pieces a portion was placed in bouillon, another portion on agar. The tubes were, as before, kept in the incubator, at a temperature of 37° C. The arrangement of the pieces, their places in the room, and the results, may perhaps be better shown in the following table. The concentration of the formaldehyde in this trial was approximately one and one-half grammes per cubic metre air space, that is, 145 tablets (Table I).

In summing up the above results we find that the pieces infected with the anthrax (spores), when transferred to bouillon and agar, gave no evidence of containing living germs at the end of a week's time in the cases where the formaldehyde gas had free or comparatively easy access to the infected pieces, that is, where

of typhoid that might be present, but failed to indicate any trace of this organism.

Some of the bouillon tubes were contaminated by a large moving bacillus, with rounded ends. In every case where this occurred—in five tubes, including the typhoid above mentioned—a considerable amount of the bouillon was injected into mice. The bacillus (bacillus subtilis?) proved non-pathogenic for these animals, and they were all living, without sign of infection, two weeks later.

It is of interest to note that a culture made from the dust in one corner of the room, immediately after opening the room, showed profuse growth of the same small spore-forming bacillus, apparently, as that found

TABLE I.

Bacteria.	Result of Control Cultures.	Position of the Infected Pieces.	Result after 25 Hours' Exposure to Formaldehyde. Cultures in Bouillon and on Agar.
Anthrax (spores)			
a'	Profuse growth in 24 hours.	Openly exposed in the above-mentioned corner.	Bouillon: No growth in 7 days.
b'	" "	Between two layers of cloth on a table.	Bouillon: No growth in 7 days.
c'	" "	Between two mattresses.	Agar: No growth in 7 days.
			Bouillon: Growth of typical bacilli in 48 hours.
			Agar: Growth of typical bacilli in 48 hours.
Diphtheria			
a'	" "	Openly exposed in the above-mentioned corner.	Bouillon: No growth in 7 days.
b'	" "	Between two layers of cloth on a table.	Agar: No growth in 7 days.
c'	" "	Between two mattresses.	Bouillon: No growth in 7 days.
			Agar: No growth in 7 days.
Typhoid			
a'	" "	Openly exposed in the above-mentioned corner.	Bouillon: No growth in 7 days.
b'	" "	Between two layers of cloth on a table.	Agar: No growth in 7 days.
c'	" "	Between two mattresses.	Bouillon: No growth in 7 days.
			Agar: No growth in 7 days.
Staphylococcus (albus)			
a'	" "	Between two layers of cloth on the floor.	Bouillon: No growth in 7 days.
b'	" "	Between two mattresses.	Agar: No growth in 7 days.
			Bouillon: No growth in 7 days.
			Agar: No growth in 7 days.

the pieces lay openly exposed or between two layers of cloth (anthrax a' and b').

At the end of a week's time about a cubic centimetre of the bouillon in each of these cases was injected into the peritoneal cavity of white mice. The pieces on agar were washed in bouillon, and this bouillon was also injected into mice in a like manner. These mice showed absolutely no sign of infection at any time, and were, without exception, living two weeks later. It would appear, therefore, as if there could have been on these pieces not only no virulent organisms, but also no bacilli or spores capable of germination.

In the case of anthrax c', on the other hand, profuse growths of typical anthrax bacilli were present at the end of forty-eight hours both in bouillon and on agar. As will be noticed, these were the pieces that had lain between mattresses.

In the case of diphtheria no trace of these bacilli could be discovered after ten days in any of the tubes. The same was also the case with typhoid and staphylococci. The tube containing typhoid c' was contaminated and this fact may possibly have affected the further growth of the typhoid bacillus. This was so only in the bouillon; the agar tube remained absolutely sterile.

From the bouillon several agar and gelatine "plate cultures" were made in the effort to isolate any bacilli

in the first experiment. It produced no effect when injected into white mice; for these animals, therefore, non-pathogenic.

(To be continued.)

MEDICAL TESTIMONY ON INSANITY AS AN EXCUSE FOR CRIME; REPORT OF A CASE.

BY JAY PERKINS, M.D., PROVIDENCE, R. I.

MR. PRESIDENT AND GENTLEMEN OF THE MASSACHUSETTS MEDICO-LEGAL SOCIETY:—It is, perhaps, presumption on my part to bring before you the subject which I have to-day, for I fully realize that I am not an alienist and am very poorly equipped to discuss questions relating to insanity. I come before you simply as a student of legal medicine, but in legal medicine, as I am by experience fast learning, the question of sanity and insanity is becoming of more and more importance, and unless we who are doing general medico-legal work are willing to bow submissively to the expert alienist, we must consider the subject by ourselves, and it is in this attitude that I present this case and discussion before you to-day.

Much has been written and said as to the medical-expert witness, and I will be brief in giving my opinion

¹ Read before the Massachusetts Medico-Legal Society, Oct. 4, 1899

of him and his attitude towards the case. In the last quarter of a century the science of medicine has in many ways made a phenomenal advance, and things which twenty-five years ago would have been looked upon as wholly fanciful are to-day undisputed and form part of the basis of all our work. This is true of many of the theories of the past; they are now facts; but this is not true of all of the theories of the past, many of which are now never mentioned. In medical discussions in society meetings, it is well to give all new and advanced ideas, as there they will be discussed by medical men and their truth or falsity can be properly estimated; but in courts of law, where often the only hope for the lawyer for the defence is to make out a disagreement of medical experts, we should be more conservative. Theories or suspicions, especially when advanced by a man of reputation as facts, may, and often do, give to a jury sufficient cause for a reasonable doubt, and thus do much harm to the cause of justice and destroy confidence in medical witnesses.

The aid of law makers has been invoked to bring the medical witness into better standing by giving the court the power to appoint experts. We have a very good law of this kind in Rhode Island, but you cannot make a set of experts into a jury, as you would be doing if you made their decisions final. They must be cross-examined and this cross-examination will bring out differences unless they are conservative and hold only to that which is well known. Then, too, you cannot prevent the lawyer from putting on independent medical witnesses. So this matter cannot be fully regulated by law any more than you can reform a drunkard by law. Laws may help, but the real reform must come from the physicians themselves, and the medical witness should in no sense be a partisan or advocate.

In the trial which I am about to report the prosecution had three, and the defence five, physicians, for the most part well-known and eminent men in the profession, who were advising the attorneys as to what questions to ask. As to the propriety of this, I am in doubt. How far does our duty to the case go in this respect and where does our professional honor demand that we desist? Especially with us as medical examiners: what is our proper attitude to the prosecution?

There is no class of cases in which all that has been said is truer than where there is the question of sanity. Psychology is an extremely complex science, and when one of Massachusetts' leading psychologists, whose writings are frequently quoted, goes before the Legislature and prevents the passage of a law which limits the substitution of ignorance and superstition for knowledge and science, and does it through reasoning from his psychological tenets, are not we, who are trying to do scientific work, justified in asking for some good proof and evidence of these tenets and the deductions therefrom, instead of blindly accepting them?

On the night of February 12, 1899, I was called, in my capacity as medical examiner, to the house of Mr. Amos D. Palmer, in Cranston, R. I. The house is just beyond the city line, but the examiner for that district could not be found. I arrived at the house at 11.30 p. m., and then learned that Mr. Palmer and his wife had been celebrating the eighth anniversary of their marriage on that day. Four guests, two ladies and two gentlemen, had been present. At about five o'clock the gentlemen went to the billiard-room, where they remained until 8 p. m., when they went down stairs, and soon after the guests went home.

The history of the case for the next few hours I give as I learned it that night and from notes taken at the time the statements were made to me by the servants, and not just as it was brought out at the trial, as I believe the former to be the more accurate.

After the guests were gone, Mr. Palmer went down into the basement, as he said, to fix the furnace; when he came up he and Mrs. Palmer had a light lunch, during which they had a quarrel concerning his going down to fix the furnace, Mrs. Palmer claiming that what he went down for was to get some liquor, and that he should let John take care of the furnace. The cook told me that he was evidently under the influence of liquor at the time they had the lunch. (At the time of the trial the cook could not remember of any such condition.)

Mr. and Mrs. Palmer went upstairs about nine o'clock. At 9.15 the two servants, Mary Farrell, the cook, and Margaret Sullivan, the second girl, were in the room over Mr. Palmer's and heard sounds like "knocking," and heard Mrs. Palmer scream three times. The cook went downstairs to the first floor, and walking through the rooms of that floor heard Mr. Palmer talking, but did not know anything that he was saying. She went back to her room again, and in about ten minutes Mr. Palmer called to her; "Mary," and upon her answering, said, "Did you hear that?" She asked, "What was it?" and he said, "I fear I have killed her." When she found that Mrs. Palmer was dead, she said, "Oh, Mr. Palmer, what have you done?" He replied, "She tried to kill me first," and then said, "Oh, what have I done; what have I done?" Mrs. Palmer was then lying with her head on a hassock. Both Mr. and Mrs. Palmer were dressed in night clothes and blanket wraps.

The cook then called the coachman, John Devine. When he reached Mr. Palmer's room, Palmer was naked, having taken off his night-dress and was apparently preparing to dress himself. At the time there was nothing said as to any frenzied condition, though the counsel tried to draw this out at the time of the trial. He did say, however, that Palmer went to a drawer and took out a revolver and wanted to load it in order to kill himself, but was restrained by his coachman. There were two revolvers given to me after my arrival at the house; one contained empty shells, five of 32 calibre, and presented evidence of having been recently fired; the other was empty and had not been recently fired, and, as was afterwards shown, it was not in good working order. He kept these in different places, and had gotten the loaded one first and to use in shooting his wife.

Palmer then telephoned to his physician, Dr. Carr, and told him that he had shot his wife. Dr. Carr was not able to go, and asked Dr. George D. Hersey to go in his place. Dr. Hersey went out, arriving there at a little before eleven, and about two hours after the shooting. Palmer was then fully dressed and met him on the landing of the stairs. After Dr. Hersey found that Mrs. Palmer was dead he told Palmer so, and he then became somewhat excited and again said he wanted to kill himself. He repeatedly stated his desire to commit suicide.

I arrived at the house at about 11.30, and saw Palmer a moment then, as he was sitting quietly on a sofa with Dr. Hersey. I went into the room where his wife's body lay and made an examination of it. Dr. Hersey came in with me, but in a few moments

we heard scuffling, and the coachman said Palmer was trying to kill himself by taking some poison. Dr. Hersey then stayed in the room with him.

After examining the body, I telephoned to the chief of police and went in and talked to Mr. Palmer and was then with him much of the time for a couple of hours. His breath smelled strongly of liquor, and upon questioning him as to what had occurred he claimed that he could remember nothing from the time he and his guests were in the billiard room until after Dr. Hersey arrived. However, he certainly seemed to realize what he had done and repeatedly exclaimed, "Why did I do it; why did I do it? I couldn't have done it." At no time, however, did he seem to doubt that he had killed his wife. When we stopped talking, he would walk across the floor with his head slightly bowed and an anxious expression upon his face and then say, "Why did I do it; why did I do it?" Upon questioning him as to why he did it, he said that all that he could lay it to was the whiskey and beer that he had drunk; that he had had four drinks of Mount Vernon whiskey and several bottles of beer; he ought to have known better than to have drunk that whiskey, "as Mount Vernon whiskey always did him up." He told me that he drank the whiskey when he went down to fix the furnace, and drank the beer in the billiard-room. He said that he and his wife lived happily together; that "they had their little quarrels as everybody does," but that they made up and were happy again, and he could remember of no quarrel this night. All of the time he talked rationally, but would have, apparently, great remorse when we stopped talking. I saw nothing, however, to indicate any frenzied condition and certainly no stupor or mental abstraction. It was impossible to get his mind off from what he had done. If we talked about anything else, the moment we stopped talking his mind went back at once to the shooting. He said that he was a murderer; that he would give himself up to the police. He said this before, as well as after my arrival.

When the police arrived and rang the bell, before he saw them he said, "There comes the police; it will be a charge of murder."

At about eleven o'clock, Dr. Hersey gave him 30 grains of bromide of soda and at twelve o'clock another 30 grains. He became somewhat quieter and calmer after one o'clock; though, as previously stated, there was nothing approaching a frenzied condition—certainly not after my arrival.

Between four and five o'clock, when in the presence of the officers, he vomited, the vomitus smelling strongly of liquor.

At about the time I notified the police of the murder, Dr. Hersey suggested to Mr. Palmer that it would be well perhaps for him to notify his lawyer of what had taken place. Mr. Palmer told him his lawyer's name and Dr. Hersey telephoned.

It was an intensely stormy night and the officers stayed at the house all night, taking Mr. Palmer to the court the next morning. He had slept none, and ate no breakfast. He was somewhat nervous at the court, and at the suggestion of his lawyer pleaded "Not guilty," but on leaving the court house for the prison, he said, "My God, I am a murderer."

The next morning I turned the case over to the medical examiner of that district, Dr. A. H. Longfellow, and he made an autopsy, at which I was present.

There were six bullet wounds, five of entrance and one of exit. One bullet entered the left arm just above the wrist on the back side and there was a corresponding wound of exit higher up on the inside of the arm, and the bullet was found imbedded in the sleeve of the night-dress. There was a bullet wound at the lower border of the left nipple; another three-quarters of an inch lower and a little to the outside; another three inches diagonally below and outside the nipple, and another three inches above the nipple. One bullet went straight in, passing through the heart and the root of the right lung. The others had a downward tendency, some more, some less; but all passed through some part of the stomach. One bullet was imbedded in the left loin. There were corresponding openings, about which the loose wool was much burned, in her blanket wrap.

By subsequent examinations, I found that the revolver was held at a distance of not less than five and not more than ten inches from the blanket wrap, and from the relations of the holes in the burned areas I determined that if the revolver was held as is usual, one of the shots was fired with body erect and the others as it was falling. This was determined by the holes being on the trigger side of the burn.

There was no disarrangement of the furniture or anything about the rooms which would indicate any struggle. Dr. Hersey and I remained at the house all night, and neither of us had any doubt but that Mr. Palmer's condition was due to alcoholism and remorse.

Now let us look briefly at Mr. Palmer's earlier life so far as it is known. Most of those associated with him, and all associated with him intimately, are dead. His father died when he was about eighteen months of age, and from that time until he was a man grown he was almost exclusively with his mother or nurse until the death of the former in 1890. Their family physician during his childhood and his nurse are also dead, so that his early history is not very definite. His mother never sent him to school and never allowed him out of her sight, or that of the nurse, during his childhood. He never associated to any extent with any other boys, as they did not enjoy his company enough to come to him, and his mother would not let him go from home. There is no doubt but that there was some good reason for this. The defense claimed that the reason was, attacks of epilepsy. The evidence on this point was not over strong, but some light attacks of epilepsy were fairly established, the best evidence being that of a barber. The evidence does show that his mind was not fully developed and there is other evidence which was not introduced into court which shows a marked mental deficiency, but it seems to me that there is still a chance to question whether the attacks introduced were really epileptic or whether they were merely manifestations of an undeveloped mind. The evidence was skilfully handled with a view of showing that he had epileptic seizures. All of the witnesses for the prosecution, excepting those on the case officially, had been skilfully brought into an extremely sympathetic attitude to the prisoner and were practically witnesses for the defence.

When sixteen years of age he was in Florida with his mother and there began to drink liquors, which habit he kept up to the present time. About two years later, after a summer at Narragansett Pier, he had an attack of delirium tremens, and drank very hard until

within about three years of the homicide, during which latter interval he drank less, but still considerably.

In 1891 he married without his mother's knowledge, a divorced woman whom he had known intimately for several years. It was at about this time that his mother died and he now passed from his mother's influence to that of his wife. He loved her passionately, and, as I think is usual when the higher faculties of the mind are dwarfed, the emotions and animal passions stood out more strongly. As had the mother, so now the wife possessed the stronger mind, and when he was not under the influence of liquor she ruled his weaker mind easily. He was, however, at times jealous of her and apparently not without cause. They always had quarrels, and about five years ago he had shot at her, the bullet striking the bed. One of the servants reluctantly acknowledged she had heard him threaten "to throw her down stairs and break her neck."

In recent years the only thing that they could bring up to show a tendency to epilepsy was his falling off from his wheel one day while out bicycling with his wife, and at another time while riding in a carriage he had a severe headache, becoming partially unconscious, but this evidence was very shaky.

When Mr. Palmer was on the stand he claimed that while in jail he woke up several mornings with his tongue sore and swollen and bloody foam in his mouth, which was, however, never brought to the attention of the physician, and in fact, his lawyers would not allow him to see the physician of the State institutions whom the State desired to have examine him.

While on the stand Palmer answered the questions more intelligently than several of the other witnesses and was attentive throughout the trial. He claimed that he could not remember when the guests went home the night of the shooting; he could remember bringing the beer up to the billiard-room but could not remember drinking any of it (though that night he remembered it distinctly), and the next thing he could remember was, "I remember bending over my wife, who lay on the floor in my bedroom and remembering lifting her head on the hassock and exclaiming, 'My God, she is not dead!'" This all faded out like a dream, and the next thing he remembered was being in the sitting-room and two gentlemen coming in, "one of whom must have been a doctor, because he gave me something bitter to take," and after a long time two other men came in. He also remembered his dog coming in and lapping his hands and face, and later of having a cup of coffee which made him sick. He claimed that the first that he realized that anything was wrong was "when the officers were there and one of them kept dogging him around"; then he recalled going to court and to jail; all the rest he said was a blank, yet he remembered that his wife had on a light blanket wrapper, as brought out on the cross-examination, though he claimed in answering his lawyer's questions that he could not remember his wife's face.

In relation to attacks of epilepsy, he testified with a good deal of minuteness to attacks which he had had. The first he could remember were when he was eleven or twelve years of age; they came on with an "all-gone feeling and a queer feeling in the head," and he lost consciousness. After coming out of the spells he would be in a kind of stupor. He could remember the time he fell from his bicycle; he was not feeling well in the morning, ate little breakfast, and started on the ride soon after breakfast. He did not at any

time lose consciousness, but felt dizzy and fell from his wheel, but with his wife's assistance he got out to one side of the road and rested for about half an hour, after which they went home slowly, he feeling "used up."

He remembered having delirium tremens and getting so drunk he could not walk steadily on a number of occasions; that sometimes the boys put him to bed. One time after drinking champagne he was taken to the City Hotel and put to bed, not knowing where he was when he awoke the next morning, but this knowledge came to him gradually.

The physician who attended him in recent years knew nothing of any epileptic attacks; he had attended him after some of his drinking spells and told him as a means of frightening him, that if he did not stop drinking they might have to put him in an asylum.

As before stated, all of the witnesses, even those for the prosecution, had been brought to a very marked degree of sympathy for the prisoner, and this was so evident in the change in the testimony of those with whom I talked the night of the shooting, that I could not place much reliance on what most of the witnesses had to say as to details. One of the witnesses testified that he saw him have spells when a boy and that he frothed at the mouth. Under cross-examination, however, he acknowledged that he had not thought of the frothing until the attorney for the defence had questioned him on that point at some time before the trial and fifteen to twenty years after the occurrence. This sympathy for the prisoner extended to the relatives of the dead woman, one of whom, a sister, kissed Palmer one day in the courtroom. The servants were all kept at the house on good pay until after the trial, and the reputation of his wife gave him much sympathy from the public in general. The most of the evidence put in by the defence was of little real value. There was one witness, a barber, however, who testified that he had seen Palmer in attacks of epilepsy while getting his hair cut. On one of these occasions his eyes bulged out, he became purple in the face, grew rigid and cried out, "Oh, oh, oh!" His mother then took him, and the hair-cutting was completed two or three days later. The barber then testified that Palmer would sometimes take up some of the hair that had been cut off and say, "Isn't that funny hair; look at it jump; it is alive"; and sometimes would complain of the furniture moving about the room. Also during some of the attacks which Palmer had while his hair was being cut, and in which he lost consciousness, he was sitting in a straight-back chair and yet he never fell out of the chair.

I believe that what I have said will give you a fair idea of the case and the character and substance of the testimony. The defence had not put in all of its testimony, when it was agreed that the experts on the case should confer as to the prisoner's sanity or insanity. This they did, and at the next session of the court, the following statement was presented:

WILLARD B. TANNER, Esq., Attorney-General:

Dear Sir,—We, the undersigned, having examined Amos D. Palmer as to his mental condition, with reference to the indictment against him for the killing of his wife on the night of February 12, 1899, hereby report that we jointly agree in the opinion that he is the subject of mental disease, and that the act was committed under the influence of that disease; and, in our opinion, is therefore not responsible for his homicidal act and that proper measures

should be taken to protect him and the public from further consequences of his mental disease. Signed: P. M. Wise, C. P. Bancroft, G. F. Keene (experts for the State) G. F. Jelly, Edward Coles, Walter Channing, W. H. Palmer and F. H. Peckham, Jr. (experts for the defence).

The prosecution and the defence then both asked that the jury be instructed to bring in a verdict, "Not guilty by reason of insanity." The court, however, stated that it could not direct the verdict, and suggested that an expert be put on the stand from each side that the jury might bring in a verdict from evidence.

All of the experts were placed upon the stand; their evidence was in conformity with the statement made in writing by all, excepting that the defence laid stress upon the epileptic element, Dr. Channing going so far as to say that "he was probably in an epileptic condition at the time of the homicide."

There was evidence presented to the experts showing the weak mind, which was not of a character to be presented in open court, but I am informed there was nothing of any weight as to epilepsy; all agreed that the nature of his mental affliction was imbecility, and in this I certainly agree; and I approve fully the finding of the jury, "Not guilty by reason of insanity."

Dr. Bancroft testified, in part, that Palmer possessed a defective will power and at the time he committed the act he was unconscious. What alcohol he took may have aggravated this condition, but under it all lay the fact of his imperfect mental condition; that he was a congenital imbecile and that the disease was incurable and progressive. It seems to me that this covers the case and is all that is justified by the evidence when carefully sifted and considered.

In all of our work I know that it is hard not to let our judgment be swayed by our sympathies and our sympathies go to those whom we are trying to help, and though it is not always easy to form or express just judgments, if there is any one in the world who needs to be just and fair, it is the medical expert, yet we all know to what depths he has fallen in many cases in the opinion of the courts and his brother physicians and the people in general. Much of this feeling is certainly unjust, but not all of it. It is impossible for the courts or the laity to keep abreast of the advance in medical knowledge. Law is built upon precedent; medicine is always reaching out towards the unknown, and at each advance tries to make use of all it can reach, and each day sets new standards, which unfortunately do not always bear up under the weight of new structures. They have not been properly tested, and when used, break under the burdens they should bear if sound, or perhaps break because they are not made for the burdens which are placed upon them. It seems to me that this is the condition of expert testimony on "insanity as an excuse for crime" to-day. The alienist has given us much new material in his line, but is he not sometimes too much flushed with his successes and not calm enough in his opinion? There are gynecologists who can find but few healthy ovaries, and but few ovaries are removed post mortem which are absolutely normal, yet every woman should not have ovariectomy performed because she has a pain in the side or back. There are a great many persons who do not come up to the physical standard set by Dr. Sargent as the normal, and yet they are able to do good work, though some will not work. There are but few minds which upon careful examination are at the standard of perfection, yet all

these are not insane even if they do what some people consider insane things. In judging of a person in a doubtful case many things must be considered, such as his education, environment, habits, efforts at self-control, and in fact his whole life.

Insanity is now the defence resorted to in all cases where there is no other, and an able counsel can do much to establish insanity in many cases where there is no insanity, the enthusiastic and sympathetic expert helping him. In the case I have related the experts were particularly eminent and honest. Those from Massachusetts you all know better than I, and I know them well by reputation and know nothing against them in any way, and for the very reason of my opinion of them, I have studied this case and their evidence and acts, yet I cannot come to agree with them in all they have said. Was this man Palmer in an epileptic condition at the time of the homicide? I will not review the case farther than to recall a few features. He had been drinking a strong liquor which he said was "always too much for him." He knew enough to know where to go for the loaded revolver first, and later for the other. Ten minutes after he had done the shooting, he told the servants that he had killed his wife, but that she had tried to kill him first. Have you known of an epileptic murderer pleading self-defence? Then he wanted to commit suicide. Do epileptics commit suicide while still under the influence of the seizure? He and his wife had a quarrel about his drinking but a short time before the shooting. He had shot at her before and had threatened her. There was no stupor, no absolute forgetfulness. He remembered bringing beer into the billiard-room, he remembered putting his wife's head upon the hassock after killing her, he remembered the doctor and other men coming in, he remembered his dog, the coffee, leaving the house, and yet he could not remember the most of what had taken place that night. At no time after the shooting could his mind be kept from it, and if drawn away, would go back almost at once. He could talk rationally during most of the time he claimed everything was a blank. His breath smelled strongly of liquor and he vomited liquor. He had a mind which was congenitally weak. Now, gentlemen, granting even that he had epileptic attacks during childhood, do these things indicate epileptic seizures, or an epileptic condition at the time of the crime, or was he in a subconscious condition due to the action of alcohol on the weak mind?

It is true that a person may have attacks of epilepsy only few in number and very slight, and then be free from it for a long time; then in an epileptic condition commit murder of which he is wholly unconscious and cannot believe. Probably men have been hanged for murder while protesting their innocence though guilty, because the murder was done under the epileptic influence, but is this a sufficient reason for saying that a murder was done during an epileptic condition because the man has had an epileptic seizure at some time during his life? There is no reason why an epileptic may not get under the influence of drink and do as others have done who never had an epileptic seizure. I know that cases are reported where a man has had but one or two epileptic seizures during his life and has committed murder during one of these, but is it safe to draw marked inferences from this and to be ready to support the belief of epileptic homicide in all cases where the person has had an epileptic seizure earlier

in life, unless all the indications point that way? It is easier for a man who has shown no signs of insanity for some years to get out of an asylum than for a murderer to get out of prison. When a man is committed to an asylum he is committed until cured, and when his sanity is proved he must be released, and, in case of murder, cannot be retried. If a man is committed to prison, there are provisions, at least in Rhode Island, by which if insane he can be transferred to the insane asylum. It is not, however, the effect in an individual case which I would oppose, but the principle of being too radical in expressing opinions as to insanity, because of the effect thus produced upon the reputation of the medical witnesses in the opinion of the court, bar and jury, and the cause of justice as a whole.

In this case time will probably show whether Palmer is an epileptic or not. The State wisely intervened and said that he must remain in the State and he is now in Butler Hospital. The records of that institution as yet show no epileptiform attacks, and I have had as a patient a man who as an attendant had the care of him for a time, and who tells me that the only thing he noticed as different from other men was a silly laugh; this laugh was used at the trial as an evidence of an unsound mind.

As a result of imperfect action of cortical areas, we can readily conceive that unrestrained reflex psychical activity may take the place of intelligent thought, that normal waking consciousness and memory may both be absent, and do we not see just this kind of automatism in somnambulism, in the delirium of fevers, in the peculiar mental state attendant on poisoning by cannabis indica, alcohol, and occasionally profound nervous shock? In this case I believe that the loss of consciousness was due to alcoholism and not to epilepsy.

Clevenger² says: "It is a common plea of inebriates who have been arrested for all sorts of criminal acts, that they have no recollection of what they have done, and it is still more common for an inebriate to recover from a spell and to experience great mortification over what he has done, with no recollection of his disgraceful performance. The resemblance of such phenomena to epileptic phases is very close, and it is to be remembered that alcoholism may be attended with epilepsy, including petit mal and convulsions, and in the relation of cause and effect. Sometimes a hazy recollection of drunken acts is preserved afterwards, or here and there a more or less distinct memory of things spots the debauch."

Dr. C. P. Bancroft has reported four cases of "sub-consciousness" where there was no reason to suspect epilepsy, and others are on record.

These facts, it seems to me, ought to caution us to be conservative in our opinions before the courts, and I believe that thereby the standing of the medical witness would be raised.

The following is a stenographer's copy of the testimony of the experts as given on the witness-stand:

Dr. George F. Jelly:

I have seen Amos D. Palmer at the jail and at the court. I have made six examinations of Mr. Palmer at the jail, the first time being thirteen days after the homicide, on the 25th day of February, this year. I have no doubt, upon the examination which I made at the jail, from what I have seen and heard in court of him and his testimony, from the

evidence that has been given here in court, and from frequent visits to the prisoner since he has been confined in this house, I have no question that Amos D. Palmer is a man of unsound mind, that he was of unsound mind and beyond his control in mental disease at the time of the homicide; that he is wholly oblivious as to this crime by reason of his mental disease; that he is in that condition where he needs care and restraint for the treatment of his mental disease. I have no doubt also that he is absolutely honest in everything he has told you. I do not think he is capable, by reason of defective mental process, of conceiving or concocting the plan. I do not think he could combine circumstances which would enable him to make a plan of defence. I think he is telling the truth when he says it is out of his mind, and that he has no memory of the event or of his wife's features; it is absolutely true, so far as I can judge. I think he was very fond of his wife. Frequently, as a child, he has shed tears in speaking of her, and I have no doubt if to-day he could recall the crime he would not attempt to conceal it. And for that reason, I believe he should be treated as a defective, diseased man, put under care, and for himself and for the community he should be treated with the hope of doing him good and protecting him. I do not think that Mr. Palmer will ever be a strong man mentally. I do not think he has ever been. I think, under good care and treatment, he would learn better control than he has now. I do not think he will ever be a strong mind. I am afraid the disease is progressive.

Dr. Peter M. Wise:

I consider that Amos D. Palmer at the time of the homicide was unconscious of the act, that his will was impaired by reason of his mental disease, and that he was wholly irresponsible for the act. I have had well-attested facts presented to me that have not been already presented in evidence. In respect to the prisoner's mental condition, I consider the disease an incurable disease, and one very likely to progress.

Dr. Charles P. Bancroft:

I think Amos D. Palmer was not responsible for his act at the time he committed it. It is my opinion that he was in a state of unconsciousness, and that he possessed defective will power, imperfect control, and that he should be in no wise held accountable for his act at that time. I think what alcohol he took may very likely have had the effect of aggravating his already weakened mental condition, but underneath all is the fact of his imperfect mental condition, which, in my mind, dates from birth. I should say that he was a congenital imbecile. I am sorry to say that I think the disease is incurable and progressive.

Dr. George F. Keene:

In my opinion, on the 12th of February last Amos D. Palmer was irresponsible for his actions at the time by reason of mental disease. He is incurable, in my opinion; the disease is progressive.

Dr. Edward Cowles:

I have visited him five times previous to the trial, and have heard the testimony that has been given. In my opinion, he was not responsible, not in a condition of responsibility, at the time of the homicidal act. He was under the influence of a disease with which he has been affected from his birth, a defective physical and mental condition, constituting a form of disease. In addition to that, in my opinion, he has had the disease of epilepsy, which has contributed by its effects to the mental incapacity. I consider that, in consequence of that disease, there are times when under its influence he is not responsible and has not control of his conduct; that he is not responsible for what he does. I believe that the events of the night of February 12th are to him a blank, and so far as I have been able to ascertain them, and from all the evidence which we have been able to learn, that is consistent with an attack of that disease at that time, and that

he was not then conscious of the nature of his act, or at all responsible for it. In my opinion, he should be placed under medical care, both for his own sake and for the protection of the public from further possible consequences of his condition; for his own sake, that he may receive the benefit of treatment it is possible that he may receive. I believe the disease is progressive and incurable.

Dr. Walter Channing :

I think at the time of the commission of the homicide that Amos D. Palmer was irresponsible. I think that from birth he has been of feeble mental organization and, as a result of a very careful physical examination that I have made of him, as well as mental examination, that he would now be classified as a high-grade imbecile. I think also that he has been an epileptic, and that, probably, on the night of the homicide he was in an epileptic condition. I think that as a result of this general condition that on the night of the homicide he was the subject of mental disease and that the act was the result of the mental disease and that he was on that night irresponsible. I think the disease will be progressive and I see no chance of cure.

Dr. Fenner H. Peckham :

I consider that at the time of the homicide, February 12, 1899, that Amos D. Palmer was in an unconscious condition as a result of mental disease, combined with an epileptic attack, and was therefore not responsible for his act which he committed. I do not think he will recover from this disease, and I think it is a progressive disease.

Dr. William H. Palmer :

My conclusions are that Amos D. Palmer, when he fired those shots that killed his wife, did not know what he was doing; he was unconscious of what he was doing; he had no control of his actions, and that all these conditions were the outcome of the disease from which he was at the time suffering and from which he has been suffering from his earliest youth. In my opinion, that disease was of the character of epilepsy, for I know of no other disease that would so arrest and retard mental development like that. I think he was therefore wholly irresponsible for his act on the night when he fired those shots. The disease will progress; perhaps in the best years of his life the advance would not be so rapid, but it will be onward, at times slow, at other times fast.

FOOD POISONING AND METALLIC IRRITANTS.¹

BY CHARLES HARRINGTON, M.D., BOSTON.

In the discussion which followed the reading of a report of a case of supposed ptomaine poisoning at the last previous meeting of this Society, reference was made to the great difficulty often experienced in determining the correct diagnosis, owing to the close resemblance in the symptoms produced by ptomaines and by arsenic, and in response to a question bearing on that point the statement was made that in a doubtful case recovery pointed to ptomaines and a fatal termination to arsenic as the cause. As this was allowed to pass without comment or contradiction, whether it was or was not intended to be taken seriously, it seems not out of place to call attention to certain points of difference which may be observed even in those cases in which the general train of symptoms points equally well either way. But first of all, with regard to the diagnostic point above mentioned it must be said that fortunately not all cases of arsenic poisoning

terminate fatally, even in the absence of treatment, and unfortunately not all cases of poisoning by ptomaines recover under most careful management.

Before passing on to a consideration of the effects produced by arsenic and other metallic irritants and by food poisons, their resemblances and differences, attention must be called to certain misapprehensions concerning ptomaines and to a common laxity of the use of the term. Ptomaines are organic bases formed by bacterial action on nitrogenous organic matter of both animal and vegetable origin. They are sometimes designated as animal alkaloids, a term which in view of their possible vegetable origin is manifestly incorrect. It is a common belief that they are all poisonous in their nature, but while some of them are decidedly so, the majority of those thus far isolated are quite incapable of exerting any harmful influence. Different kinds of bacteria form different kinds of ptomaines and the same organism may produce different kinds according to the nature of the substance and according to the conditions, such as temperature, access of air and other circumstances under which it works. In contact with certain kinds of material it may produce no ptomaines, or harmless, or very poisonous ones; and acting upon one and the same material under differing conditions it may be capable of evolving a variety of compounds equally different in action. Again, the same material may yield under like conditions poisonous or non-poisonous ptomaines, or none at all, to different varieties of bacteria.

We have fallen into a common habit of ascribing to ptomaines the effects of all forms of organic poisons due to decomposition of food materials, regardless of the fact that other substances than organic bases are formed by bacterial activity. To these substances various names have been given, and at the present time there is considerable difference of opinion as to their applicability. In view of the fact that this confusion exists, and that in any case of poisoning of this sort the nature of the toxic substance cannot be known until it has been demonstrated by careful analysis, I would suggest that it would be preferable to adopt a general term suggesting food poison rather than a specific one having reference to the particular kind of product, the presence of which is suspected but not demonstrated.

In all cases of food poisoning the effects produced are due either to substances formed by bacterial agency in the food itself before ingestion, or to toxic substances developed within the body after infection by the contaminating bacteria. They vary widely in character, sometimes closely resembling those caused by metallic irritants, sometimes suggesting the presence of narcotics, and again being mistaken for infectious disease of common occurrence. For the purpose of this paper only those cases in which the symptoms resemble those of poisoning by metallic irritants will be considered. The individual members of the latter class cause practically the same group of symptoms, but with the exception of arsenic they cause such peculiar metallic tastes that their effects are not very likely to be mistaken for those of bacterial products. Therefore, the discussion may most properly be further limited to the resemblances and differences observable in poisoning by this substance and by foods.

From the character of the onset, no assistance in making a diagnosis can be expected, because of its exceeding variability in both classes of cases. In arse-

¹ Read before the Massachusetts Medico-Legal Society, October 4, 1899.