elyotromy in preference to laparotomy. In these three cases the placenta, rendered aseptic, was left behind without evil results.—*Dr. Schwartz's Scientific Mission.*

A FREQUENT CAUSE OF BILIARY CALCULI IN WOMEN.—Marchand finds in women's corsets a frequent cause of the formation of gallstones. The pressure exerted by these articles of dress on the liver is transferred to the gall bladder and its ducts. This pressure is not uniform; it is more constant by day, but decreases at night, or exerted only when the form of the thorax is already altered by pressure. This pressure causes the retention of the bile in the gall bladder. During the daytime the bladder tends to empty itself; in the intervals of digestion, and during the night, there is a tendency to refill itself. If the daily evacuation of this organ is prevented, or only imperfectly effected, there is a recurrence of stagnation of bile, and consequent disposition to the formation of gallstones.

CHLORAL HYDRATE IN NIGHT SWEATS.

—Dr. Nicolai (*Gazette Medicale*) has obtained very favorable results from the use of chloral hydrate in the night-sweats of phthisis. Every night before retiring the entire body of the patient was sponged with the following:

R: Chloral hydrate. . . . ʒ ij.

Alcohol

Water ʒāā ʒ iij.—M.

Should this not suffice, the patient's night dress is saturated with this solution, then allowed to dry, and worn.

This mode of treatment also gave excellent results in the night-sweats of children, the results of phthisis. Two or three of these spongings will generally suffice to check a sweating which has persisted for two or three weeks.—*Bull Therapeutique.*

MIXED ANÆSTHESIA.—Obalinski, of Cracow, speaks highly of anæsthesia induced by a combination chloroform and

cocaine. He maintains that when anæsthesia is induced by chloroform it can be kept up by the administration of cocaine. The following is the method followed:—After giving chloroform for a few minutes, until commencing general anæsthesia is noticed, a quantity of cocaine, varying from three-fourths to one grain, is injected into the tissues that are to be operated on. After the injection of the cocaine, no further chloroform is administered. After this method of anæsthesia, such operations as amputation of the leg and thigh, and herniotomy, have been performed. It is claimed for this mixed anæsthesia that it is less dangerous than either pure chloroform or a mixture of chloroform and ether. Obalinski followed the above method in twenty-four cases, and always with satisfactory results.—*Montreal Medical Journal.*

ERGOT—Effect of on the Utero-Ovarian System.—It is very doubtful if ergot ever originates clonic contractions of the uterus during pregnancy, unless the organ is prepared from some pre-existing cause to expel its contents. When in midwifery practice I was in the habit of frequently prescribing ergot as a preventive to post-partum hemorrhage, commencing its administration a week or ten days before the expected advent of labor. I never once had occasion to suppose that it hastened that event, but, on the contrary, in several cases the period of utero-gestation seemed to be lengthened. In cases of threatened abortion I have seen the hemorrhage checked and pregnancy proceed normally under the administration of ergot. It seemed, indeed, to act as a uterine tonic. In other cases, and perhaps the majority it seemed to produce no effect at all; in a few it induced clonic spasms, but in these there was always reason to think that the ovum was already blighted.—*L. Atchill, M.D., in Dublin Jour. of Med. Science.*

THE SIGNS OF DEATH.—Dr. Richardson enumerates the proofs of death as—1, respiratory failure; 2, cardiac failure; 3, reduction of temperature of the body far below the natural standard; 4, rigor mortis and muscular collapse; 5, coagula-

tion of blood in the veins; 6, presence of putrefactive decomposition; 7, absence of red colour in semi-transparent parts with strong light; 8, absence of muscular contraction upon electrical stimulus; 9, absence of red blotch under skin after injection of morphia; 10, absence of signs of rust of needle after plunging into tissues. The practical application of the tests is recommended in the following order: 1, Apply a fillet to the wrist and examine the veins at the back of the hand, the front part of the wrist being so arranged that the arteries are not compressed; if life be not extinct, turgescence of the veins will be apparent; 2, open a vein at the bend of the elbow and seek for stringy coagula; 3, apply the electric test; 4, inject ammonia hypodermatically; 5, examine transparent tissues with a strong light; 6, if any doubt still remain, and rigor mortis has not developed, let the body be kept in a damp room, at 84° F. This would favor decomposition if the body were dead, or favor recomposition if still alive.

THE ABSURDITY OF THE RECENT MEDICAL GRADUATE ADOPTING A SPECIALTY.—We are every day more and more astonished at the complaisance with which young men fresh from college propose to treat one organ or one section of the body as a specialty. The assumption must be that one section is entirely independent of the remainder, or that from books and teachers enough can be acquired to warrant the young man in sitting down in an office and concentrating what ability and cultivation he may possess on one fraction of a complex organization. Either proposition seems to us entirely absurd. The fact is that each part of the body is continually influenced by every other part, both in health and disease, and that the only way possible for comprehending these obscure but powerful forces is by that practical experience for which study of books and listening to teaching only prepares the best of us to *begin* to learn. But general practice is laborious and filled with grave responsibilities which it is comfortable to escape, and hence the modern graduate inclines to begin at the top of the ladder

as a specialist. The plan is very fascinating because drudgery is avoided, but that familiarity with the combinations and mysterious influence of each organ over the others is lost to the over-confident youth, and we may well inquire, "What must the harvest be?"—*Toledo Medical and Surgical Reporter.*

DANGERS OF SULPHONAL.—Sulphonal, the now fashionable hypnotic, is the subject of very varied professional opinion. Some extol it, others condemn. The truth probably lies, as usually happens, between the extreme statements. Sulphonal has a clearly defined usefulness, and belongs not so much to the class of narcotic agents which produce sleep by stupefaction as to the remedies which assist the natural periodical desire for sleep. The new drug is, however, by no means so harmless as has hitherto asserted by its manufacturers. Dr. Bornemann has just reported a severe case of poisoning resulting from the administration of the drug. The patient to whom sulphonal was given for insomnia caused by cerebral excitement, was a physician. The result was a pronounced intoxication showing very complicated symptoms. There was a distinct interference of coordination, first in the lower and later in the upper extremities. He could not, for instance, raise a cup of coffee. A very prominent feature of the poisoning was his perverted feelings and illusions. The patient believed he had two heads, four feet and arms, etc., or believed he was on a boat, or in a railway car, and that some one was about to kill him. These illusions may be termed reflectory. The ataxia referred to is a central one, as it remained unchanged no matter whether the eyes were opened or closed. This distinction between central and sensory ataxia has been made by Prof. Mendel. The drug did not exert any unfavorable influence over the heart and circulation, which appears opposed to the warning of Dr. Schney not to use sulphonal in angina pectoris and arterio-sclerosis. *Med. and Surg. Reporter.*

THE BUSINESS VIEW OF IT.—When a physician is called to attend a case he has not the opportunity and privilege of ex-

aming into the prospects of certain financial reward, as a merchant or mechanic has when he is asked to extend credit for goods or work. He must go and do the best he can, and retain the case to its close, or he will at once arouse the indignation of the community at his so-called heartlessness, and thus lose the patronage of many who are willing to pay their bills.

In view of this fact, would it not be well if physicians' accounts were made an exception in the laws of those States which allow the exemption of a certain amount of property from attachment for debt? This will work no hard-ship to any one, for all the physician wants is his reward from those who can pay if they try; he is generally willing to do cheerfully the worthy charity-practice which properly falls to his lot.

The family may do without the new clothing or furniture until they are able to pay the cash, for if the merchant refuses credit; but when the physician is wanted he is wanted right away, and there is no opportunity of putting the transaction on a proper business basis. Every application for his services becomes an absolute demand.

Let every reader urge the importance of this subject upon the member of the Legislature from his district. If anyone should object to it, ask him how he would view it if his goods or services were placed entirely at the disposal of any and everyone who asked for them, without regard to their ability or intention of paying.—*Medical World.*

LOCO-POISONING.—The ranchmen of Kansas and Texas have suffered serious loss, owing to the prevalence of a peculiar train of symptoms commonly ending in death, which have been for some years observed to affect cattle and horses in certain districts. The animal affected loses flesh, has a feeble, staggering, uncertain gait, a rough coat, and general appearance which is said to be characteristic; it loses all sense of distance or direction, and is liable to fits of rearing, plunging, and wild excitement; pregnant

animals drop their offspring prematurely. It is known as the loco or crazy disease, and is believed to be caused by eating a plant which is generally identified as the *astragalus mollissimus*, and is commonly known as the loco-weed. The liking for the plant is an acquired taste, but once formed, only strict confinement in a pasture free from the weed can eradicate it. In one county of Kansas alone, five hundred horses and cattle have died in this way, but Dr. H. C. Wood, of Philadelphia, and Mr. Kennedy, of Texas, both failed by experimenting on animals, to prove that the plant was poisonous; the latter, however, quoted a Mexican belief that it was poisonous to human beings, producing a condition resembling insanity, and ending in death. The Mexican senoras, it was said, sometimes get rid of an inconvenient husband by administering draughts of the fatal decoction. In spite of the failure of the experimenters, the belief in the poisonous qualities of the loco weed gained ground, and now Dr. Mary Gage Day has published some fresh experiments, which gave very definite results. She used a decoction of roots, leaves, and stems, gathered in September, and gave rather large quantities to cats and kittens with their food; all the animals became affected, the kittens sooner than the cats, with symptoms closely corresponding with those observed in "locoed" horses and cattle. The "jack-rabbit" of Texas, it was found, quickly acquired a liking for the plant, suffered from the same symptoms, and died in ten days. Dr. Day makes an observation which may explain the failures of other experimenters; she is convinced, from experiments made with materials gathered in different months, that the greatest amount of poison is present in the autumn and winter, after the seeds have ripened; it is at these seasons also that the disease is most rife.

BIRTHS.

LYNCH.—On the 10th inst., the wife of Dr. Lynch of a daughter.

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