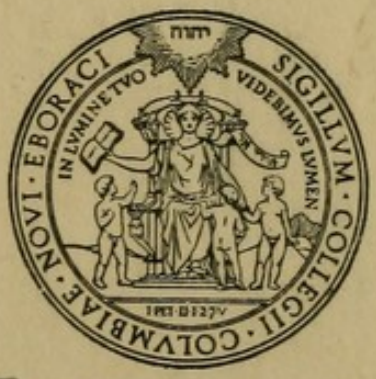
Suggestions to the medical witness / by J. S. Wight.



SUGGESTIONS TO THE MEDICAL WITNESS

BY

J. S. WIGHT, M.D.

PROFESSOR OF OPERATIVE AND CLINICAL SURGERY AT THE LONG ISLAND COLLEGE HOSPITAL, BROOKLYN, N. Y.

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Inscribed

TO THE MEMBERS OF THE

MEDICAL AND LEGAL PROFESSIONS,

WITH THE HOPE THAT THEY MAY BE INDUCED TO

COOPERATE IN THE SEARCH FOR EVIDENCE,

THE DETECTION OF FALSEHOOD, THE

DISCOVERY OF TRUTH, AND

THE PROMOTION OF

JUSTICE.

Hear the other side of the question; and be silent, that you may hear: for the truth may be found between the two sides.

PREFACE.

When the doctor first begins to testify in court as a medical witness, he has nothing to guide him. He is in a new and strange place, and has assumed new duties. If some one would kindly tell him what to do, and how to do it, a great favor would be conferred, and a lasting debt of gratitude would be incurred. To be ground between the millstones of the advocate and the adversary is not agreeable, not pleasant, not desirable. Yet sooner or later the doctor must come to this, and he generally comes unprepared and defenseless. If he had only been taught the princi-

ples of giving medical evidence, he would be able to do himself credit, and could shake off any fear or dread he might have of the advocate or the adversary. The primary wants of the medical witness are sometimes urgent, and it is with the hope of meeting them in some degree that the suggestions in this little book are put forth. The Suggestions to the Medical Witness contain a discussion of the principles of testifying before a jury, as well as some of the unwritten rules which relate to the relevancy of evidence. It is the object of the author to aid and help those who need and desire it.

J. S. WIGHT, M.D.

No. 30 SCHERMERHORN STREET,
BROOKLYN, N. Y.

SUGGESTIONS TO THE MEDICAL WITNESS.

1. It is the duty of the doctor, while on the witness stand, to state medical facts and give professional opinions. He acts in a special capacity: he testifies in regard to facts which are unknown to other men. When he speaks the language of medicine he is like a man in a strange country, where no one can tell what he says and what he means. In order that he may be understood he must translate the language of medicine into that of every-day life. He stands before the Court as an interpreter, who explains special facts, and who draws reasona-

ble conclusions from these facts, and then gives professional opinions, which are received as evidence.

2. It is evident that the doctor has rights when he becomes a witness. Some of these rights are as follows: he has a right to tell the truth in a simple and plain manner; he has a right to refuse to disclose professional secrets; he has a right to be silent on anything that would incriminate himself; he has a right to civil and reasonable treatment from the counsel of both sides. The Court respects and protects the medical witness in the exercise of these rights. In fact, the Court is the counsel of the witness. Even the untruthful, prevaricating, and irresponsible witness has rights to be respected. The remedy is not in the invasion of his rights, but in the punishment of his offenses.

3. The duties of a medical witness differ

in some respects from those of a doctor. The doctor investigates his case alone; Court, jury, and counsel are absent. He conducts the direct as well as the cross-examination of his patient. There is no judge but his own conscience; there is no jury beyond his own educated faculties; there is no counsel besides his own judgment. He does not practice his profession in open court, to be seen and heard and known of all men. His professional cases, as it were, are tried with closed doors. His practice is like that of the star-chamber. To him the issues of life and death are solemnly committed, and there is no appellate court. The case is closed, in one way or another, and that is the end of it: the case cannot be reopened, and tried again.

4. It may happen that the doctor does not understand his rights and duties, as a medical witness. He may be honest, rightly

disposed, and well informed, and yet not have the qualifications of a good witness. In the hands of unscrupulous and prejudiced counsel he may be made to distort the truth and conceal the facts. He must realize that he is to tell the truth, that he is to relate the facts, without exaggeration and without deviation. And it seems to me that he may assert himself, as the champion of the truth, for such he indeed becomes, when he tells and reaffirms his story of the facts. If a medical witness adheres closely and firmly to the facts as he knows them, he cannot go far beyond his rights and duties in giving testimony. And if he reasons correctly on truthful evidence, his opinions will be sound and acceptable.

5. A medical witness may pretend to have knowledge that he does not possess. He may be ignorant of the essentials of his science and his art. He may suppose that

he can impose on learned judges, acute lawyers, and expert witnesses. But he will have to translate his professional phraseology into common words, such as are known to the jury, and in the end he will have the mask of his presumption removed. Such a witness deserves and merits the name of quack, for he is an ignorant pretender to knowledge that he does not possess. He may be handled by the cross-examiner without pity and without remorse. And it will be his own fault, if he leaves the witness stand, naked, wounded, and bleeding, after his unequal encounter with the dexterous knight-errant of the law.

6. It is important to remember that medical facts are, to some extent, matters of opinion. For the fact that there is an injury is reached through a process of reasoning from certain signs and symptoms. The signs, for instance, are facts of observation.

These facts may be seen, treasured in the memory, and then related. They are not injuries, they are signs of injury. The medical witness comes to a knowledge of these signs, and then thinks and reasons from them, and concludes with reasonable certainty that there is an injury. The injury is a fact if it exists, but its existence is only known on account of the reasoning of the expert. He does not reach the fact directly, and the existence of the injury is only a matter of opinion with him. But if he reaches this opinion upon good and sufficient evidence, it must indeed stand as a fact, and that fact must be one of evidence. So that we may say, in general, that the mature and scientific opinions of medical men stand for facts, and they are so regarded by courts and juries. Truly, there is not the least doubt as to the competency of the reason to discover truth; nor is the reason

in any way subordinate to the special senses in discerning facts. Indeed, I am not sure but that the special senses suffer from illusions and hallucinations more frequently than the reason suffers from delusions. In any case it will not be wise to subordinate the reason to the inferior faculties. In more cases than one have I seen the reason correct the errors of the special senses.

7. The doctor has knowledge which belongs to a class and is not the property of men in general. In giving testimony, he is an ordinary witness, or he may be an expert. If he is an ordinary medical witness, he testifies to the existence of facts of a professional nature, such as have come under his own observation, and as a doctor he is competent to give them in evidence. When he comes to testify, it is generally shown that he is a graduate from a medical college, and that he has been engaged in the

legal practice of his profession. If he is an expert, his testimony explains the nature and cause of disease, the pathology and results of injuries, and the meaning and import of medical facts. He is supposed to be especially competent to trace the clinical history of disease and injury, and to give an opinion upon the course each will run. The expert may express opinions on scientific questions, on a hypothetical statement of facts, and on a statement of admitted facts. And these opinions must come peculiarly within the scope of his scientific knowledge and his professional experiences and judgment as a medical man. As has been said, the medical man has knowledge which belongs to a class, and the medical expert has had special and unusual opportunities to acquire this knowledge, as well as practice the precepts that are derived from it.

8. A medical opinion, in order to be admitted as evidence, must not be vague, uncertain, and merely hypothetical; it must be eminently probable and reasonably certain, such as comes from a well-educated and reasonable mind, — a mind that is ever ready to receive the truth. The medical expert must be convinced that the opinion he has formed stands on a basis of proven facts, and that his reasoning has been strictly logical. Such an opinion goes beyond a mere impression; it becomes the conviction of a reasonable mind, and so expresses an underlying fact. And, after all, it is this underlying fact which is admitted as evidence. The expert tells us that in his opinion a certain fact exists, and this fact, expressed in his opinion, is admitted as evidence.

9. The ordinary medical witness may be summoned merely to testify to medical facts

that have come under his own observation: they are facts that he has seen. He may have much or little experience, he may have only ordinary skill and knowledge, or he may be an accomplished expert. As an ordinary witness, he simply testifies to the facts of the case. He says, for instance, I found such and such injuries in the body of the litigant who is plaintiff. He does not necessarily express any opinion as to the results of the injuries. If he does, then he testifies as an expert. He may be a competent witness as to medical facts, yet he may be deficient in the qualities that go to make up an expert. At the same time, his opinions may have some value. But an expert is supposed to have all the knowledge and skill which ordinarily belongs to his profession. He is legally assumed to be competent to observe medical facts and form opinions in regard to them. And he is some-

times called upon to apply his expert and professional skill, knowledge, and judgment in disclosing and explaining the meaning and import of facts stated by ordinary witnesses. In brief, expert evidence comes from a man who has had much experience in studying the science and in practicing the precepts of his profession. And he whose experience overshadows that of others is eminent as an expert. Here we may add that well-informed specialists are looked upon as experts in their department of special practice. As a matter of course this must be so. The courts, as well as the profession, view specialists in this light.

10. Yet in regard to medical and surgical facts, great practical difficulties may arise. Some facts are plain, and come within the reach of all; some are obscure, and can be explained only by those who have

the highest skill; some are so concealed that the most expert cannot find them out. Who can always make a correct diagnosis? Where is the man who never made a mistake? Who has acquired all knowledge and all skill? Who has become expert in every kind of practice? Who has mastered all there is in one line of practice? Let the attorney who has never lost a case, or the judge who has never made an error, tell us. And let the doctor who has never lost a patient, if he has been in practice any length of time, inform us on this point. The difficulties that beset some medical facts may affect the expert, as well as the ordinary witness. So it is, that the opinions of the experts must invade the territory of conjecture, when medical facts are obscure, concealed, and uncertain. In this territory we have abundant scope for the wise exercise of the principles of liberality.

And then there arises the suggestion that we may expect too much, when we have only little to give.

11. A surgeon examines and treats a case of injury, and then it becomes the subject of litigation. He is called into court to give evidence. He testifies as to his diagnosis, he describes the treatment; and tells us how the case resulted. Then he may say if the injury was severe or not, and he may inform the jury if the result was as good as could be expected. In so far as he does this, he is an ordinary witness. But let another surgeon, one of experience and skill, examine this patient, at any time after the injury was inflicted, for the purpose of testifying in court as to the nature, extent, and result of his injury, and he then becomes an expert. He comes before the Court because he has more than ordinary experience, — he is an expert. Finally, one

does not like to say exactly where the expert witness merges into the ordinary, or where the ordinary witness most resembles the expert; hence let us be content with the broad general distinctions we have made in regard to this important matter.

12. An explanation of the subject of medical skill will throw some light upon the difference between an ordinary witness and an expert. As a matter of fact there are many degrees of experience and skill: one doctor differs from another in the sum and quality of his knowledge, in the training of his senses, in the cultivation of his reason, in the education of his judgment. The recent graduate does not have the skill acquired by the surgeon who has performed many operations. The civic may surpass the rural practitioner in knowledge and skill, because he has had unusual opportunities for observation and work. One doctor

may have greater natural gifts than another, so that, other things being equal, he may attain to a higher standard. Experts differ and vary in their experience and qualification. They do not rank the same. The degrees are not only good, better, best, but some are less than good. All surgeons have not the same qualifications, though they may have ordinary skill.

13. All this means that there is no complete rule, no absolute standard of medical practice. Yet it is important to have some practical rule, some legal standard, to guide us in determining the necessary degree of knowledge and skill that should be possessed by the doctor, not only for the practice of his profession, but also for the requirements of medical jurisprudence. The standard of practice must not be too low, for that would imperil human life. It must not be too high, for then it could not be

reached by any one, not even the most skillful. It seems to me that there are two rules to be applied to the question of medical skill: *one is a rule of law; the other is a rule of duty.* All are required to follow the rule of law. How many follow the rule of duty?

14. The rule of law is to this effect: the doctor must have and apply ordinary skill in the practice of his profession; he is legally bound to know the established principles and rules of medical practice; and he must not be negligent in the application and use of these principles and rules. He is a warrantor only to this extent, that he can practice his profession with ordinary skill, — that skill which medical men in general possess. He enters into an obligation to employ ordinary skill in a reasonable and diligent manner in the treatment of disease and injury. He is not legally required to

promise and warrant cures, for there is no law, and in the nature of the case there could be none, to compel the doctor to cure all cases of disease, to remove every deformity, to restore every impaired function. The doctor is only required to carry out the law of ordinary skill; but he may add the law of duty, and even then he will find very many things that he cannot do: the blind, the lame, and the sick will exist, in spite of all his best efforts.

15. The doctor is only responsible for the reasonable and diligent performance of what is ordinarily possible in medical practice. He does not say to his patient: I will tell you exactly what is the matter with you; I will agree to cure you, to make your broken bone as good as it was before; I will remove your deformity; I will restore the use of your arm or your leg. The prudent doctor cannot make any such contract with

his patient. So he tells him that he will treat him with ordinary skill, due diligence, and reasonable attention, according to the established rules of practice. Beyond this he cannot go: to promise more than this is unwise and unprofessional. Yet if the doctor finds that he has a difficult case to treat, he has the right to ask for assistance, in order that his patient may have the benefit of a consultation. In fine, he may properly ask for a consultation with some one who has the ability to give sound advice and good assistance. This practice is indeed common, thanks to the magnanimity and benevolence of the medical profession. In no other field of labor do we find so much liberality, so much coöperation, so much benefaction.

16. If the doctor practices with ordinary skill, due diligence, and reasonable attention, an error of judgment on his part does not

make him responsible for the result, any more than an error by the Court in ruling and charging entails responsibility in regard to the result of a case which has been tried. To hold the doctor responsible for the result following an error of judgment would be to look upon him as infallible, and that would involve a standard of practice higher than any man can reach. It is evident that the doctor who sets himself up as one who can make no mistakes and who is a warrantor of cures must be, from the very nature of the case, an ignorant pretender to knowledge and skill that he does not possess, and that he is a dangerous impostor, whose practice may be followed by peril and disaster.

17. The rule of duty is somewhat different from the rule of law. One judge presides better than another. One attorney is a better examiner than another. And one

doctor can practice better than another. Now as to the duty of each: I am clearly of the opinion that the doctor, in treating his patients, ought to use his best skill; that the attorney, in his examinations, should apply his best legal ability; that the judge is under an obligation to employ his best faculties, in the administration of justice. But, while these things are so, the law and the courts make no such distinction: all doctors, under the law and before the courts, are equal, for no one is required to possess and apply extraordinary skill. Yet it is right and proper for a man to give the world the benefit of skill above the average, if he is fortunate enough to possess it, be he judge, lawyer, or doctor. How much better the world would be, if every man did his best at all times and in all places!

18. Do we not employ a surgeon of skill and reputation, and pay him a larger fee,

because we expect him to do a better piece of work than an ordinary surgeon? If the surgeon asks for and receives an unusual fee, on the ground that he has extraordinary skill, is he not bound to render an equivalent? Is he not under an obligation to give his best skill to his patient, when he has received an unusual fee? It seems to me that he is. So it seems to me that the rule of duty, in some sense, merges into the rule of law. Such as we have of skill to work we ought to give to others, not only for pay and reputation, but also for duty. The question is, Have I done the best I could under the circumstances? In saving from deformity and from disability, have I saved to the uttermost, no matter whether I have been paid for it or not? In the community in which I live, are there limps, halts, illusions, and delusions, which I could have prevented? That is the question. The

more we think of it, the more we begin to realize that we are all under an obligation to do our best in every field of human endeavor.

19. Some of the qualifications of an expert may be stated: he has been a careful observer; he has educated his senses; he has cultivated his reason; he has trained his judgment; he is a diligent student; he is a man of sound sense; he separates a conclusion from a fact; he distinguishes between the medical facts and the merits of the case; he knows if a fact is relevant to the issue; he is above all a practical man; he brings common sense to the performance of his duty as a medical jurist; he will make a complete and thorough investigation of the medical facts of a case; he will subject these facts to a critical and severe cross-examination; he will test his own conclusions with the most searching analy-

sis; he will reject what is irrelevant and incompetent; he will find and hold to what is true and relevant; he will be honest, upright, and impartial in his opinions; his words will not be spoken for either litigant, as such; he will tell a plain story in a simple manner; he will relate to the jury, in the presence of the Court, what is true, right, and just, without fear of consequences; he will rise to the dignity of that position on the witness stand which tends to promote the more perfect administration of justice; he will coöperate with the magnanimous and upright attorney in the discovery of truth, in the production of evidence, in the establishment of justice between man and man. Such are some of the qualifications of an expert.

20. The doctor has special knowledge, and employs special terms to express it, when he speaks with professional men. But judges, lawyers, and jurors are not supposed

to be familiar with the language of medicine. What they need is some one to translate this language into the language of every-day life. A medical fact expressed in medical language does not convey a clear idea to the mind of a juror; it must be expressed in the plain, practical language with which the juror is familiar, before he can understand it. One knows of no more important point than this in the art of giving testimony: the translation of the language of science into that of every-day life. The question is, What does the medical witness mean to say? This is what the jury want to know. And how can they know it, if the witness speaks to them in an unknown tongue? So if a medical word must be used, let it be so completely defined that the mind of the average juror can understand it.

21. Let me point out the difficulty of

making a complete definition of anything in any department of science or art. Who can so describe a thing as to separate it from every other thing in nature? Who can insulate a fact with words? Who can separate a fact from all of its relations with all other facts? Give us the form of what seems to be a complete definition, and its incompetency can be shown at once. There will be some weak point in it, demonstrating the inadequacy of words to define with perfect exactitude any one of the many things in the world from every other thing. Yet we must have definitions, such as we can construct, be they good or bad. They are the handles by which we take hold of things: they are the fences we put around facts and opinions, — such as we put before the Court in evidence. A definition is a verbal fence put around a fact or an opinion, to keep it from getting away while we in-

spect and study it. Some definitions are like the bulrush that was used in trying to stop the current of the Nile; and some are like the grim granite walls which beat back the ocean wave or turn aside the ice-river that flows from the mountain side. Definitions are not facts, they are brief descriptions of facts. The facts are seen and known through the words which express them.

22. The following definitions are introduced for illustration: 1. Shock is a depressed state of the nervous system caused by injury. 2. An illusion is the imagined seeing of a real thing. 3. An hallucination is the real seeing of an imagined thing. 4. A delusion is a misleading of the mind. 5. A medical diagnosis is "to know" through a case. 6. A legal diagnosis is the science of probabilities founded on a knowledge of anatomy and pathology. 7. Insanity is a

disorder of the structure or function of the brain accompanied by impairment of the will, delusion of the judgment, derangement of the reason, and perversion of the affections, — and followed by mental disability and irrational conduct.

23. It is evident that the same thing may have different definitions: A man may have a ten-acre lot, and put a board-fence around it; then he takes down this fence and builds a stone-wall in its place; and again he removes the fence and plants a hedge to define his acres: in each way he fences in his ten-acre lot. So the above definitions are not exclusive; they are only made to fence in or define the fact which we desire to examine. Let some one erect a better fence around the event which we call shock, and we will take down our own fence and build one like his. Let any one construct a better fence to inclose or define the state

which we call insanity, and we will adopt it without delay. How often do we find men differ in opinion because they see differently, because they make different definitions. They see and talk about the same things, — and yet they differ. This point of difference often mystifies the minds of the jury and causes them to disagree.

24. An answer to a question put by counsel to a medical witness may be in the form of a definition. One of the accomplishments of a medical witness consists in his ability and skill in making a correct and reliable definition. The witness should put around the fact of his evidence, or his opinion if he can, a fence he will not have to take down. The words he uses should if possible make the fact, or the opinion, so clear that everybody can understand it. On the other hand, a question put to a medical witness may be in the form of a definition, which will de-

mand his assent or denial of its truth. It may be that he can assent to part of the question, while he will have to deny the rest, because counsel has framed a definition that is ambiguous. This difficulty is increased, when counsel and witness have taken, as they often do, different views of the same matter.

25. The medical facts are introduced to aid in proving or disproving the facts in issue between the litigants. This property of proving or disproving the facts in issue must belong to the medical facts in order that they may be admitted as evidence. The facts in issue must be inferred to be true, or not, from the medical facts, in so far as the case in issue is medical. This part of the case does not refer to the merits of the issue. The question now under consideration is one of relevancy. The evidence admitted by the Court is supposed to be relevant. It is the

business of the Court to admit evidence, — and the only evidence that can be admitted is such as is relevant. The following definition of relevancy may be quoted here: "Facts, whether in issue or not, are relevant to each other when one is, or probably may be, or probably may have been, the cause of the other, the effect of the other, an effect of the same cause, a cause of the same effect, — or when the one shows that the other must or cannot have occurred, or probably does or did exist, or that any fact does or did exist or not, which in the common course of events would either have caused or have been caused by the other." That is to say, in general, in order that facts in evidence may be relevant to facts in issue there must be between these two sets of facts some causal relation. The facts in evidence must prove or disprove the facts in issue. That is to say, the evidence must

prove or disprove the issue: if the evidence does not relate to, does not affect, the issue, it is not relevant and must be excluded.

26. If a doctor is on trial for malpractice, his treatment of similar cases cannot be admitted, for such evidence is not relevant, because it does not prove how he treated the case under litigation. The relevant facts belong to the case for which he is being tried, — only what proves or disproves the question or issue of malpractice is relevant or admissible. He may indeed show that he is qualified to practice his profession with ordinary skill. The question at issue is, Did he treat the case for which he is being tried, with ordinary skill? That evidence which goes to prove that he treated the case with ordinary skill is relevant. Also that evidence is relevant which goes to disprove that he treated the case with ordinary skill.

27. If a man is on trial for murder, the fact that he committed another murder could not be admitted against him, for it would not be relevant. The facts which go to prove or disprove that he did the murder for which he is being tried are alone relevant. All evidence beyond that is not admissible, — it is foreign to the issue, which is that he did the murder for which he is on trial.

28. Let us take the following issue joined between two parties: A, for instance, alleges that B owes him a certain sum of money. This is the fact in issue. It is the fact to be proved or disproved. The facts of the testimony must go to prove or disprove the alleged fact that B owes A a certain sum of money, — which is plainly the fact in issue. Then the testimony becomes evidence, because it is relevant. The facts of the testimony are only relevant to the

fact of the issue, when they go to prove or disprove that B owes A the alleged sum of money.

29. It must ever remain true that relevant facts in evidence are those which have a causal relation with the facts in issue. They must be such facts that a reasonable mind can infer from them the existence or non-existence of the facts in issue. If the facts in evidence are true, then the facts in issue are also true, or they are not true, just as the testimony proves. If the facts introduced in evidence have not this causal relation with the facts in issue, if they are indifferent to the facts in issue, they are not relevant.

30. In this place, we may refer to the relevancy of the expert's opinion. It is, no doubt, the duty of the jury to draw inferences and form opinions; and so in general an inference or an opinion given by a wit-

ness would not be relevant. It was the function of the witness to relate facts; he did not give opinions: he could not think for the jury. But the jurymen are required to reason on the facts of the evidence, and so tell what they mean: it is their function to find out if the facts of evidence show whether the facts in issue are true or not. The question for them is, Has the issue been proven? But there is one notable exception to this rule: the average juryman does not know everything; and the principle is that he cannot reason on what he has no knowledge of, about that of which he is ignorant. In this respect, some one must think for him, and at least teach him how to reason in regard to matters of scientific import. Hence, it is assumed that the opinions of experts on relevant medical facts are also relevant as evidence. This is so for the following reasons: the juryman is

unacquainted with medical facts and cannot know what they mean, and so he cannot draw inferences from them, nor can he form opinions in regard to them. Hence, under the jury-system, justice would miscarry, if the jurymen are not enlightened in regard to medical facts. They are enlightened in the following way: medical facts similar to those which have been given in evidence are assumed, and the expert draws inferences and forms opinions from them; these inferences and opinions are admitted as relevant testimony; they enlighten the jurymen, who have an example to guide them in dealing with the medical facts that are relevant to the facts in issue. The jurymen are supposed to deal with the relevant medical facts admitted as evidence much in the same way as the expert did with the assumed and similar medical facts. If we could imagine a jury made up of experts, it is plain that the

expert witnesses would not be needed. Such a jury would reason on the medical evidence in the same way that they would on the rest of the evidence. We do not call experts in regard to matters on which the jury are informed. In any department of special science or art, an expert may be needed to make things plain to a jury.

31. The medical witness will have to meet questions relating to the possible, the probable, and the reasonably certain. It is clear that evidence has all degrees of certainty, from the lowest to the highest. In evidence there may be an uncertainty, and as far as we can, let us try to define this uncertainty. In the first place, the possible is something which can be; that is, it is something which can exist; it may have taken place in such a way that there is no evidence to show it; or its existence is perfectly plain; or it may not have taken place at all, as yet.

For example: the skull can have a fracture which shows no sign of its existence; or it can have a fracture whose existence can be easily demonstrated: on the other hand, the skull may not have been broken, even under the action of causes that are known to be competent to effect this injury. The possible may take place in the future, yet we cannot assert that it will. For instance, some cases of contusion of the shoulder leave permanent paralysis of the deltoid muscle: such a result can be, but we cannot say that it will be. The possible is therefore a question of degree, and its value as evidence depends upon how far it does away with the impossible.

32. In the second place, that which is probable is something which can be proved. The question of probability relates to things that exist, or that will or can come to pass. If the expert says that a fact is or will be

probable, he says, in effect, that such a fact can be proved. That is, he implies that there are other facts whose existence enables him to infer that another fact does or will exist. In other words, the probable fact has its proof in the existence of certain other undisputed facts. Let the expert examine a case of injury: he finds, or thinks he finds, certain signs and symptoms; these are fairly well determined facts; they are proof of the existence of a fracture, for instance; hence the expert says that a fracture is probable. Again, an expert examines a case in which there is deformity and disability: he has seen such cases before, and their deformity and disability have been permanent. The facts of such experience are probative in regard to the special case examined by the expert. They enable him to say that the deformity and the disability of the case in question are probably perma-

nent. It will be seen that probative facts may be stronger in one case than in another. Hence the question of probability is also one of degree. There is another side to this question. We say a thing is probable, when we have an impression, more or less strong, that there is evidence somewhere in existence which will prove it: the difficulty lies in the way of obtaining this evidence; if we could get the evidence, the thing would be proved. In effect, a probability seems to leave in our minds the impression of an uncertainty. Yet in the highest degree, that of eminent probability, we seem to reach very near to the point of certainty.

33. In the third place, that which is reasonably certain depends for its existence, as a fact in evidence, on strong facts which are known to or admitted by the witness who reasons on them. That is, there are medical facts which appear in evidence. They are

admitted by the Court, and they are believed by the jury. Given these or similar facts for the expert to reason upon, and then he infers that some other fact exists, or will exist, that this fact is or will be certain to the extent that there has been no mistake in his reasoning, and that his inference is legitimate, being founded upon the evident facts: and this inferred fact is one of reasonable certainty. A fact, then, that is or will be reasonably certain, is one that issues, or will issue, from other proven facts, the causal relation, the relevancy, between the evident facts and the reasonably certain fact of inference being traced and defined in the mind of a reasonable and well-informed expert. Now it will be seen that the expert does not warrant the certainty of his inference being or becoming a fact. A great many things might happen to change the nature of a result that has been

inferred with reasonable certainty. In the mind of the expert a fact is or will be reasonably certain because he has reasoned soundly and inferred correctly in regard to facts whose existence has been proven: his inference is reasonable, and is therefore reasonably certain.

34. The expert, in stating that a thing is reasonably certain, affirms that it exists or will come to pass. Such a statement, if properly made, has a strong and binding force, and carries conviction to the minds of a jury; it is like a good verdict which satisfies all intelligent men. A reasonable certainty is stronger than a probability, even an eminent probability. A fact which is probable, as has been said, is one that can or may be proved, and it so stands in the mind of the expert. A reasonably certain fact is one that, in the mind of the expert, is already proven. In matters of evidence,

a probability is stronger than a possibility; a reasonable certainty is stronger than a probability; the weakest testimony is that of possibility. And yet, after all, the great leading question is, Can the expert answer as to the possibility, the probability, or the reasonable certainty? If he cannot answer, if he cannot form an opinion, then his testimony, such as it is, must be excluded. Everything depends upon his conviction, — if he is convinced that he can form an opinion, he is entitled to testify. He may be mistaken in his conviction; this would be an honest error, one of judgment, and not one of intention. On the other hand, an expert has it in his power to affirm that he can answer a question, when he cannot, and when he knows he cannot, and when he intends to do violence to reason. Such a course can only savor of the baseness of perjury. There is only one other thing

that is like it, and that is the solemn statement of a litigant witness, that he has symptoms which do not exist, and which it is very difficult to disprove, since it is a matter of personal or mental experience.

35. As to the relevancy of an expert's opinion expressing a reasonable certainty, there can be no question. And it seems to me that opinions as to possibility and probability, as such, are to be admitted in so far as they are relevant. If a fact can be, or can be proven to be, it ought to have weight according to the degree of its possibility or its probability. The expert can deny that a fact can be; he can say that its existence is impossible. He can say that a fact cannot be proved; he can affirm that it is improbable. Such denials are, no doubt, relevant as opinions in regard to medical facts that are relevant to the facts in issue. We can say that it is reasonably certain that a fact

does not exist; we can say that a statement of fact is improbable, or impossible: and then we can say that either fact might exist. In a given case of injury, the expert is reasonably certain that it is possible or probable for a recovery to take place; he is not reasonably certain that it will, he only knows that it is possible or probable. It amounts to this, that we cannot safely neglect and exclude certain minor degrees of proof that have less force and weight than facts and opinions which are reasonably certain. For if we do, we shall not compass the whole truth, and there will be part of the evidence omitted, so that justice will not be made exact and even-handed.

36. When the doctor or the medical jurist investigates a case of injury or disease, he may always ask himself two questions: "Is there any change of structure? Is there any impairment of function?" These ques-

tions are always pertinent and relevant for both medical and legal practice. They are so far fundamental and general that all other questions are, as it were, grouped around them; all relevant and admissible questions centre in these two. All other relevant interrogatories lead to the questions of structure and function. Answer these two general questions in the affirmative, and there is case for treatment or for trial. Then there follow two correlative questions: "What amount of deformity exists or will exist? What is or will be the extent of the disability?" These two questions are sometimes of the greatest importance, especially in the assessment of damages. But if there is neither deformity nor disability, there is no case for the doctor, none for the medical jurist, none for litigation; unless the would-be litigant makes an attempt to feign disease or injury.

37. The surgeon deals with evidence in the pursuit of his profession. This evidence goes to prove or disprove the existence of disease or injury. No one is more conversant with the nature of evidence and the process of obtaining it, than the surgeon. If there is no evidence, there is no case for him. Yet there may be evidence which he has not found, and then there is a case. On the other hand, he may think that he finds evidence of a case, when a case does not exist. The evidence of disease and injury consists in certain signs and symptoms: and it is important for the medical jurist, as well as the doctor, to be familiar with the nature of this evidence, — to know how to distinguish between signs and symptoms. They are essentially different in nature and value, for the purposes of medico-legal as well as medical practice. They constitute a series of facts that are relevant

evidence, in the trial of cases in which medicine enters as a component part. A sign is a fact of medical evidence, observed, determined, and related by the medical witness. The deformity, the mobility, and the grating caused by the fragments of a broken bone are signs. A symptom is a fact of medical evidence experienced, known, and related by the litigant witness. Pain and insensibility, as the effects of injury, are symptoms. A sign comes to the knowledge of the Court and jury through the perceptive faculties and the reasoning powers of the medical witness. A symptom becomes known to the Court and jury through the feeling and the statement of the litigant witness. As a piece of evidence, a sign is objective, and a symptom is subjective. In this respect, we are dealing with a little mental philosophy. We are considering two sets of facts: one, subjective; the other, objective.

38. A sign is a fact which can be observed, determined, and related by a number of competent witnesses who can make the evidence certain beyond a reasonable doubt. A symptom is a fact which can be felt and related by only one witness, — and he has an interest in the statement he makes. If the expert is permitted to say that the litigant witness has told him that he has suffered pain, he is giving what is closely related to hearsay evidence. Yet it is not so exactly. In the mean time, the expert is entitled to learn the symptoms of injury or disease, from the litigant witness. The litigant witness alone can tell the expert of the pain he suffers. The expert may hear the story of his sufferings, from the litigant witness, in order that he may come to some conclusion in regard to their real nature. Are his sufferings real or imaginary? Does he pretend to suffer, when there is nothing

the matter with him? Momentous questions, that are at times difficult to answer. But the expert knows that injuries cause pain, and he says that a patient suffers pain, even if the patient does not tell him that he does, when he knows that the patient has had an injury.

39. In regard to the question of pain, we may add: the litigant witness feels and suffers his own pain, and so testifies. He is entitled to compensation for the pain he is made to suffer by the negligence of another. If there were no way to measure its extent except by the statement of the one who suffers it, there would be room for exaggeration, deception, and injustice. Now it is perfectly plain that it is the duty of the expert to test the reality and the validity of the pain which a litigant witness says he feels, and he must do so in every proper and reasonable way. In this work of detec-

tion he must apply his knowledge of anatomy and pathology, as well as use his best skill and experience. At times, it is quite impossible to put the detection of a litigant into a conclusive and tangible form of evidence. I know of no task, performed by the expert, more difficult than this, — more uncertain, more thankless. I am not sure but that we are, in many ways, more or less at the mercy, as they say, of these unmitigated scoundrels, who, in their rôle of litigant, prey upon the defenseless defendant, and commit, under the shadow of justice, a nameless crime, for which there has not as yet been found any means of conviction, much less has there been invented any punishment.

40. I once had a patient who said he had a very severe pain in his right knee. He left his work and went to bed, and when I saw him, I found his right lower limb as

straight and rigid as possible. The knee was neither red, hot, nor swollen, but when I touched it he gave expression to great suffering. An attempt to bend the knee appeared to increase the pain to an alarming extent. But he would raise the limb with the leg extended, and say that it did not hurt him. The complete absence of signs of any kind whatsoever contradicted all the statements that he had made. I resolutely told the patient that there was nothing the matter with him, and when I added ridicule to assertion, he confessed his attempt to deceive and went back to his work.

41. The evidence in such a case as the following is of a higher grade. In the evening a lady, as she was walking along, fell into an uncovered hole in the sidewalk and injured her left hip. Six months after the accident, she brought a suit for damages against the contractor who had caused the

hole to be made. Before the trial, at the request of her attorney, I examined this litigant and found the following evidence. A to-and-fro motion of the wing of the left ilium, under pressure with my hand; a new line of motion, going through the socket of the thigh-bone; an up-and-down motion of the left thigh-bone and the ilium when she walked; and a considerable swelling of the left lower limb. The litigant walked with a cane and limped. She complained of pain when pressure was made upon different parts of the left hip. She said that she had suffered from disordered menses since the time of the accident. Now it will be seen that the facts which have been related in this case are grouped around the two general facts of damaged structure and impaired function. From the facts that I found I drew the following conclusions: the hip-bone, that is, the ilium, had been broken;

bony union of the fragments had not taken place; the nerves of the left hip had been seriously injured, and were suffering from impairment of their function. Then I expressed the opinion that both the deformity and disability would be permanent. In this case, the signs, as facts, corroborated the symptoms.

42. The following case is one in which the evidence appears somewhat complex. A gentleman of sound mind and good sense had a large estate, and managed it wisely during many years of his long life. He made a will giving his property equally to his heirs. He grew old, and became a changed man: he had a feeble step and a tottering gait; his hands never ceased to tremble in his waking hours; his signature became more and more illegible, and at last it could not be read; he had frequent and persistent illusions and hallucinations; his

memory became so defective that he did not recognize his most intimate friends; he was tormented by strange delusions which he could not correct. Then he was induced to make a will greatly in favor of one of the heirs, and soon after that he died. When this will was contested, the preponderance of expert testimony was to the effect that the testator had suffered from the decay and the dementia of old age, so as to disable him to the extent of incompetency. That is, the experts expressed the opinion that the testator was incompetent to make a will. But the learned Judge before whom this case was tried had some doubts as to the strength of this view, and was reasonably certain, according to his decision, that the testator was competent to make a new will.

43. We make the following comments on this case. The testator had been in a sound mind and was competent to make a

will, and did make one which was eminently just. After that he became greatly impaired in mind, as well as body, having impaired sensation, sense, and voluntary motion. In this case there was a question of mental disability. In fact, there was a reasonable doubt as to the competency of the testator to make a will. This doubt, which had been raised by the contestants and which had been supported by the opinions of experts, was set aside, and a judicial opinion of competency was given. This might have been according to law, and may have been consistent with the facts of evidence, — it may have met the fact in issue, — which was that of competency to make a will. But it seems to me that a more important fact ought to have been in issue, — one that affects public policy, as well as the impartial administration of justice. This was the real question: did the testator dispose of

his estate, — or property, — just as he wanted to, according to his wish and purpose, when he made his will being in good health and of sound mind; or, at the time he made a new will, being in the last stages of senile decay and dementia? It seems to me that the last will ought to have been set aside, and that the first one ought to have been declared valid.

44. In this place may be noted some of the sources of error which may affect the credibility and standing of the medical witness. The following points may be made: 1. Deficient knowledge; 2. Limited experience; 3. Deception of the senses; 4. Delusion of the mind.

45. (1.) Deficient knowledge. Suppose the doctor is called to treat a case of assault or criminal poisoning. The victim dies under his care. The person who has made the assault, or who has administered the poison,

is arrested and brought to trial. The facts that become known to the doctor must be related in court, under the rules of admitting evidence. The doctor is ignorant of the nature of these rules, as well as the manner in which they work. He has no knowledge in regard to relevancy of medical facts in testimony to facts in issue. He has learned the rules and precepts of his profession at a school where only medicine and surgery are taught. He is ignorant of law and its relations to his profession. He is unacquainted with the subject of medical jurisprudence. He has no experience in the difficult and responsible duty of giving medical evidence. While it may be no fault of his own, this deficiency of knowledge on the part of the medical witness may lead to doubt, confusion, and uncertainty. The witness does not testify clearly, and he throws discredit upon a liberal profession.

46. The doctor sets out in life to cure people who are sick or injured. Is this for the sake of the sick and the injured? Or is it for his own advantage and advancement? Has he maledictions on the law, as well as on fate, because he is called into court as a witness? Has he no time and no desire to meet the learned and cultured gentlemen of the Bar, who are glad to welcome him, as occasion may require? Is he afraid to stand or sit under the shadow of justice, and deliberately tell the truth in order that some one may be prevented from suffering a great wrong? Has he forgotten the fact that he belongs to a liberal profession? Did he ever learn that he belonged to such a profession? Does he discard and disown the deeds of mercy and benefaction that brought glory and renown to the Fathers of Medicine? Does he shrink from being the champion of truth because he fears

the attack of the adversary? Will he let Truth fall wounded and bleeding because he is ashamed to come to her defense? Will he let Justice be mutilated when her fair form is assailed by her enemies? Is he a coward, that he fears to meet the gaze of the public, in the defense of the imperiled rights of one who has his cause brought before all men? Does he not feel that he is the peer of the best in any profession? Strange and unaccountable aversion, unreasonable and inconsistent attitude, of a class of men who owe so much to the community in which they work and live! When will they try to keep their obligations to a community which only asks them to render a small equivalent for the franchise that they have received?

47. Let not the doctor forget that the people have conferred on him a valuable franchise that brings him position, respect,

honor, and emolument, and exempts him from duties that others are obliged to perform. He may not consider it any part of his business to attend to the duties of a medical jurist; and he may avoid as much as he can the duty of giving medical testimony. The farmer, the mechanic, and the merchant may be unpatriotic and refuse to take up arms in the defense of their country, but the state compels them to come to its rescue. So the doctor cannot, with reason, decline to perform the duties of a medical jurist, for he thereby aids the commonwealth in protecting itself against those who commit every kind of crime. It must be, then, that the doctor ought to qualify himself so that he can perform the duties of a medical jurist with ordinary skill. He owes this to the state, to justice, to his profession, as well as to himself.

48. (2.) Limited experience. It is true

that one man cannot have experience in all things. The young lawyer does not expect to have and display the learning, the ability, and the tact of his older confrère. The doctor may have treated cases of disease and injury, but he has been employed as a medical jurist in none. Yet his inexperience may be supplemented by a careful study of the duties of a medical witness. The doctor, as well as the undergraduate, ought to be a student of medical jurisprudence. The points are these: the student may learn the nature of evidence; he may understand that relevant facts prove or disprove an issue; he may become more or less familiar with the rules of testifying; he may inform himself as to the relations of law to his profession; he may observe the conduct of others as they answer questions while on the witness stand; he may make a thorough study of the case in which he is

going to perform the duties of a medical witness. In all this let him search wisely and consistently for the truth. If he does this conscientiously, he will become more and more a public benefactor.

49. In this place let me, as a medical teacher, say that for years I have trained medical students to search for and relate the facts of medical evidence, — the evidence of diagnosis and prognosis. I need not remind the reader that every diagnosis, every prognosis, is either a good or a bad verdict. In this work of training I have brought to bear the results of my experience in both surgery and medical jurisprudence. This training has many advantages. To examine and cross-examine patients who are prone to conceal the causes of disease, who tell their own story, who exaggerate the symptoms, involves a method similar to that employed in the courts in obtaining and

testing evidence. The patient gives his view of his own case ; to the doctor he states facts and expresses opinions. The patient is an interested witness, whose testimony is affected by his own morbid feelings. Now the doctor wants the facts that underlie the symptoms and signs. He may indeed listen kindly to the recital of the patient's feelings and conclusions. Yet he must ever keep in mind that the signs which he discovers may contravene and contradict in many instances the statements of the patient. He must form his own opinions upon a careful consideration of the ascertained facts. So that the doctor is not entirely unfamiliar with the process of obtaining and sifting evidence. Sometimes counsel might learn a lesson in the examination of witnesses by observing the methods of investigation employed by the experienced practitioner of medicine. To educate a medical student in the work of

examining and cross-examining patients will give him a good preliminary training for the duties of a medical jurist.

50. (3.) Deception of the senses. That the senses of the medical jurist or witness may be deceived is illustrated by the following cases. A friend of mine, a medical man and a careful observer, said that he saw me at a certain time in the basement of a house across the street from where he lived. It was in the forenoon, when the light is good and when the mind is clear, and when the mistakes of illusions and the errors of delusions would be least apt to occur. In the evening of the same day my friend spoke to me of having seen me as above stated. I told him that his eyes were false witnesses, and had deceived and imposed upon him, for at the time in question I had been in another place, where several persons who knew me well had seen me and

talked with me. The strange thing about his illusion was that my friend had known me for years. At one time I attended him for a broken leg, when he saw me daily during many weeks. It would have been difficult to impeach his testimony, as his character for truth and probity was of the highest order. He was greatly surprised and impressed when convinced that I was not where he supposed he saw me, and pleasantly remarked that there had been no murder committed in his neighbor's house across the street. Such a case as this should make a lasting impression upon us all, for it is possible, under certain circumstances, to convict an innocent man of a crime, through the illusions and delusions of witnesses who have unimpeachable characters. It startles one to think of a possibility of this kind.

51. The following case made a strong impression upon me: I once saw a log which

was to be cut up into boards, and which weighed over two tons, roll swiftly down a side-hill and go over a boy about seven years of age. It looked as if the boy would be crushed, but he jumped up and ran away, none the worse for his adventure. Those who saw and heard of the accident said it was a miracle that the boy was not killed. There was no doubt about the fact of the log going over the boy, and also that the boy was not injured at all. But what was the explanation? On examination, it was found that the boy had fallen into a hollow in the ground, and that the log had only come in contact with his body as it went over him; there had been no miracle at all, for there was only a hole in the hillside. The boy would have been crushed if the log had struck him with the full force of its momentum. Sense deceptions are of quite frequent occurrence in every-day life, and the

medical witness has his share of them too, and the sooner this important fact is recognized, the sooner we will have an improvement in the administration of justice. Many more cases to the same effect could be adduced by me, but let these suffice for the present.

52. (4.) Misleading the mind. That the mind of the doctor, and so the mind of the medical witness, may be misled, is illustrated by the following cases. Once during the War of the Rebellion an officer was my patient; he was a brave and efficient officer, and had been discharged from the service for permanent disability. He appeared to have complete paralysis of the lower limbs, and so could not walk. He was under my care for a few days while on his way from the front to his home; out of pity for his helplessness I often carried him upon my back in the hurry and exigency of

transportation. I learned afterwards that he entirely recovered in a short time after he reached home. The minds — the reasons and judgments — of the surgeons who sent him home for permanent disability had been misled; a more careful examination of his case would have resulted in making a correct diagnosis.

53. At another time, a colored soldier while on the Hospital Transport seemed to have epileptic fits. I saw him in a fit of great severity, and suggested that the nurses throw him overboard to the sharks because he could not fight any more, and because the government would soon have to bury him. This heroic suggestion at its inception acted like magic, and restored the seeming sufferer to his normal condition in a moment. His cure was complete and permanent; and what was more, the cure appeared to be contagious, since several

colored soldiers having the same kind of fits got well at once and remained so. The diagnosis of epilepsy had to be changed to that of malingering.

54. Take the following case. A woman fell from a street car upon her left knee, and after several weeks she called a doctor who told her that her knee-pan had been broken and that bony union had taken place. Then she brought a suit against the railroad company for damages. At the trial, the experts on both sides said that her knee-pan had been broken: those for the plaintiff said that the fracture occurred at the time she fell from the car; those for the defendant said that the fracture occurred at some previous time; they agreed as to the existence of a fracture, but differed as to the time when it took place. The defendant tried to prove that it took place at a previous time; the plaintiff tried to prove that it

took place at the time of the accident. But it was then proven that the plaintiff's right knee-pan had a sign similar to the one on the left knee-pan: this sign was a transverse furrow in front of the bone; it led the experts to say that there had been a fracture. This sign was as good proof of a fracture of the right knee-pan as it was of a fracture of the left one. In addition to this, how the fragments of a broken knee-pan could unite by bone, when the patient was up and about all the time, and was not treated for an injury at all, seems to be very incomprehensible to the practical surgeon. Were the experts of both sides misled in regard to this case? It appears to be reasonably certain that they were.

55. A German sailor fell ten or twelve feet, and struck upon the back of his head and neck: his neck and head were twisted to the left and bent forward. Some of the

doctors who saw him said that he had a dislocation of the neck; others said that he had some impaction of one or two bodies of the spine-bones of his neck. It was evident enough that he had injured his neck; but the whole truth of the case did not come to light until it was found out that he had suffered from a wry-neck all his life. Then the obscurity and the difficulty of his case were cleared up. It seemed as if he was trying to make his injury appear worse than it was, by concealing his life-long disease.

56. The dead body and its surroundings exhibit *appearances:* we do not then speak of signs and symptoms. Any and all appearances of the dead, in cases of crime, must be carefully examined by the medical jurist, who ought to write the facts down in detail and without remarks or comment. These facts relate to the following points: the condition and quality of the clothing

on the dead body; the position and attitude of the body and the limbs; the appearance of the face, which may retain the last expression; the temperature, if need be, as shown by the thermometer; the rigor mortis, as tested by the resistance; the pallor or lividity of the skin; the wounds, if any, and their nature, location, and extent; the presence of blood and its condition; in fine, all objects on or about the dead body.

57. The medical jurist must also note and record the appearance brought to light during the post-mortem examination. Every organ of the body must have a careful examination, for the pathological, microscopical, and chemical conditions and appearances may all be important in their bearing on the guilt or innocence of the person suspected, arrested, or brought to trial. These facts of the autopsy must go with the facts previously exhibited by the

dead body. All the facts of the appearance and the autopsy are relevant to the facts in the issue: they will tend to prove the guilt or innocence of some one.

58. The doctor may be called to a case in which poison has been administered, with intent to take life, — to a case in which wounds have been inflicted with intent to kill: he is already a doctor, and at once he becomes a medical jurist. Clearly two grave duties now rest upon him: he must administer remedies and try to save life, making no distinction as to whom he is to save. He is also charged with a legal and a social duty; he becomes a witness, who holds the keys of life and death, not only of his patient but also of the person who has given the poison or inflicted the deadly wound. So it is his duty to observe and record the signs and symptoms with care and precision, for they are relevant to the

facts of guilt or innocence. A careless observation, a hasty opinion, may implicate the innocent, or let the guilty go free.

59. After the medical jurist has made his record of the facts of the appearance of the dead body, as well as those of the autopsy, it will be competent for him to write down his impressions of the case, and add such remarks, comments, and opinions as accord with his reason and judgment. These impressions are received, these remarks and comments are made, these opinions are formed, when the facts of appearance and the autopsy are fresh and vivid in the mind of the medical jurist; and if they are put on record they will be of more value than any subsequent impressions, remarks, comments, and opinions; for they will materially aid the memory, reason, and judgment of the medical jurist when he becomes a witness.

60. The doctor must be reasonably certain that his patient is going to die; that he does not expect to survive his disease or injury; that he does not entertain any hope of recovery; that, in so far as the things of this world are concerned, he is *in extremis*. The doctor writes down the dying declaration, and he writes all, even the very words spoken by the person who is about to die. He cannot add anything to these words, nor can he take anything away from them. And the proper party to assure the dying person of his fate is the doctor, for he alone is supposed to know when people are going to die. In order that dying declarations may be admitted as evidence in court, the person who is *in extremis* must be asked, Do you expect to die? The answer must be in the affirmative. Also he must be asked, Have you any hope of recovery? The answer must be in the negative. It would seem as

if a person who is convinced that he is going to die, and is without hope of recovery, may make a valid dying declaration, no matter how he is impressed with the expectance of death and the hopelessness of recovery.

61. The doctor may also write down his impressions and opinions in regard to the mental condition of the declarant. Does he see and think clearly? Does he know and appreciate what he says? Is his reason disturbed? Is his judgment weakened? Is his mind deluded? Are his mental faculties disabled? And if so, to what extent? Does he appreciate the responsibility of making a dying declaration? Does he feel that he can neither gain nor lose in this world by what he affirms? Is he impressed with the knowledge and the conviction that the solemn declaration of the truth is the only thing that can avail him in the future? An

expert's answer to these questions bears upon the value of the dying declaration, in so far as it is admitted as evidence. And no one but an expert can answer them.

62. Dying declarations are admitted as evidence only so far as they describe those facts which could have been related in court under the obligations and sanctity of an oath. It is the province of the Court to determine the admissibility of these declarations. It belongs to the jury to say how far they are credible. It is the duty of the medical witness to relate them in court. The extent to which dying declarations are relevant is no doubt obscure. It is for the purpose of throwing some light on this point that the following comments are made. It has been generally assumed that the person *in extremis* knows and feels the responsibility and the solemnity of the occasion; that he feels he has nothing to gain or lose

in this world; that the things of the next world may properly engage his attention; and that the truth, as if under the obligations and the sanctity of an oath, will be related by him. The presumption of common sense, and both law and practice, have been to this effect. Yet the person *in extremis* may be in such a physical and mental state as to unfit him for making a true and relevant statement of facts in his dying declaration: his nervous system may be in a state of severe shock; his attention may be distracted by great and persistent pain; his reason may be disturbed by the magnitude of the sudden calamity that has befallen him; he may have a great and fixed hatred toward the person who is suspected of wounding or poisoning him. In view of these things, it seems to me that it is relevant for the medical expert to state to the Court and jury the facts relating to the com-

petency of the person *in extremis* to make a dying declaration. There is another point in this matter of great moment: the person *in extremis* is not cross-examined. He has told his story; he has been truthful to the best of his ability; he had no motive to exaggerate or misrepresent. Yet it is possible that he might be mistaken. He may have been deceived. In his condition, could he not have had some illusion, some hallucination, some delusion? In his statement might there not be something that he would wish to correct? The truth of his statement has not been analyzed and tested by the cross-examiner. Even if it be under the shadow of death, a dying declaration in evidence is very much like the evidence-in-chief of a litigant witness. Since these things are so, it would be safe practice to follow the doctrine that a dying declaration, being only examination-in-chief, ought not

to have the same weight and the same influence as the testimony of the declarant, if he were in court under the cross-examiner's searching analysis.

63. Two questions of privilege relate to the medical witness. First, he cannot be made to incriminate himself. Second, he must hold professional secrets as sacred, and must not relate them in court. Whatever the doctor sees, hears, or finds out in any way, in regard to the disease or injury of his patient, having a bearing on the treatment, is of the nature of a professional secret. In court, these secrets are as if they did not exist. They remain as an untold story — as if they were still locked in the breast of the patient. The patient, as a litigant, alone has the power or privilege to permit the medical witness to disclose them. And when the patient dies there is an end of these secrets, for they are supposed, in

law, to perish with the decedent, and the seal of secrecy cannot be broken by heirs, representatives, or administrators, since these secrets relate to the decedent's health, and perhaps his reputation and character, and the law, as well as public policy, has wisely decreed that those who come after him can only reach the estate he has left.

64. It must be kept in mind that the patient imparts to his medical adviser a knowledge of his secrets for the sole purpose of promoting his own well-being and advantage. This knowledge is confidential, and it enables the doctor to treat his patient with more success. The doctor receives these secrets for the sole purpose of aiding him in curing his patient, and he receives along with them a consideration, a fee, to compensate him for his professional advice. The doctor and the medical witness are under the same obligation: they must not disclose

professional secrets. If these secrets were not held sacred by doctors and witnesses, the result would be that many needing medical aid would not seek it. And such a state of affairs would be greatly against public policy.

65. More than once have I seen this question of privilege applied in the following way: a doctor treated a case of injury and did not make it severe enough to suit the ideas of his patient, who was going to bring a suit at law for damages. He was then dismissed from further professional attendance on the case. At the time of the trial, the defendant called the dismissed doctor as a witness. He was not allowed to testify as to the facts that came to his knowledge in a professional way, on the ground that he would disclose the secrets obtained for the purpose of treating his patient. At the same time the litigant patient had

several experts in court, and they told all they knew about the case, and their testimony was clothed in the language of exaggeration.

66. Suppose the expert is requested by counsel to examine the injuries of some one who is going into court to try to obtain damages. He is entitled to learn certain facts which the litigant knows and can tell him. He may ask the following questions: What was the cause of the injury? How did you get hurt? When did the accident happen? What part of the body suffers from injury? What treatment has been applied? Have you been confined to your bed? And if so, how long? When did you first go out of your house? Were you under the care of a surgeon? These questions are preliminary to the physical examination to be made by the expert. It is evident that the cause of the injury, the

method of its treatment, the length of time since the accident, are important facts, and the expert is entitled to know them, in order that he can form a correct opinion. Then if the litigant will truly indicate the location of the injury, it will keep him from unnecessary examination, and the time of the expert will be saved. Why is it necessary for the expert to go all over the body of a litigant, in order to find out a local injury? I know of no better rule for an examiner to follow than this, the exclusion of all other parts of the body, except the one that has been injured.

67. Let the expert proceed with his examination. Are there any signs that there has been an injury? Is there a scar? Note its size, its form, its location, its character. Is there a bone broken? If recent, note the crepitus, the mobility, the deformity, the disability. If time has elapsed,

note the disability, as well as the deformity. Has the head been injured? Note the impairment of sensation, sense, and voluntary motion. Has the spine been broken? Note the condition of the sensory, the motor, the reflex, the vaso-motor, and the trophic functions of the spinal cord. In a few words, in a case that may be examined, find out the extent of the deformity and the degree of the disability. In doing this, the expert uses his knowledge of structure and function, as well as the experience that he has gained by years of observation. He carefully records the results of his examination.

68. The litigant witness has a story to tell, as every one knows who has had any experience in such matters. Let us listen to him: he has been injured; he has suffered much pain; he cannot work, nor attend to business; he has a case against some

one whose negligence injured him; he takes to his bed, for the most part; he pours his troubles into the ear of any one who will listen to him; his attention is constantly given to his injury; he carries his injury daily in his thoughts; it is conspicuous on the page of his memory; he believes he is deformed and disabled; he holds the pain he suffers as something convertible into cash; he is going to have all he can get for it; and the price is no inconsiderable sum; in fact, he broods over his misfortunes. The story of the litigant is affected by all these things. The symptoms are ever clothed in the language of exaggeration, — at times, unconsciously, at other times purposely. These are the manifestations which the expert must observe and interpret.

69. Again, the litigant witness may have a bias. He is ever ready to bring all the facts of his troubles together; he subjects

them to analysis, day by day, and holds them with a firm grasp; the more he thinks of them, the more he feels hurt; he makes the sum total much larger than it really is; in fact, he magnifies and exaggerates his case; in a word, he tries to deceive others, as well as himself. He readily passes from self-deception to the deception of others. Then the case is not one of exaggeration, it is really one of deception. Perhaps cunning, duplicity, and falsehood take the place of honesty, reason, and truth. Such products are derived from the territory of malingering symptoms. A patient or a litigant may simulate a pain, but neither can counterfeit the signs of a broken bone.

70. An accident happens to some one; he is slightly injured, and is taken home. He is put to bed, and is visited by his physician, who finds a small bruise upon his patient's back. This is the sole and only sign of in-

jury. With all his sagacity, the physician cannot find any other sign. The symptoms are as follows: the patient cannot walk; he has but little feeling in his lower limbs; he suffers great pain in his back; he has persistent headache; his appetite is gone; he is wakeful at night; he has unpleasant dreams; he loses his ambition; he stays in bed and grows worse from day to day. Then he gets a lawyer, and brings a suit for damages. Distinguished experts are employed on both sides, and they greatly differ in opinion. After months, and sometimes years, the case is tried. During the trial the litigant witness is carried into court on a bed. The sympathy of the jury goes out to him. He is the picture of despair, suffering, and wretchedness. The exposure of his systematic deception counts for nothing. A large sum of money is awarded him for his injuries. The case is ended, and cannot be

tried again. The reasonable certainty, so-called, of permanent disability is not now, as they say, reversible in law. The litigant has had his day in court: his friends carry him home, and put him into his accustomed bed, where he remains for a time. It is not very long before he begins to improve: at first he sits up in bed; day by day he sits up more and more; time goes on and he is assisted into a chair; soon after he begins to walk with a pair of crutches; in a week or two more he hobbles out on the street; he gains strength so very rapidly now that everybody wonders; at last he attends to business; his progress to recovery is rapid and sure; the fame of his family physician has greatly increased, for no other skill could have restored him from so great an injury: and then he has been paid a handsome sum to compensate him for all his suffering, — and then he happens at last to

think that he has not got much of it after all. This is not a case of exaggeration, it is a case of deception. Cunning, duplicity, and falsehood have erected an amazing superstructure of fraud upon a foundation so slight and unsubstantial that the very breath of Justice ought to level it with the ground.

71. In the trial of medico-legal cases, it is evident that each side is entitled to have its medical jurist. This right is second only to that of having an advocate. Out of the realization of this right arise some important practical questions. One question which has been much discussed, and on which there is a diversity of opinions, is this: Who shall select the medical experts? In practice each litigant selects his own experts. This is according to law. In what way is it wrong? How does it violate any personal right? How can it go against any ethical principle? If it accords with right, why

should we change the law? Some one says: Let the Court select and appoint the medical experts. It is certainly the duty of the Court to decide upon the admissibility of testimony. Then let us ask the question, Is it proper for the Court to call witnesses, even though they are medical, and at the same time exercise the office of saying whether their testimony is relevant or not? Well, the objector says, the Court has a better knowledge of who are experts than the litigant. It is probable that this proposition cannot be maintained. The Court is versed in law, but is not a doctor. How few doctors know about the qualifications of other doctors. It is reasonably certain that the experts selected by the litigants will be as good as those appointed by the Court. Then there is no valid reason why the constitutional right of any citizen to have his own day in court with his own witnesses

should be abridged at all. Finally, let me add that the family physician of the Court may or may not be a skillful practitioner or a competent expert. In fact, the Court, in making selection of experts, may overlook the best and the most desirable.

72. Once the author was requested by a defendant to examine an injured plaintiff, for the purpose of testifying in court. The injured part was permanently and completely disabled, and the defendant's lawyer told me that he would not detain me as a witness, for he was not going to corroborate the testimony of the other side. The lawyer defended the case on its merits, showing that his client was not liable, because it was proved that the plaintiff had been guilty of contributory negligence. The principles of practice involved in this case are often applied, and accord with the right of the litigant to call his own medical experts, or not, as he may deem best.

73. It may happen that the medical evidence proves too much, and that it is in serious conflict with the real facts of the case. A case was tried in which the medical witness for the plaintiff testified that the right clavicle and two ribs had been broken. Three surgeons of experience, on the side of the defendant, testified that they could not find any signs of breakage of these bones. The jury disagreed, and the case was re-tried. Then on the re-trial, the medical witness of the plaintiff testified that there had been a severe contusion of the shoulder, — which was substantially the testimony given by the defendant's experts at the previous trial. The jury brought in a verdict for the plaintiff. This case illustrates how important it is for the medical witness to hold to the truth in giving his testimony. At the re-trial, the plaintiff's case was won upon the medical testimony given by the defendant's experts in the first trial.

74. A doctor treated a case of broken knee-pan, and testified in regard to the result, when the patient was suing for damages. In substance his testimony was: That the bony fragments were slightly separated and that they had good union; that there was little or no deformity; that the disability was very slight: The author examined the litigant witness and testified: That there was no union whatever of the fragments; that they would separate four or five inches when the leg was flexed; that there was considerable deformity; that there was serious disability. Out of the facts of a case like this two important questions arise: —

75. (1) One relates to the doctor's estimate of his own work. The doctor is often anxious to have his own work rated high. Then he says that the results of his treatment are of a high order. For he takes

pride in his work. The difficulty is in the fact that he does not separate what he can do from what he cannot do. In this, as in all other matters, it is best to hold to the truth, if you know what the truth is. If you are honestly mistaken, you are doing far better than you would be if you were to affirm what is untrue for the sake of making it appear that you had brought about a good result after treating a fracture, when you had not. (2) The other relates to the result of the treatment. Admit that the defendant in such a case as this is liable, and that he ought to pay for the injury sustained by the plaintiff. The case as presented had non-union of the fragments of a broken knee-pan, accompanied by serious disability, such as would justly call for heavy damages. Is this disability without remedy? Then the damages must be paid. So say the jury. Now admit that a reasonably safe operation

can remove a large part of the disability. Then it seems to me that the defendant has a right to have this operation performed, and so have the amount of damages he has to pay rightly diminished. At the same time, the plaintiff would be greatly benefited by the operation. If such an operation comes under the head of ordinary skill, would the law require it to be performed? The defendant is not liable for the negligence of others, even in such a matter as this.

76. Shall the medical witnesses of both sides consult on the evidence — the medical facts, such as they have — before they testify? Yes, if opposing counsel so direct. And yet, is this a wise thing to do? How ought this matter to be managed? In the first place, each litigant has a legal and constitutional right to produce his own witnesses to testify in his behalf. In what way does

an expert differ from any other witness? Suppose opposing counsel were to say to all the witnesses: Consult together on the facts of the case, and try to come to some agreement, so that all will testify the same way. What one witness does not know he can learn from another. Then the testimony of each witness will be like that of every other. There will be no conflicting statements, and the dignity of the office of testifying will be maintained, and there will be no impediment in the administration of justice. Then it would happen that all the serious duties and the difficult work of the Court would be turned into a pastime and a play. And where would justice be? Can any one possibly tell? In what way does the consultation of medical witnesses differ from the consultation of other witnesses? Let us go a little more fully into this matter. A medical witness examines a case

and finds certain facts and forms certain opinions. These facts and opinions form his testimony. They are the evidence he gives in court. Another medical witness does the same thing, and relates his testimony, — gives his evidence. Is there anything illegal or wrong about this? Is it incompetent? In any way, does it lead to injustice? Why should an ignorant and inexperienced doctor go upon the witness stand and relate facts and state opinions he has learned from one of mature knowledge and ripe experience? Such a witness would not be permitted to say: On examination of Mr. A. I found such and such facts, and formed certain opinions; but on consultation with the other doctors, I have found it expedient to adopt their facts, and have changed my opinions to make them agree with what they think in regard to the case. Yet, he is permitted to testify as to the facts

of the case and give opinions, only he leaves out of his testimony the very essential fact that he is giving as testimony the facts and the opinions he has heard from others. *De facto* this is hearsay evidence, but the Court and the jury are led to believe that it is direct testimony.

77. Now, what is the motive for these consultations of the medical witnesses before trial? In whose interest are they suggested? For what purpose are they desired? Who wants them? Are they to aid opposing counsel? Will they promote the administration of justice? Will they favor the detection of truth? Do they aggrandize the medical profession? What does the world care about difference of opinion? Every man wants to know what is true, what is right, what is just. No one cares for anything but justice. Let it be said that justice stands supreme over

all, — hence justice must be preferred to litigants, counsel, experts, and even the Court itself. Put the matter in this way: an accident happens; an injury is caused; a suit for damages is instituted; the case is coming on for trial; one medical expert holds one opinion; a different opinion is entertained by another; indeed, they do not all agree; it is "too bad" to have this so; it brings discredit upon a beneficent and liberal profession; it belittles the position and the "trade" of doctor; the medical profession will not be so much respected; it is desirable to keep the confidence of the people; let us avoid disagreement, if we can; we ought not to be scandalized; our usefulness will be impaired; our reputation will be assailed and tarnished; we shall not be respected and trusted by the community, — a very sad and undesirable state of affairs: let us consult beforehand; we can come to

some agreement; we can change our opinions, if we want to do so; we can adopt the opinions of others, for they may know more than we do; we will help the weak brethren, since they are more important than justice; we will all see the same facts in the same way; we will all have the very same opinions; we will all tell the same story; we will stand shoulder to shoulder for the cause of our trades-union: then counsel will be brushed aside; then the Court will be impressed with our wisdom; then the jury will be enlightened by our consentaneous knowledge; then the verdict will be conclusive and final; then the people will marvel at an ill-used class of men, who have aggrandized themselves: the Judge will have no difficulty, for he will only have to expound the law; the jury will be unanimous, for the testimony will be all in the same way and to the same effect; in fine, the profession will be without a peer.

78. Let the experts consult: suppose they cannot agree; suppose they have an honest difference of opinion; each one would be glad to see and think as the others do; in fact, they would prefer to agree, if they could; but they cannot agree. What good would such a consultation do? It is plain that the jury, if they could, would have to decide upon the points of difference, — the difference in the opinions of the experts. Then why not let each expert testify as to the facts he himself finds, and give his own opinion? Of course we shall know that the doctors disagree: but judges disagree; lawyers disagree; juries disagree. We do not therefore dispense with judges; we continue to employ lawyers; we do not cease to impanel juries; and we still send for the doctor when we are sick or injured. It seems, then, that the consultation of medical experts before a trial is not by any means a remedy

for the apparent defects of expert testimony; it will not aggrandize the medical profession; it will not bring to light every hidden fact; it will not insure the perfect administration of justice. Suppose we illustrate these points: —

(1.) A poor woman was shot in the right temple, and died in a few hours. The doctors who were called to testify as to the cause of her death told the coroner and his jury that the pistol-shot wound was self-inflicted. The skin about the wound was as clean and unspotted as if the pistol had been twenty feet away from her head when it was fired. It would be physically impossible for any one to hold the muzzle of a pistol far enough away from the temple under such circumstances to prevent the formation of powder-marks upon the skin. It was reasonably certain that a murder had been committed. And yet the medical wit-

nesses who had been called to testify had consulted beforehand. If all the medical witnesses in this case had been called and examined, the guilty might have been convicted and punished.

(2.) A man was suspected of being the slayer of another who was found dead in the highway. The evidence to convict him of the crime was the existence of blood-spots on his clothing. The medical witnesses made an examination, and agreed that these were spots of human blood. The suspected party was convicted and sentenced to death. But before the day of execution it was clearly shown that the convicted man was innocent. Then it came to light that one of the medical witnesses had held the opinion that the spots on the clothing were not from human blood, but from some animal. He had been coerced, as it were, into agreeing with the opinion of the other medical witnesses.

79. At times, a lawyer needs the advice and the assistance of a doctor in order to prepare for the defense of the imperiled interests of his client. Then the doctor becomes, as it were, associate counsel. It will be his duty to determine medical facts and form medical opinions. He may outline the examination of the medical witnesses. The medical jurist may write out the questions which counsel will need to ask the medical witnesses. He will indicate the answers that these questions ought to have. The need of all this flows from the fact that counsel is ignorant of medicine and seeks for information and knowledge in the only way in which it is possible. This position of associate counsel is most delicate and responsible. It may be further elucidated as follows: —

80. The medical jurist, in all he says and does, must not be an advocate. His office is

to examine facts and search for the truth. Everything beyond this is foreign and superfluous. He must advise counsel without prejudice and without bias. His suggestions must not show the footprints of sinister motives or of unfair means. He is in a field of practice where he is sole judge of his own conduct; he has special knowledge; he is an investigator; he is a scientific man; he is eminently practical; he comes to advise; he explains difficult questions; he speaks for the truth. To expose the ignorance, the arts, and the fallacies of experts by profession; to defend the truth against the assaults of the adversary; to aid in holding up the hands of an upright and conscientious advocate, is a duty that need not bring shame to any man.

81. To advise counsel, to write out questions for medical witnesses, to assist in meeting the evidence of the other side, in

a word, to become, as it were, an integral part of one side of a case, and then go upon the stand as a witness and testify, may leave the medical jurist in a doubtful and uncertain position. The jury will be very apt to conclude that he is a partisan, that he is working for his side, that he is really an advocate, that his testimony is biased, that he is under the influence of the side which called him. Yet this need not be so: the medical jurist need not be a partisan, nor need the jury think that he is. The medical jurist can advise counsel and then testify, and at the same time he can be truthful, unbiased, and upright. The question is perhaps one of expediency and policy, and may be met in the following manner: let the medical jurist be simply associate counsel; let him supplement the legal advocate; let him advise and suggest in regard to the conduct of the medical part of the case; let

him arrange the medical evidence; let him aid in the construction of the hypothetical questions; but let him not take the witness stand, — then he may be part of the advocacy of the case. And then the medical experts, who have no relation of associate counsel, are only witnesses to tell the truth, and nothing but the truth, which being told, will leave them free from all imputation. In this way the medical jurist becomes a legal part of the trial of the case. If he is honest, upright, and magnanimous, he may deserve and claim the same consideration and respect as the attorney with whom he coöperates. And now we may add: a medical jurist may go on the witness stand to testify, and even then do all things right, just, and well, — that need not make him dishonest, untruthful, and unjust. It might be that the real solution of his difficulty of practice will be found in the fact

that the attorney has become qualified in every branch of medicine and surgery. If he were so qualified, he would be competent to try the case alone without the advice of a medical jurist. And then the medical jurist would be relegated to the office of medical witness, where he would find his legal occupation, as one who is set to answer questions.

82. Cases like the following have come to my knowledge: (1.) A trivial injury has followed an accident. An expert by profession has magnified the resulting deformity and disability. He has affirmed that there will be serious deformity and disability for life. It may be that he desired pecuniary gain and hoped to reach it by means of the arts and devices employed to confound lawyers, mystify judges, and deceive jurors. (2.) A severe injury has been followed by serious results: there was marked deformity

and notable disability. A pretender to expert knowledge, in order, perhaps, to please his employer, says that the effects of the injury are slight, and that the disability will be only temporary. It is the duty of the medical jurist who is associate counsel to help prevent and expose such practice. He is not in court to please litigants. It is his business to detect falsehood, to tell the truth, and let the consequences take care of themselves. He must stand at the door of the temple of Justice, in order that he may help to keep it closed against deception, falsehood, and dishonor.

83. Suppose the doctor has been subpœnaed and has accepted the witness fee. He is in the same relation as any other witness who knows any facts about the case. He must appear in court and testify. It will be at his peril, if he does not obey and fails to appear, for he alone can give the essential

facts of the case. His absence must depend on some substantial reason, such as sickness, or such as attendance on a case in which life would be in peril if he left it. In regard to the expert, he appears in court when he has been engaged to testify; and he often attends without a formal subpœna. Yet I have known attorneys careful not to omit the subpœna in any case, for fear that an expert might fail to be present and attend to his obligation.

84. Some important questions have arisen in regard to the attendance of experts. Can they be compelled to appear? Can they be made to testify? Can they safely neglect to obey the summons, — the commands of the subpœna? Suppose a subpœna is served on an expert who knows nothing of the facts of a case which is coming on for trial. The expert is competent and can render valuable aid to the litigant who

wants him as a witness. What are the legal duties and obligations of the expert under the circumstances? Is he bound to appear in court and testify? It could not be shown that he had any information or knowledge of the facts of the case, so it could not be proved that his non-appearance could cause harm and damage to the litigant. But it may be that there is another view of this question. The opinion of the expert might be of great value to the litigant, who might suffer loss and damage if he did not attend. Yet, let us see what the right of this question is. An architect cannot be forced to construct a bridge or build a house; a lawyer cannot be compelled to give his professional services to a litigant; a doctor cannot be compelled to undertake and attend the case of a patient; an expert cannot be brought into court and made to think, reason, and give opinions on the testimony

of others. At the same time, it is good policy for the expert to obey the subpœna and appear in court. In this way, he shows that he is willing to respond to the presumption that he has been rightly called. As it is a personal service, as his experience is his capital in trade, as his opinion will be of value to the litigant, he may demand his fee. That is his unquestionable right. If he is not paid, he cannot be held. He is at liberty to go. All this is on the assumption of his not knowing anything about the medical facts of the case. On the other hand, the expert may not volunteer to become a witness in any case: he must wait to be called.

85. The State sometimes becomes a litigant, and needs the services of experts. The same rule holds for the State that holds for the individual. The State does not have the right to take the services of the expert without compensation. It no doubt has

the power to compel the attendance of experts in such cases as need them, but it must pay for their services. In this respect the State differs from the individual: the individual cannot compel the attendance of the expert, who is legally free to refuse. But it would appear as if the State could summon an expert, and then pay him for his services. Without an expert an injustice might be done, and this would be against public policy. But if an expert were subject to call without compensation by the State, he might thereby be deprived of the means of support, and that would be an unjust and an unnecessary hardship, and it would also be contrary to public policy. No one can doubt that the expert ought to receive reasonable compensation for his services, not only from private persons, but also from the State. The litigant who can pay for the services of an expert can always obtain one,

and it seems to me that the Court might appoint an expert as counsel is assigned in certain cases, — the Court might appoint an expert to testify in certain cases, for the protection of those who cannot make their own defense.

86. To send a client to a medical expert so that he may make an examination and gain a knowledge of the facts, as it were, by deceit and fraud, is not the practice of an upright and conscientious attorney. It more frequently happens that the expert has to defend himself against designing litigants, who go to him as if they were patients desiring treatment. Upon careful investigation, I invariably refuse to have anything to do with a patient who would try thus to deceive me. This is my undoubted legal right; for no one can compel me to attend him, especially if he begins with an act of dishonesty. Our appeal is to the legal pro-

fession to protect the medical profession from all unjust invasions of this kind. Lawyers have nothing to lose by such a course, and they have everything to gain, for doctors will put themselves out of the way to do a favor to a lawyer who treats them according to the golden rule.

87. The medical witness stands in the presence of the litigants, the jury, the Court, the people, and the ever-living God, and makes a solemn promise; he swears or affirms that he will tell the whole truth, and nothing but the truth. The promise, the declaration, the affirmation, the solemn invocation, is made, not only to the Court, but also to the All-wise Judge who knows all truth, who never forgets, who makes no errors, who makes no mistakes in his decisions, and whose laws are followed by inevitable consequences. This is the nature of an oath. This is what it means. It is the sol-

emn promise or affirmation that is binding. In one or the other of these lies the obligation or the duty. It is the violation of this promise or affirmation which constitutes the crime of perjury. It makes no difference whether we touch or kiss the Book, or whether we hold up our right hand, if we promise or affirm in the presence of the All-wise Judge. One form of oath-taking is as good as another, and just as binding if the witness speaks from the forum of his conscience.

88. A prudent lawyer will find out beforehand what a medical witness is going to say when he testifies. He will try to measure the exact meaning of the words of the witness, as well as the nature of the facts they are intended to describe. A written statement of the medical facts will bring them clearly before the mind of the witness, and it will enable the attorney to read the

evidence, and then for the most part he can frame the questions to be asked. He will also get the opinions of the witness, and have them reduced to writing, in order that he may have them before him, and then he can make no mistake as to their meaning.

89. The examination-in-chief, or the direct examination, begins with the questions: What is your name? Where do you reside? What is your profession? How long have you been in practice? What has been your opportunity for professional work? What kind of cases have you been in the habit of treating? With what public institutions have you been connected? These questions establish the identity and the qualifications of the witness. It is the duty of counsel to ask these preliminary questions and have the answers put on record, in order that the circle of legal evidence may be complete. The record must give a reasonable account

of the identity and the qualifications of the medical witness.

90. In the direct examination, the lawyer asks such questions as do not suggest their answers. The object is to leave the witness free to tell the plain and simple story of the facts of the case just as he knows them. For a suggestion as to the answer to be given might lead the witness beyond his own knowledge of the case. The questions are: What did you see? What did you hear? What did you observe? What did you find? Did you form any opinion? If you did, what was your opinion? The answer to each one of these questions must be given to the jury. Not one of them can be answered by "yes" or "no," except one, "Did you form any opinion?" They are not leading questions. They are direct interrogatories, and must have responsive and descriptive answers. How plain, how sim-

ple, how just is this legal procedure for getting facts before the Court and the jury! If the witness has the truth to tell, and desires to tell it, the Court will receive it, will weigh it, and will declare what it means. The design of the law is admirable, beneficent, salutary. And it takes into view the process of weighing the witness himself, in the very scales in which justice weighs the facts of the case.

91. When the witness has ceased to speak, when he has told his story, then comes the question of counsel: Is that all you know in regard to this case? Have you told all you know about it? Let me say to the witness, in this question there can be two objects: the examiner may rightly desire to find out if the witness knows anything more than he has related. That would be desirable, competent, proper, and just. But if the witness says that is all

I know about the case, he will be very apt to get into difficulty, when he is taken in hand by the cross-examiner. The witness may mention some fact which he has not already related. Then he will have to give a reason for the omission and explain his previous statement. Did he forget or did he conceal the omitted fact? The question is a very troublesome one, and I have known the Court to ask it. In reply to the question, Is this all you know about this case, the medical witness may answer as follows: These are the essential facts and points of the case that I found and that have come to my knowledge; if I should recall any relevant fact that I have not mentioned, I will relate it. I have known an examiner to get a witness to say that he had related all he knew of a case, and then draw from him further facts, when he would try to make the jury believe that

the witness was insincere and untruthful. In making these suggestions, it is our object to put honest witnesses on their guard against the strategy of the advocate.

92. It is not good practice for counsel to ask two questions "at once," nor is it a good thing for the witness to try to answer two questions "at once." If this happens, the witness may answer first one question, and then the other. More than once have I known the Court to request the examiner to separate his questions. A plain, single direct or cross interrogatory is always best, for all parties concerned. It tends to bring out the truth and promote justice. The attorney who has a good case will have nothing to lose and everything to gain by bringing the issue before the Court and the jury in the simple words of the naked truth. He will ask only one question "at once," and so on to the close of the trial. But if his ad-

versary asks a double question, he will see to it that the witness has the opportunity to answer each one separately.

93. A skillful lawyer and a competent expert will coöperate in the work of bringing the medical testimony properly before the Court and jury. One is justly interested in obtaining, and the other is ever ready to give, the plain facts of the medical evidence. But it is difficult for the most expert witness to answer the crooked questions of an incompetent examiner. On the other hand, the most sagacious lawyer may not be able to get at the truth, if an ignorant and presumptious witness is on the stand. But an illiterate lawyer and an uneducated doctor will make a most pitiable spectacle, as they distort the facts and mutilate the truth of the evidence. In fine, an incompetent witness may be thoroughly weighed by a shrewd lawyer, and a brow-

beating lawyer may have merited chastisement at the hands of a skilled witness. It need not be insisted upon that the witness who is intent on telling the truth is in an impregnable position. The truth agrees with itself on all sides, and is stronger than any man, so that no man can break it down.

94. Sometimes the examiner asks a question that is objectionable to opposing counsel. The duty of the medical witness is to wait for the Court to sustain or overrule the objection. The Court is the sole judge of the admissibility of testimony; it is the business of the Court to weigh and explain the meaning of the testimony; so that the medical witness must be under the direction and control of the Court. In fact, as has been said, the Court is counsel for the witness, and will protect him from the unfair and the unjust assaults of the examiner. To persist in answering a question when

there is an objection raised seems to put the witness in the position of an advocate. Let the witness answer in haste, and let his answer be stricken out, then his standing with the jury may be compromised. It is better for the witness, therefore, not to make haste in answering questions. He may take a reasonable time to give his answers, no matter how urgent the advocate may be.

95. When the cross-examination begins, there are generally two leading presumptions which guide the counsel who conducts it. He presumes that opposing counsel has asked for and obtained from the medical witness only those facts and opinions that are favorable to the side on which he testifies. It will be seen that this is a matter which affects counsel, and that it need not reflect on the medical witness. The duty of the one is to tell the truth ; the duty of the other is to defend his client. Counsel asks

only for those facts which are favorable to his client's case, and as a matter of course, the witness gives them; for the witness may not volunteer testimony. He may indeed tell all he knows when he is asked for it. The cross-examiner also presumes that the medical witness is friendly to the party who called him, and that he is hostile to the party against whom he testifies. On the basis of these two propositions, which may or may not be true, the cross-examiner proceeds to the performance of his high duty in two different directions: (1.) He does his best to bring to the light of day any facts known to the medical witness that opposing counsel may not have asked for, or that the witness may have concealed. (2.) He exerts, if need be, all his skill to remove the exaggerations that the medical witness may have made of his own motion, or may have been led into by the arts of his adversary.

Hence, there are two things for the medical witness to do during the examination-in-chief, in order that he may come out triumphant from the ordeal of a masterly cross-examination: (1.) He must tell the exact truth; (2.) He must form correct opinions. He must leave out of his testimony all words and expressions that will in any way exaggerate the facts, or diminish their force. He must take the facts from the storehouse of his memory and put them in the scales of his judgment, and then give the Court and the jury the exact weight. He must also bring the proven facts before his conscience, and then form such an opinion as will stand the test of reasonable certainty. He must not say that he is reasonably certain, when the facts will not sustain his opinion that he is reasonable and that he is certain. He must not conceal anything that is called for, since that might leave him

in the position of a prevaricator, or of one who did not intend to tell the whole truth. He need not take any thought about the effect of his testimony, when he tells the whole truth. He may always feel that it is not in the power of any cross-examiner to assail and overturn the truth, if it has been told in simple and plain words. While he may not volunteer anything, he is at liberty to tell his whole story, if it is asked for. Yet he may keep in mind that he does not conduct the case. But the medical witness may properly offer to make any statement that may be necessary to remove apparent contradictions in his testimony; he may ask to be permitted to explain any point that has been left obscure; he may come forward and request the Court to allow him to make corrections in his testimony.

96. The rule of practice is for the attorney to obtain the testimony from his medi-

cal witnesses. He attempts to prove one point by one witness, and other points by another. Or he may have a number of witnesses testify to the same facts, only taking care not to have too many, — two or three witnesses are sometimes better than a greater number. The cross-interrogatories relate to the testimony given by each witness. If the cross-examiner goes into new matter, the witness becomes so far his. Then this witness may be cross-examined on this new matter by the attorney who called him to testify. The plaintiff's attorney may put one of the witnesses of his adversary on the stand, in order to find out the line of the defense. The witness must then tell exactly the same story that he would if he were testifying for the defendant. Nothing can harm the witness, if he tells the truth. It makes no difference to him when and where he testifies, so long as he tells the truth in a

simple and direct manner. But it is not always safe for an attorney to call the witness of his adversary. I have seen such a procedure result in disaster to the case being tried, by an attorney who put it in practice.

97. Finally, we may add that there are two things for the medical witness to do during the cross-examination: (1.) He must give, if he is asked for them, any medical facts that he knows and that have been left out, or that have been overlooked in his direct examination. The fact that he has been employed by a litigant who has paid him an expert fee could not justify him in withholding any competent evidence of which he had knowledge, although it might tend to establish the case of the other side. All the pertinent and relevant facts belong to the issue between the litigants, and must not be kept back. The witness must continue to affirm, if they are valid, the truth

of the facts that he has already given in his direct examination, and must not permit the arts of counsel to change or diminish their just and proper weight and character. In a word, he must be a firm and fearless champion of the truth. (2.) He must have no bias; he must be impartial; his aim must be to establish justice.

98. The leading difference between the direct and the cross examination is in the form of the questions. In the former, the witness is asked to tell what he knows about the case. The questions do not suggest their answers. In the latter, he may be asked ordinary leading questions, as well as those that suggest their answers, in the strongest possible manner. In fact, the cross-examiner may go all over the story told by the witness on his direct examination, taking up the points step by step. The answers that he gave on the direct examination may be

put in the form of questions which may be answered by "yes" or "no." The legitimate object of this is to test the witness. Is he telling the truth? Is he a competent witness? Is he honest? Is he a partisan? A witness and the evidence that he gives are so closely related that it is impossible to separate them, — the facts as stated by a witness are in some sense very much as he sees them, — hence we find the testimony of one witness differs from that given by another. The witness appears to tell us about the facts seen by him very much as he sees them, if he is honest.

99. The theory of the direct examination is, that the witness is competent, honest, and truthful; and that he can and will tell what he knows of the case without help or suggestion; and that he has no interest in the result of the trial, except that of seeing the right prevail. The theory of the cross-

examination is that language is figurative and may be made to express various shades of meaning; that the witness may be hostile or incompetent; that he may have exaggerated or prevaricated in his testimony; and that leading questions will expose partisanship and detect the bias of the witness and find out the truth. Indeed, the witness is, as it were, between two millstones, which, in the dual examination, may grind and sift him exceedingly fine. He can afford to produce some bran, if the flour is good and abundant. In any case, it may happen that the cross-examination will be the more important, since it may establish the truth more firmly, or it may show that what we supposed to be the truth was only a tissue of falsehood.

100. The cross-examiner treats a witness in various ways. A witness whose testimony is unimportant is told to stand aside; one

whose testimony is only corroborative is dismissed at once; one who is conceited and incompetent may be asked certain questions: Did you ever treat a case like the one in issue? His answer is, No. This shows his deficient experience. Then he is asked: Have you read the literature of the subject? Once more he answers, No. Then counsel tells him: That is all, sir; you may stand aside. In this course, the cross-examiner is, no doubt, right and just, for it is his duty to detect and expose the expert by profession, one who is not qualified by reading or by practice to give reliable opinions on professional subjects. For the cross-examiner to fail in the performance of this duty would be to leave his client open to the assaults of the adversary.

101. When reputation, character, property, and life are in peril, and an essential part of the issue depends on the testimony

of a medical expert, it is no doubt the duty of the cross-examiner to determine his qualifications by appropriate tests. The medical expert is, or he is not, what he holds himself out to be. In the latter case, he is a fraud, and deserves exposure; in the former, he gains greatly in the esteem of others by showing that he is genuine. The cross-interrogatories may be: How long have you been in practice? How many cases like the one in issue have you treated? Can you relate the facts of any one of these cases? Let it be remembered that the witness cannot be compelled to disclose the names of his patients, though he may use their cases for illustration in his testimony. The general statement as to qualification given on the direct examination may be analyzed and reduced to particulars by the cross-examiner. The cross-examination may be so far extended as to show the real qualification of

the expert. It is the duty of the expert to show by all means at his command that he is the genuine article.

102. The most searching and careful cross-examination is reserved for the leading and skilled medical witnesses. We say again, that such a witness has a cultivated mind; he has trained his reason and judgment; he is a man of education and large professional experience; he knows the meaning and import of words; he can make a right use of professional terms; he thinks clearly and quickly, and can reach sound conclusions at once; he can see and understand the facts that are relevant to the issue; he can judge of the designs and motives of counsel; he can perceive if counsel desires the truth, or only wants to win his case by any means at his command. Such a witness has already told the truth, and will not change what he has said; he will hold

all his answers to the standard of the truth; he will form all his opinions on the basis of reasonable certainty; he will feel that truth agrees with itself on all sides, and must ever be consistent; he will let the attacks of the "cross-advocate" come with all their adroitness on the position he holds; the onset will be in vain, leaving him securely intrenched in the facts he has related and the opinions he has expressed. Such a witness will make a determined stand for the truth, no matter what happens to the litigants. The profession will gain respect; the truth will be victorious; and justice will prevail. Evasion, prevarication, and exaggeration will not elevate the position of medical expert. Able counsel will defeat the designs and attempts of experts by profession, even if they claim to be professional experts. When the pretentious and the ambitious have been impaled by the legal weapons of

the cross-examiner, there will be none to pity; and when the real expert remains securely intrenched in the citadel of truth, the just will rise up and applaud.

103. Medicine is not an exact science. The practice of the profession is progressive. To-day it is one thing, and to-morrow it will be another. What was good practice a few years ago has now been set aside. Yet some points in practice will never be changed. A great law or a great principle of practice may not be changed. But it has happened that equally learned, experienced, and competent doctors have had different theories of disease, and have carried out the treatment in different ways. One will give one medicine and another will give something else. The practice of medicine varies, not only with the times, but also with men. And it is important for us to ask what bearing this variety of theory

and practice has on questions of law and authority. If the practice of medicine were exact, and established on an immutable basis, the question of authority would be answered, and the application of the law would be simple and easy. The established and immutable practice could be printed in a book which could be used as an authority, — something like the decisions of the Court of Appeals. Then the medical jurist would differ from this authority at his peril. But there is no such standard authority as this at present. Yet we have standard authorities of another kind. These authorities are in the form of certain books.

104. What is the gist of this question of medical authority? What do we understand by a standard work? Is it the book, or the author? Who does not know that doctors differ? Who does not know that authorities differ? They are like doctors,

who disagree. Who shall say which is right? When two books differ on any point, they cannot both be authority. If one is right, the other must be wrong. Let us pass from two books that differ to the consideration of a single book. Suppose a medical witness admits that a book is accepted as authority in the profession. What does this mean? Are we to accept the entire book? Are we to admit the validity of every sentence, every word? Is there no weak point in the book? Can any man write a book without a mistake? Is any man above an error of judgment? But it is said that a book is a deliberate piece of work, in which the author is under a solemn obligation to write the truth, and that, as it were, he speaks to the public as if from the forum of his conscience, in some measure as the witness speaks to the jury. But do not the best men fall into errors and make mis-

takes? Is not a trial in court judicially deliberate? Does that prevent errors and mistakes? Do the deliberate purpose and the solemn obligation put the stamp of authority on an author's book? The medical witness is tested by the searching questions of the cross-examiner. A book cannot be cross-examined; but the author might be, if he were in court. Some one says: It is what the witness thinks of the book. Again, some one says: It is what the profession think of the book. In the name of justice, how can any man, or any book, be the final authority, when the practice of medicine is progressive?

105. In the nature of the case, the doctor is not bound, in his practice, to follow explicitly and to the letter the rules and precepts laid down by medical authors. If this were so, there would be an end to medical progress. And we then would have no

more improvements and advancements in the treatment of the sick and the injured. It would be like assuming that medicine is an exact science, and that the art of healing had been perfected. Everybody knows that this is not so. As a matter of fact, the doctor could not follow different rules and precepts in treating the same case; hence, where authors differ, he would be obliged to choose some one as a standard, and make him the guide to his practice, and, to some extent, that would be acting upon his own judgment. It often happens that a doctor's practice is better than that of the book of so-called authority.

106. What is more, no two cases are exactly alike, and so cannot be treated in the same way. In medical practice, as time goes on, new points and conditions arise and are met, which cannot be brought under the rules and precepts laid down in the books.

The practitioner will be under the necessity of applying the broad and general principles which lie at the foundation of the science of medicine, — and he will have to do this according to the dictates of his best judgment. The difficulty here noted is sometimes carried over into medico-legal practice. It cannot be settled by reference to authorities. The expert must be an authority in the premises, — somewhat as the Court is an authority on the admission of evidence. The expert may err, so may the Court.

107. I am clearly of the opinion that the rigid adherence to the doctrines, rules, and precepts found and taught in the so-called standard medical and surgical books that are paraded in our courts by experts and counsel is, in some respects, against sound public policy. When a doctor becomes a medical witness, and is under the sanctity and obligation of an oath, must he

say that a given book on medicine or surgery is standard authority? Must he be compelled to accept the entire contents of such a book, errors, mistakes, and imperfections, with all that is sound and reliable? Must he follow, as it were blindly, its rules and precepts in such a manner as to contradict his own experience?

108. It seems to me that a medical witness may contradict an author in the same way and with the same force as he would contradict another medical witness. Because an author says one thing and a witness says another does not prove that the author is right and the medical witness wrong. Suppose witness A. is asked if witness B. has a good professional reputation. If he has, let him say so. But that does not imply that A. should adopt the opinions of B. The opinions of A. on assumed facts that are similar to the relevant and admitted facts

of the issue are wanted. He may no doubt think very highly of witness B., but he must testify for himself. Because I esteem and respect another doctor does not oblige me to practice or testify as he does. He may justly claim the same respect for his truthfulness, in every way, as I do. Why should I move my conscience from my own convictions upon those of another, even if he has written a book? I fail to see why doctors have not a right to disagree upon any subject whatever. I do not understand why their differences of opinion should be the sport of men of sound sense. I can see why narrow-minded men affect merriment over the disagreement of doctors. Who makes himself merry at the disagreement of judges? He might be put under arrest for contempt of court. Who makes sport of the disagreement of a jury? Who is there that cares for the disagreements

and wrangles and contentions of lawyers? It is an old precept which throws suspicion upon the testimony of witnesses who agree exactly.

109. We may add the following points. The facts and opinions expressed by an author in his book, if the words are read in court, are in the nature of hearsay evidence. The Court may not take the evidence of fact from a stranger; for the author is absent, and may be dead. He is not, and cannot be, a witness. He never knew anything about the case in issue. If he were in court he could not testify as to matters of fact; but if he were to give an opinion, he would have to be cross-examined. Then why should an opinion be taken from his book, and the right of cross-examination waived? If the facts proven of the case in issue could be shown to be true of the case or cases related by an author, his opinion

might be admitted as a probable answer to a properly constructed hypothetical question; and even that should have but little influence, and there might be doubt as to its admissibility.

110. Again: new books are written from time to time; they differ from previous books; the books of to-day are better than those of yesterday. This must be so, since medicine is progressive. The book that was an authority yesterday is in some respects obsolete to-day: a better authority has arisen in its place. It might then happen that an injustice would be done. The rights of a citizen might be imperiled by some one whom he has never seen. He has a constitutional right to be confronted in court by his accusers and their witnesses. Do not those who testify against him stand in some measure for his accusers? Can, therefore, the words of a man who is absent or dead,

even though they are printed in a book, be introduced to show that a litigant has not a good case? No doubt they can, for this is a common rule of practice; but how far is this practice right and just?

111. We may have a better understanding of the question of surgical authority from the following comparison. A law is a rule of action, and is the same for all until it is repealed. It is certain, and its force is binding. Its true meaning has a controlling force. A case cited according to its practical intent and working is an authority. An authority of this kind is general in its influence, and must be respected. In regard to surgery, we may make the following remarks: —

112. If a rule in surgery becomes as general as a law of the land, then we may say of it just what we have said in regard to law, it is binding, it is authoritative; and a

case treated according to it may be cited as an authority, and have weight before the Court, and exert an influence on the jury. In so far as this point is concerned, it may be proper to make citations from a reputable surgical author. There is no doubt that this practice is competent and admissible. But as to points on which practical men and experts differ, and there are many such points, it is clear that there can be no authoritative rule. In such cases a citation of authority may bring peril to the just cause of a litigant. It would be like citing a law, when there were several different laws for the same kind of offense. Suppose there was a law providing several different kinds of punishment for the same crime. It is evident that such a law would be inconsistent and unjust. So inconsistency and injustice would follow the citation of an authority when there were other materially different authorities on the

same surgical topic. In such a case we can only be guided by the testimony of intelligent experts. So it is evident that great care and caution must be exercised in the citation of surgical authorities in the trial of cases, in order that injustice may not result.

113. Sometimes counsel will read from a reputable author an opinion or a statement which is relevant to the issue of a trial, and ask the expert if he agrees or disagrees with it. The expert must answer this question, just as he does all other questions, according to the best of his ability. Inasmuch as authors frequently differ on the same topic, it is easy enough to find an opinion or statement that will contradict the testimony of an expert. It is plain that nothing less than a full sentence or a full paragraph can be read without doing violence to the meaning of an author. The upright and mag-

nanimous attorney will not read a part for the whole of an opinion or statement: he will never mistake a comma for a period. Should not the expert be allowed to read the words of an author whose meaning he is presumed to be competent to interpret? Once for all let it be said that the doctor cannot always remember every word of an author on a subject or topic. It seems to me that he has the same legal right to read a medical book as counsel or Court to read a book on law. On what principle is an expert held to a higher standard of memory than a judge or a lawyer? I know of no such principle, which can be called right or just. Now as for myself, I do not hesitate to differ, if need be, from the opinions and the statements found in medical books. I would willingly contradict an author if he were in court, if he held an opinion different from my own. His book could not overawe

me and bring me to confusion, nor could he himself. I only ask that books be estimated truly at their exact value, and be assigned to their right and proper place.

114. If the medical witness tells the truth, it makes no difference to him where the examiner ceases to ask him questions. To be sure, he is called upon to tell the whole truth and nothing but the truth; but he does not conduct the case. It is his business to answer the questions put by counsel. All else is superfluous, for it is the prerogative of counsel to ask questions. Now what the witness tells is the truth; and what he is not permitted to tell is the truth also; but the truth, as has been said, agrees with itself all round; and the witness can have no interest beyond telling the truth; if he tells the truth, he will be consistent at the beginning, middle, and end of his story, let the examiner rest when and where he will.

115. The expert may be asked to explain the meaning of scientific terms by the attorney, by the Court, or by a juryman. He may have already explained them; now he is requested to explain them to the jury. Let him not hesitate to do so, for it is his duty and his business to make his testimony clear and comprehensible. He must translate the language of science into that of every-day life. This he cannot do if he is ignorant of the facts that underlie the scientific words. For verbal knowledge is only scientific ignorance; words that are incomprehensible will not enlighten a jury. The lawyer is anxious to have the jury know and understand the facts of the case, and asks the expert to tell what he means; if he is competent, he can make his testimony clear.

116. It may happen that a lawyer will ask the same question a second time. This may

occur for three reasons. It may be from inadvertence; it may be to make sure of the answer; it may be to confuse or annoy the witness. When such a thing happens, the witness may say that he has already answered the question; and if there is any doubt on this point, it can be cleared up by an appeal to the record. But if the Court and the jury desire to hear the answer again, the witness will do well to repeat it. When the question has been fully and clearly answered, there is nothing to be gained by asking it over again. In such a case the Court will generally direct the examiner to proceed to some other point. I have sometimes thought that the advocate might desire to get different answers to the same question by persistently repeating it, and in that way try to discredit and confound the witness. In such a case the witness is entitled to the reading of his previous answer by the official stenog-

rapher. At any rate, the witness may answer the question again, and then he may say, That was substantially my previous answer; it may not be the answer, word for word, but it is my previous answer.

117. The advocate may be aggressive; he may try to bend the evidence in favor of his client, for whom he is bound to do his best, under all circumstances. But the doctor is not an advocate. He must not be led into making statements with a view to benefit any one. He is the champion of truth and the promoter of justice. While what he says may be of great value to one or the other litigant, this must not be his motive. It is encouraging to see an expert stand firmly on the rock of truth, never knowing a personal interest, never being moved by undue influence, no matter what the inducement, the provocation, or the assault. Lawyers, even when they are cross-examiners,

have great respect for such a witness. They know that opposing counsel cannot use him, or shake his testimony.

118. When a medical witness is adverse to answering questions in regard to relevant matters about which he has knowledge, the Court may decide that he is hostile, and permit counsel to ask questions that are leading. Then the counsel proceeds like the cross-examiner, and he cannot lead too much. He rightly assumes the prerogative of being severe and aggressive. This is a proper exception to the rules which govern the direct examination. It is founded on public policy, for it is better to compel a hostile witness to tell the truth than it is to let the guilty go unpunished, or let the innocent suffer.

119. When the advocate has to deal with a witness who is partisan, prejudiced, offensive, and hostile, he may be excused for treating him with rigorous severity. He

may cross-examine him with all the skill he possesses. He may dissect every fibre of his motives. He may expose his bias, his pretension, his presumption. He may demonstrate his hostility; he may make a spectacle of his animosity. All right-minded men rejoice at the discomfiture which follows his cross-examination; for he is an enemy of public order and public policy. He has the sympathy only of those who are like him in their practices. It is a pity that there are any such witnesses. Here, we may add, as a high authority has said, "an advocate is a warrior, and not an assassin."

120. We often hear of the license of counsel in the treatment of medical witnesses. In fact, the medical witness often complains of the difficulties encountered in giving testimony. He especially fears and dreads the cross-examiner. In order that we may do justice to both counsel and witness and come

to a better understanding of their relations, let us analyze the subject a little more in detail. Now what is the duty of counsel? He speaks for his client, since his client cannot speak for himself. It is his duty to defend the rights and interests of another for whom he speaks and acts. This is his business. He must ward off an attack; he must repel an invasion; he must protect his client from the threats and menaces of an adversary. He must use his best skill and exert all his powers to prevent his client from suffering an injustice. He must leave nothing undone to prove his innocence, to gain his acquittal, to promote his interests, to maintain his rights. In matters that are relevant to the issue, he may search the depths of the human heart, he may probe the profoundest feelings, he may traverse the ways of the most devious intellect: he is like the skillful surgeon, who inserts the knife and causes pain, that life may continue.

121. The law intrusts the advocate with extensive powers and with great liberty of speech, such as in every-day life would not be tolerated. In what he may do for his client he is, as it were, only limited by his own sense of duty; and if he has a high sense of duty, in his own field of work he is supreme. In his search for truth, he must not be reckless, nor rash, nor unreasonable, nor unjust. If he goes beyond the law, and if he violates the rules of admitting evidence, he may be admonished, reprimanded, or punished by the Court. He must pursue his work by methods that are legal and right and just. He is not at liberty to seek after truth by means that are illegal and wrong and unjust. We all respect the magnanimous and upright advocate; he is an honor to his profession; he is a terror to those who do evil; he is a hope to those who are assailed and wronged; he is a public benefactor and an ornament to society.

122. The trial of a case proceeds upon the theory that it must be decided on the testimony that is introduced. The argument of counsel, the charge of the judge, and the verdict of the jury cannot go beyond the testimony, the evidence. Justice looks through the light of evidence, the lantern of testimony, to find the result, that is, the verdict. Anything outside of this light must not affect the argument, the charge, the verdict, for it is the evidence that proves the issue. A trial also proceeds upon the theory that the prosecution cannot affirm anything that is not true against the defendant, the prisoner at the bar. The counsel for the State stands upon the highest moral and legal grounds, searching to the best of his ability for the truth. On the other hand, counsel for the defense, in so far as he can, prevents the introduction of any testimony that will harm the

prisoner. He leaves out any fact or opinion, unknown to the other side, which may tend to the conviction of his client. In regard to this practice, can we reason as follows? The prisoner at the bar has committed a grave crime; he has been engaged in the violation of the law; he cannot be made to testify against himself; he is trying to conceal everything that will weigh against his case; he has feelings and instincts that impel him to avoid punishment; and when convicted and in prison, he will make every effort to escape: such is his nature, such his character. He hates truth and justice, having associated himself with the Father of Lies.

123. Yet the assumption is that he is innocent until he is proved guilty. No man is legally guilty before he has been declared so in a properly constituted Court of Justice. The prisoner is represented by his at-

torney to this extent: every legal safeguard is applied in his defense, just as if he were innocent; the proceedings against him must be strictly in accordance with law; he must be held innocent until he is convicted of crime; and his conviction must be because the properly admitted evidence is against him. His attorney does not represent him as a criminal, but as an accused person, who has a legal right to his defense. When he is finally convicted, his attorney ceases to represent him. Yet, if his attorney is convinced that his client is innocent, he is bound to apply all those legal remedies provided for the relief of men who have suffered an injustice. If the criminal, or one suspected of crime, who is yet a citizen, before his conviction, were not legally tried and defended, who would be safe from the accuser? A citizen is innocent, and his attorney defends him and takes away from

him the opprobrium of crime ; a citizen is a criminal, and his attorney sees to it that his conviction rests only upon evidence which fairly and justly proves him guilty.

124. Sometimes the cross-examiner tries to intimidate a medical witness. He says: Do you answer that on your oath ? Do you swear to the truth of your statement? Could you not be mistaken ? Are you sure that you are right ? Now be careful in your answers. Will you stake your professional reputation on what you say ? Then he may speak to the witness in a loud tone of voice. He may gesticulate in a violent manner. He may appear to be very angry with the witness. Such methods can greatly impress and confuse a timid witness, and impair the value of his testimony. But a lawyer who is a gentleman never descends from the position of a magnanimous advocate, in order that he may browbeat and intimidate

a witness. He will lose his case sooner than he will tarnish his honor or compromise the dignity of his profession. Yet a witness who becomes an advocate, a partisan, and a prevaricator, deserves to be detected and exposed. As we have said, the examiner must not fail in his duty to his client.

125. Under all circumstances the medical witness should be self-possessed. At every point he should act the part of a gentleman. Every man who loses his temper parts with some of his self-respect. He who becomes unreasonable and gives way to anger is ever placed at a disadvantage. To be cool and collected under trying circumstances not only maintains self-respect, but it also commands the respect of others. The intimidations of a demonstrative examiner are entirely harmless when they fall upon the shield of self-possession; for good temper and gentlemanly conduct are always protec-

tive. It is not what the advocate says to the witness that gives character to his testimony, but it is what the witness says and the way he says it. The witness is always safe when he is self-possessed and reasonable. The advocate who fails in his attempt to intimidate a witness has placed himself and his client at a disadvantage. Just so far as the advocate loses the respect and confidence of the jury, the medical witness improves in the opinion and confidence of the twelve good and true men who are to render the verdict on the issue that is being tried between the parties at law.

126. According to the law and the practice of the courts, the medical expert is not allowed to give an opinion directly on the medical facts. This would be an invasion of the duties of the jury. The way this matter is managed is by hypothesis. The proven medical facts are put together in

their logical order, and are assumed to be true of a supposed case, that is, one that does not exist in fact, yet one that is the same as the case at issue, and the opinion of the expert is asked on it, and he may give an opinion, if he can do so with reasonable certainty. The real case, the one at issue, must be left for the jury to decide. The law gives the jury the sole power to render a verdict. In so far as the medical facts are concerned, the supposed case can be decided by the medical expert. This gives the jurymen a case to guide them in coming to a conclusion in regard to the case at issue, the case being tried before them. In other words, the expert cannot reason and draw conclusions in regard to matters that pertain to the legal functions of a jury. But in matters whereof the jurymen have not experience and knowledge, and in which they are not competent to reach a sound

conclusion, similar facts may be assumed, such facts as have been proven, and on them the expert may reason and give opinions, in order to show the jurymen how to deal with the medical facts coming to light during the trial. This practice leaves the jury the function of accepting or rejecting the opinion expressed by the expert.

127. Let us reason in the following manner. It is competent for the counsel of each side to frame a hypothetical question for the medical expert to answer. Suppose one takes the facts as proven by the plaintiff's witnesses, and the other takes the facts as proven by the defendant's witnesses. Now if the evidence is substantially the same on both sides, the expert will have no difficulty in giving an opinion. His opinion on one side will agree with that on the other, for the facts are the same. But let us suppose that the facts in evidence on the two

sides of the issue are different. As the proven facts differ, the hypothetical questions will differ, and so the opinions of the expert will differ. The expert gives to the defendant's counsel one opinion, and another to the plaintiff's counsel. Now the expert may not decline to answer either hypothetical question. He is bound to answer well and truly, to the best of his ability, the question that is framed on each series of facts put in evidence. If the answers differ, that cannot be any fault of his. The difficulty is found in the facts admitted as evidence: they differ. It is the province of the jury to say which of the two sets of facts are worthy of belief. If, for instance, it is decided by the jury that the facts put in evidence by the witnesses of the defendant are incredible, the opinion of the expert on such facts will come to nothing, no matter how correct and sound such an opinion

would be, if these facts were true. The assumed facts must resemble the facts in evidence, in order that the opinion of the expert may be relevant. A hypothetical case different from the case in issue would not call for a relevant opinion. The expert must answer, to the best of his ability, any hypothetical question asked by counsel and admitted by the Court, however incomplete and partial that question may be.

128. Again, let us reason in the following manner. The hypothetical question must contain assumed facts which are suggested by the relevant facts of the medical evidence. The answer to the hypothetical question must be drawn from all the facts assumed. The assumed facts must be complete and full, and they must all be stated. If these things are so, we may add, it must not be left out of our account how we obtained the medical facts. It is plain that the med-

ical evidence, both of facts and opinions, must come from medical witnesses. The facts and opinions must be seen through their statements. As they see the medical facts and think about them, so they are presented to the Court and the jury. Is there a mistake in the presentation of the facts? Then there must be a mistake in the hypothetical question, that is, the error of fact vitiates the truth of the hypothetical question. It must then follow that justice will not be done. So it must also follow that a hypothetical question framed on the medical evidence of one side only may fall short of obtaining and promoting justice. Then we may ask: Who shall frame the hypothetical question? The doing of this requires both a lawyer and a medical expert, or a lawyer who is skilled in medicine. An expert who is versed in the rules for admitting evidence is no doubt competent to frame a

hypothetical question. At any rate, it is wise for counsel to consult the expert before framing his hypothetical question, in order that he may have the exact meaning and bearing of the medical facts.

129. A medical expert may get into difficulty by failing to make an exhaustive examination of the injuries of a case. Let the cross-examiner ask the expert the following questions. Did you find the right leg of the plaintiff wasted? Was this leg as strong as the other? Did you apply the tests to determine these facts? Now the expert did not know these facts, for he had overlooked them, since he had not made the examination. If the expert had overlooked important facts, it would throw doubt on the accuracy and reliability of the facts that he actually observed and related. The value of his testimony would be greatly impaired.

130. A difficult duty is imposed upon an

expert when an examination is refused by a litigant, or when a testator, being dead, cannot be examined. In such a case, the expert waits in court and hears the medical testimony. Then he may go on the witness-stand and explain the facts produced as evidence. To illustrate how this works. Suppose the medical witnesses who testify to the facts, as they observed them, prove too much. The duty of the expert is to point out the inconsistency between the alleged facts and the conclusions drawn from them. If, for instance, a litigant claims through experts, that he has an incurable disease or injury which will disable him for life ; and if it can be shown, by the evidence of practical experts that such a disease or injury would be almost necessarily fatal, and if the evidence of the plaintiff's experts cannot show any of the usual signs of such a serious disease or injury, there is a doubt as to

the value of their testimony at once raised: indeed, their evidence, as any one can see, proves too much, and plain common sense will surely discredit it.

131. Take, for instance, the proven facts as to what a testator said and did during the last few years of his life. The question of his competency to make a will has been raised. The expert has never seen the testator. He asks: What did the testator say and do during the last part of his life? Were his sayings and doings like those of former times? The witnesses testify that what he said and did in former years were different from what he said and did during the time previous to his death. The expert hears this testimony in regard to the testator who had made his will after the changes in his conversation and action. He must form an opinion as to the soundness of the testator's mind, as to mental ability, or mental

disability, and he has only the testimony of other witnesses to guide him. If what they say is true, was the testator, when he made his will, of sound mind, or not? Was he competent to make a will?

132. Now suppose an expert has affirmed that a prisoner who has committed murder is insane, and suppose the cross-examiner asks him for the reasons why he has come to such an opinion. The expert cannot see and examine the prisoner's brain, and if he could, he might not find any change in its structure. He can only observe, or he may be told, what the prisoner says and does. Now in this case, as well as in the previous one, the difficulties of the expert may be very great not only in the direct but also in the cross examination. Let us try to find out in what these difficulties consist. We may reason as follows: —

133. The question of degree is, no doubt,

very important. Suppose, for instance, a man does not say or do anything rational at all; that he has gone altogether out of his mind; that he is in every way demented and crazy; that all he says and does is irrational; that everybody can see the change in him at once; — well, such a case is so plain that the expert can have a very decided opinion and cannot make any mistake, and he can give sound reasons for his conclusions: and these reasons cannot be successfully contradicted by any one, nor can their effect and force be diminished by the cross-examination.

134. Once more, suppose that a man is partly sane and partly insane, that in his sayings and doings he mixes up what is rational and what is irrational. In such a case it is very difficult to tell exactly where the rational ends and where the irrational begins. Such a man is like one partly intoxicated: for a few moments he staggers;

his will, for the time being, has become somewhat disabled; then he makes a supreme effort and walks along almost in a steady manner; again, he goes first to the right and then to the left; once more he assumes his self-control; and so he goes on until he recovers. Now shall we say that one man was drunk, and that the other was insane? Ought we not to say that one was partly insane, and that the other was partly drunk? In some respects the cases are parallel, and in each the disability is incomplete.

135. To illustrate farther: suppose a man is lame, and that he is not lame enough to prevent him from walking; he limps, and has some disability; his lameness interferes with his business; and it may be very difficult to estimate the extent of his disability. Now suppose a man is unsound in his head; let us say, figuratively, that he is lame in

his brain, and that he is not so lame as to prevent him from reasoning, to some extent; his brain limps, as it were, and has some disability. This kind of lameness interferes with the man's business, as well as his social intercourse; and it is very difficult to estimate the extent of his disability.

136. In the first case, the expert says that the lame man is disabled about one fourth. He means by this that the working capacity of the man is about three fourths of what it was before the man went lame. In the second case, the expert says that the man who is lame in his brain is insane. He does not speak of mental disability. He does not say that the insane man has about one fourth disability, for instance. He is not looking in that direction. Indeed, he does not consider the question of partial disability when the brain is out of order, — he wants to make out the man insane. The

question put to the expert is, Is the man insane? If he is insane, he is not responsible; but he is responsible, if he is not insane. Now every reasonable man knows that there are degrees of insanity, that there are degrees of lameness, that there are degrees of disability, that there are degrees of responsibility. The real question is, How much can a man do? or, How much can a man pay?

137. If these things are so, where does the real difficulty lie? Does it not lie in the facts and their presentation? Some of the facts show mental disability; the rest of them show mental consistency. Let us see the effect of the difficulty on a case at issue, when the hypothetical questions are framed and answered. Assumed facts, like all the irrational sayings and doings of a prisoner, are put together in the form of a hypothetical question, and the expert's answer is to

the effect that the supposed prisoner is in sane. So much for one side of the evidence. Then, on the other side, assumed facts, like all the rational sayings and doings of the prisoner, are put together in the form of a hypothetical question, and the expert's answer is to the effect that the supposed prisoner is sane. Each hypothetical question is correct as far as it goes, but it is incomplete; it does not embody all the facts. Each answer given by the expert is correct, and could not have been given in any other way; and both answers perhaps cover the case. The simple fact is, the prisoner is partly sane and partly insane. But it is not the fault of the expert that he must answer a one-sided hypothetical question, for he does not frame and ask the question. It is only his business to answer the question. He ought not to be charged with inconsistency when he has given the only answer

that can be given. The inconsistency, as well as the difficulty, lies in taking and presenting part of the facts in evidence, for the purpose of framing a hypothetical question.

138. Now, let us reason in the following manner: is it for the medical jurist to determine the question, where, in a case of mental disability, the responsibility begins and ends? When does a man become like the elements, in which physical forces prevail? When does he lose his moral qualities and become irresponsible? When does he lose his self-control? When does the circle of sensation, sense, and voluntary motion become so disordered that it is impossible for him to perform rational actions? If the astronomer says, *I do not know*, he is praised for being highly scientific. But if the medical jurist says, *I do not know*, he is called a *humbug*. Now which is the more difficult, to penetrate the secrets of

the stars, or to unravel the mysteries of the human mind?

139. But then we have not yet solved the difficulty. We have made the contention that the expert ought to give evidence of the man's insanity. We have affirmed that the expert alone is competent to say that the man is insane. We have done this much in the same way that we have dealt with a lame man. We have said, This man is lame. Then we seem to feel that we have triumphed over all obstacles in our field of special work. Have we not said that the man is lame? Who can contradict us? And have we not said that the man is insane? Who can contradict that? Now it looks as if the question were settled. But is it settled? Do not the Court and the jury want to know how lame the man is? The question is, Will you rate his disability? How much work can the man do?

On the other hand, the expert says the man is insane? But what of it? Where is the rating of his disability? Then it is a question of what is to be done with him. To be sure, his insanity has been tested, or rather the appropriate tests have been applied, and according to them he is not of sound mind. But still we are at fault. Where in all that immeasurable distance from the raving maniac to the harmless crank, from the incurable idiot to the person of weak mind, — where shall we find him, where shall we place the insane? Can you tell us that, Mr. Expert? If you can, you are the man we want. For we do not know where the man is. You have told us that he is somewhere, wandering in this unknown territory. We admit that the man has lost his way. But we want to know where he is, so that we may know what to do with him. Is there any test for this? Let me ask you, Has this

man any conscience? Do his faculties and powers work together? Do they coöperate? Do they tell him what to do? Now, Mr. Expert, you know that some insane persons can reason; yes, and they can reason quite well, too. The question is as to the action of the insane. Does the man who is insane in part know anything about his own actions? Now what does the Court say? In effect, the Court says: Mr. Expert, you are competent to tell us that the man is insane; we take your opinion on this point, and admit it as evidence; but we have another test, different from your test; we want to know what to do with this man; as to what we may do with him is none of your affair; as we have admitted your competency to say that he is insane, we will take your opinion on another professional point; surely you must know how insane the man is; you must know where he wanders in the field

of disorder; what we may do with him depends on his responsibility; and this is a matter which belongs to us and our jury; we apply our test with your aid, to be sure; can you tell us if the man knew that he was doing wrong when he committed the crime with which he is charged? Has he conscience enough left to discriminate between right and wrong, as applied to his own acts? Is his conscience disabled? Is he suffering from mental disability? Can you tell the jury what the extent of this disability is? If you cannot, you need not answer. If you can, you may say, with reasonable certainty, how much the man is disabled as to his capacity of knowing if he did right or wrong. Or we will frame a hypothetical question, assuming facts like all the medical facts, and assuming them of a hypothetical case, and let you answer it, if you can, and this question will be, Did the man know if he was doing right or wrong?

140. In order to throw more light upon a difficult subject, let us relate the following case. A man has the idea that some one has done him a great injury or wrong; he feels in dread of bodily harm from somebody; the thought that he is in peril has taken possession of him; he suffers from illusions and hallucinations, some of which he cannot correct; he has delusions that pursue him at every point of his troubled life; he is in fear, and connects somebody with his sufferings; he hears voices which command him to kill somebody: all these things go on from day to day, and portend the existence of a disordered mind; under the stress and strain of long-standing disorder he takes life, and it may be that of his best and most intimate friend. Yet this man had his lucid moments: then he could talk and reason, yes, he could reason well, and on many important subjects, such as come up for consid-

eration in every-day life; he could tell the difference between right and wrong, and weigh the meaning and the import of a great variety of actions; but he was pursued, as it were, by the vagaries of sensation and by the errors of sense, until his conduct culminated in a nameless offense: shall we call it a crime? Or is it such a mixture of good and evil as to confound human justice? Or rather, is it such a mixture of right and wrong as to make it impossible for any man to say whether the offender is responsible or not? Would it not be just to have different degrees of punishment for different degrees of criminality?

141. A competent observer writes: "I can produce any day a hundred lunatics, selected from our various asylums, who, if they were placed in any parlor or office and engaged in a general conversation, would no

more reveal their insanity necessarily than they would their religious convictions or their parentage. If you were asked to state under oath what your opinion on such persons' insanity was, you would feel almost ashamed to doubt it for fear of casting imputation on your own. Yet these people are lunatics and need hospital treatment. You think they are well because they are not in an actual paroxysm of their malady, but they are just as much within its grasp as a man with tertian ague is within the grasp of his disease on his well days. Insanity, like all the neuroses, is characterized by intermittent exacerbations, and while in its intervals its victims may seem perfectly restored, to the eyes of a casual observer, experts know but too well the unreliability of any opinion based on a personal examination, when not accompanied by a complete history of the patient's life." It appears,

then, that we meet with great difficulty, at times, in the determination of two questions: Is the prisoner insane? What is the degree of his insanity?

142. What is the test of responsibility in a case of insanity? To what point shall our inquiry be directed? Where shall we look, if not to the knowledge and the conscience? We must, indeed, look to the conscious knowledge that we have of our own acts, in every degree of health and impairment of our faculties. Admit that the defendant has an insane delusion. Can he correct this delusion? If he can, then he is responsible. Does his insane delusion persist as a reality to him? Then he is not responsible. Did he know that the act which he performed was against the law of the land, that it was wrong? He is then responsible. Has he forgotten the difference between right and wrong, so that he is like the blind man who

cannot see? Then, indeed, he would be irresponsible.

143. The uncertainty of verdicts in the trial of cases in which insanity is a relevant fact of evidence deserves some suggestion. Let us ask, What is the cause of this uncertainty? In what does it consist? We may have wise and competent judges, learned and able advocates, experienced and skillful medical witnesses, intelligent and honest jurors, so that in trials of another kind we obtain verdicts which are, in the main, reasonable and satisfactory; but let the element of insanity come into a trial and we are apt to distrust the soundness of the verdict, as well as the probity of the judicial decisions, and at the same time we impugn the motives of the advocate, as well as the qualifications of the expert.

144. Why do we sometimes feel that the innocent have been punished and that the

guilty have gone free? It is because the sane criminal has been proven to be insane, has been proven not to know the difference between right and wrong, thus taking away his responsibility; and because the insane criminal has been proven to be sane, thus making him responsible. The wrong man has been hung; the wrong man has been set free. In such a case, it would seem as if common sense came to our aid, and we get an idea that something which is unjust has been done. We cannot adjust to our sense of right the fact that a man who is insane has been hung, and our moral sense is outraged when the wrongdoer escapes merited punishment, under the plea of insanity. Seeing that these things are so, we learn to distrust the validity of a verdict which has been reached in a trial, where testimony has been introduced to prove or disprove the existence of insanity in a defendant who is accused of a grave crime.

145. Let us see if defining insanity will help us to any great extent. To say that insanity "is the state of being insane," "is reasoning correctly from false premises," "is a lesion of the intellectual faculties," "is the loss of the faculty of volition," "is a disorder of the power of comparison or judgment," "is the loss of the faculty of attention," "is a lesion of the association of ideas," or, "is a derangement of the mental faculties," does not make the subject clear. It is evidently very difficult, if not impossible, to frame a definition that will accurately index and describe a subject so vast, so complex, so obscure, as this one is, which relates in so many ways to all we know and all we do not know in regard to the brain and its functions. The difficulty of defining, as well as the numerous definitions given, points to the intrinsic difficulty of the subject itself. Let us quote Dr. Buck-

ham's definition. Insanity is "a diseased or disordered condition or malformation of physical organs through which the mind receives impressions, or manifests its operations, by which the will and judgment are impaired and the conduct rendered irrational." And now we may add our definition: Insanity is a disorder of the structure or function of the brain accompanied by impairment of the will, delusion of the judgment, derangement of the reason, and perversion of the affections, — followed by mental disability and irrational conduct.

146. It would appear that we do not know all about the brain and its functions; that we cannot conceive altogether what the mind is; that we cannot explain how the will, the judgment, and the reason are connected with sensation, sense, and voluntary motion; and that we are met with difficulties we cannot solve. While it may, perhaps, be

true that all we do not know in regard to the brain and its functions is as much as all we do know; it must also be true that men who have given a life to the study of this subject know more about it than those who have given it little attention and less thought; and so it must be that experts know more about the insane deviations of will, judgment, affection, reason, and conduct, than judges, advocates, jurors, or general practitioners. That is, the best informed know little enough about insanity, while others may not be expected to know everything about it.

147. It then amounts to this: we cannot understand all the workings of the human mind in its normal conditions and relations; so we cannot well understand and explain the insane workings of the same mind when it is affected and disturbed by disease or disorder of the physical structure through

which it is manifested. The following illustrations will doubtless help us. Once I said to a gentleman that I did not know if a patient who was very ill would recover or not; it was his brother, and he replied, "You ought to know, you are a doctor." Then I asked him, he being a broker, if he could tell me if a certain stock would rise in price on the morrow, when he said, "I do not know." To this I replied, "You ought to know, you are a broker." Once a certain judge said, "Expert testimony is not only of no value, but it is worse than that." Then the expert might have replied: "May not many of your decisions be overruled by the Court of Appeals?" Evils are never cured by animadversion.

148. The limitations of special science, as well as the imperfections of human knowledge, meet us everywhere. In some respects these imperfections and limitations

are without remedy. Who has told us all about the nature of good and evil? Who has drawn the line of demarcation between what is right and wrong? Who has given us a complete standard of responsibility, even in a trial of a case of insanity? The judge knows the law; the advocate searches for the evidence; the jury reasons from the evidence to the verdict. But the difficulty lies in the very uncertainty of the evidence; and the evidence is the insanity in some degree of a defendant. The expert is better qualified to find and produce the evidence than judges, advocates, or jurors. His failure to find and produce it ought not to subject him to animadversion and contempt.

149. Again we say, The question of testimony is one of fact, fact relevant to the issue, — the issue as to the guilt or innocence of the defendant. The facts are medical, and they are for the expert to find out and

present. First, is the brain diseased or disordered? Second, are its functions impaired? Take a surgical case: is there damage to the structure, say bone? Is there a certain impairment of use? Then there is a fracture. Who testifies to this? Surely the surgeon does. In the case of the damaged and impaired brain, accompanied by special signs and symptoms, there is insanity. Who testifies to this? Surely the expert does. The signs and symptoms are matters of fact relevant to the diagnosis of insanity, which is also a fact of evidence relevant to the issue. The question is, Is the defendant insane? The expert determines the fact. The law wants to know the degree of his insanity. It wants to know the extent of the disability. The test to apply is, Has he sense enough to know if he is doing right or wrong? In one trial, the jury believe the litigant has a

fracture because the surgical expert says so. In another trial, the jury believe the defendant is insane because the "insanity" expert so testifies. In one case, the surgeon rates the physical disability; in the other case, the neurologist rates the mental disability. Then the jury can award damages, or it can give freedom.

150. Yet it is true that each juryman knows something about human conduct. He has been living all his life among other people, and knows perfectly well how they act. He has a pretty good opinion as to the standard of conduct, which is orderly and reasonable. He may not have been in personal contact with insane persons, and yet he knows when an individual acts in a strange manner, doing harm to others and himself. He must come to some conclusion, under such circumstances. But he is not skilled in those signs and symptoms which

are so many proofs of the existence of insanity in every degree, from the least to the greatest. It is just in these points that the skilled expert is the most competent to investigate and report. It is the duty of the expert to make a diagram of insanity.

151. There are two points of special difficulty in the examination of a defendant who claims, through his attorney, that he is insane. One relates to the extent of his disability. The other refers to simulation. Does the defendant pretend to be insane, when he is sane, and only wicked? Does he make the plea of insanity in order that he may escape the legal consequences of his crime? The same points of difficulty have already been considered in regard to injuries. Does the litigant pretend to be lame? Does he exaggerate the lameness that he has? Does the defendant pretend to be crazy? Does he exaggerate his partial insanity?

These are difficult and momentous questions, which require the most consummate ability and skill to solve, and which are not infrequently solved unrighteously and unjustly.

152. Now what are the difficulties which lead to uncertain verdicts in trials in which insanity is made a relevant issue? Let us epitomize them as briefly as possible. Our best informed experts, while they know all that has been found out in regard to insanity, do not yet know everything that is to be known; indeed, there are many undiscovered regions and unexplored corners of the human mind. In this matter which lies at the basis of relevant fact, we may have the imperfections of science and the limitations of human knowledge. So that, in many instances, those who know most, and whose opinions are most trustworthy, are not always certain of being right. This uncer-

tainty as to the best science appears to be the root of the evils of the insanity trial. Then if the doctor who has had no experience with insanity is admitted as a witness by the Court to testify more to his ignorance than to anything else, a material element of uncertainty is added to the insuperable limitations of science. At last comes the advocate, with his view of the case, searching for exact knowledge, putting a part for the whole, investigating a subject about which he is intrinsically ignorant, testing the fact of insanity with a hypothesis in the form of a question; and so he brings a new element of uncertainty into a case that set out with a grave difficulty. In fine, the multitudinous diversity of judicial opinions which nobody can harmonize is obtruded upon our attention, supplementing in the most astonishing manner the already accumulated uncertainties of the

insanity trial. Who can wonder that jurors are bewildered, and that verdicts are uncertain, under the influence of such circumstances? It is neither fair, manly, nor just to unload the entire mass of opprobrium upon the poor expert.

153. Let me say a few more words in regard to the legal responsibility of the surgeon. I am induced to do this, because the subject is ever coming up in society, in practice, in the courts. It is of great interest, and of leading importance. The subject contains two questions which we cannot ignore. They are, What can we do for our patients? Are our interests in constant peril? I am the more inclined to look farther into these questions, because what I say may help to define the territory of possible work, so that those who seek our aid may not expect too much, and so that we may try to do our work in the best way we can.

154. At the outset we may say, It is just and right to hold the surgeon to the full measure of his responsibility. That is what we do in regard to other men. The surgeon may not neglect to employ the skill that he has, even though it is above that which is ordinary. As has been already said, this is a question of duty. To follow this higher standard need not interfere with the right of the surgeon to be governed by the rule of law which requires the employment of ordinary skill.

155. But why should the surgeon have too high a standard of responsibility? Why should patients assume that surgeons have extraordinary skill? There is no reason for this assumption. Why does the surgeon pretend to have knowledge and skill above that which is possible? It is a strange fact that the surgeon does this sometimes. Why should the advocate, or

the judge, or the jury, presume to require the surgeon to have attainments in his science and in his art which are beyond the reach of the wisest and the most experienced? I have sometimes thought that the advocate does not comprehend, the judge does not understand, and the jury does not know that the profession of medicine and surgery is limited in what it can do, that there lies beyond its benefactions a great territory of impossibilities. Strange as it may seem to say so, there are many things that we do not understand, and there are many things that we cannot do. So we may try in every possible way to make plain the boundary line between that which is possible and that which is impossible in practice. This line runs through the territory of diagnosis and treatment.

156. In the first place, we have the question of diagnosis. This is a question that is

ever coming up, and one that ever returns to vex the surgeon, let him turn whithersoever he will. In many cases, perhaps the greater number, he can form correct opinions as to matters of fact, — he can make a diagnosis. But there are cases in which uncertainty is present and in which doubt remains. So the surgeon may be led to an erroneous conclusion, even when he does the best he can. The following cases will illustrate the bearings of this important point. A woman about fifty years of age fell on her right hip, and was so much injured that she could not get up. She was seen soon after the accident by two surgeons of skill and reputation. They made a diagnosis of dislocation of the thigh-bone, and failed to make a reduction after several attempts. This case was one of simple fracture of the neck of the thigh-bone. Let me say that I have seen such a mistake made more than

once by surgeons who practice with more than ordinary skill. The case of a woman who fell from a step-ladder some three or four feet, and came down on her left hip, is one of interest in this connection. She was examined by a competent surgeon, who applied all the ordinary tests in making a diagnosis. The surgeon came to the conclusion that she had only a severe contusion of the hip. In a few days, he encouraged her to get up and walk about. Soon after, she got out of bed, and while trying to walk, the neck of the thigh-bone suddenly gave way, when she fell upon the floor and was made an incurable cripple. An impacted fracture of the neck of the thigh-bone had been mistaken for a contusion of the hip.

157. In another case we have the following evidence. A strong man was thrown from his wagon and came to the ground on his right shoulder. A surgeon of experi-

ence was sent for, and after a careful examination he told his patient that he was suffering from a contusion. In a few days, the surgeon made another examination, and had no difficulty in finding a dislocation of the humerus, for the swelling had for the most part disappeared. He reduced the bone to its socket, and the patient recovered with a useful limb. A suit for malpractice was instituted. Two experienced surgeons testified that at times it was impossible for the most expert to make a diagnosis of an injury to the shoulder. The verdict was for the defendant.

158. The following case is of interest. A laborer became intoxicated, and fell on his left shoulder. He was seen by a surgeon, who made a diagnosis of dislocation of the humerus, and, as he supposed, reduced the bone. Some four weeks after the accident, it was evident that the patient

had a longitudinal fracture of the upper end of the humerus. The signs of this injury are somewhat like those of a dislocation of the humerus. Now it was not certain that there had been a dislocation. And at the time of the accident, on account of the extensive swelling, the fracture could not surely have been made out; and it would not have been good practice to neglect an attempt at reduction. As often happens in these cases, a complete cure did not result.

159. So it appears that the surgeon, from time to time, meets with cases which present great difficulties in the way of making a diagnosis. That is to say, there are cases whose nature, conditions, and relations cannot be traced and determined with scientific accuracy by the most experienced. We have not yet found the expert, in any science or art, who knows all things, even in

the narrow circle in which he may perhaps boast of his experience. Nor do we believe such an expert will ever be found, for this would be contrary to human experience. I know it is not easy for the expert to say in plain words, *I do not know*. Yet at times he had better say so, because, as matter of fact, it is true. It would be far better to say so than it would be to say what is not true in order to conceal an ignorance we cannot overcome.

160. Where does the surgeon's responsibility begin? In what direction does it go? Where does it end? I am not now speaking of the naked fact of ordinary skill. It is important to find out what ordinary skill means. The practical relation exists between the surgeon and the patient: one has been injured; the other tries to give relief. The relation implies a civil contract. The surgeon undertakes to do something for

his patient. Let us suppose two cases. A surgeon agrees to repair a broken limb, a broken bone. Is he not bound to do it? He may not have taken into account the fact that the limb cannot be repaired, yet he has agreed to make such repair. Has he, indeed, assumed a responsibility that he cannot meet? Has he promised to do something that cannot be done? Is he like the merchant who has agreed to deliver goods when he cannot get them? Again, a surgeon agrees to use ordinary skill in an attempt to bring about repair of a broken bone. He does not go beyond this simple agreement. Yet he may use his best skill. If the bone can be repaired, he repairs it; if it cannot be repaired, he does the best he can with it. He indeed meets just the responsibility that he assumes. In many cases he may not possibly know beforehand what result can be obtained. He is not a war-

rantor of cures; he only agrees to use and apply ordinary skill, and when he has done this, the result must take care of itself. For in many cases of disease and injury so many factors may arise that the result will be different from anything that can be seen or known at the outset of the treatment. Over and over again, we repeat, the surgeon applies the ordinary rules of his art in a diligent and careful manner, and the result must be such as can be obtained under the circumstances.

161. Is it not, then, frequently the duty of the surgeon to say to his patient: I cannot make your limb as good as it was before the injury, yet I will use all the skill I have in treating it; after I have done my best, there will be some deformity and some disability? These words will express the import of a proper and reasonable contract between the surgeon and his patient. It

will involve the true measure of the surgeon's responsibility, and he cannot rightly assure anything more. If he does, perhaps he may be held to what his promise implies. He might be in the same position as the merchant who agrees to deliver a quantity of goods on a certain day, and at a certain price. Failure to fulfill the agreement might be followed by loss and damage. The merchant would have to pay; and the surgeon would be liable in so far as there is an agreement to perform work and accomplish results. He must not promise more than he can perform.

162. It may seem humiliating to acknowledge the limitations of our science and our art, but yet it is sound both in practice and in law. So it is that the surgeon, as far as he can, ought to know his professional limitations, and make no promises that will go beyond them. To illustrate. A patient

sixty years of age fell on her left hand, fractured the lower end of the radius, and severely sprained the wrist. She was treated by a surgeon of reputation and ability; in an unguarded moment, he promised to cure his patient. As sometimes happens in such cases, the result involved much deformity and marked disability. This patient came to consult me in regard to her case. I told her that the treatment had been good, and that she ought not to complain, even if the deformity and the disability were permanent, since such injuries, even under the most skillful hands, might result in damaged structure and impaired function. She finally told me that she was going to bring an action for damages against her surgeon, since he had promised to cure her and failed. In the mean time she died on account of some internal malady, and the doctor was saved from a troublesome lawsuit.

163. The following case illustrates the same point. Two surgeons of this city came to me and said that they were treating a case of fracture of the condyles of the left humerus of a girl about seven years of age, that they had told the father they could not make the limb as good as it was before the injury, and that he had informed them he would compel them by law to make his child's arm all right again. At their request I went to see the patient, and made a careful examination of the injury, as well as the treatment. Then I said to the father that the treatment of his child's case had been conducted with more than ordinary skill and care, and that he ought to be thankful under the circumstances for his good fortune, and that any recourse to law would be an utter failure. He then concluded that he did not know anything about surgery, and that it would be wise on his

part not to interfere with the doctors in their attempt to give his child as good a limb as possible.

164. Two important propositions that ought to be well recognized may be enunciated: (1.) There are some things the surgeon cannot do; (2.) There are some things the surgeon can do. They flow from the general proposition that there are two extensive fields of surgical work: (1.) One in which injured structure and disordered function cannot be repaired and restored; (2.) The other in which injured structure and disordered function can be repaired and restored. On the members of the surgical profession rests the responsibility of drawing the line of demarcation or limitation around that which is possible in the field of practical surgery. All beyond this line is uncertain or impossible. In the field inclosed by this line, everything is more certain and attaina-

ble. It might happen that the medical witness would fail to draw the line clearly and correctly around the territory of possible practice. This would vitiate the orderly administration of justice, since it would affect the charge of the Court, and introduce an element of error into the deliberations of the jury. It might lead to other matters of importance. The advocate might cast reflections upon the medical witness, who does not, indeed, know everything, though he may stand in the front ranks of his profession. Then the Court might animadvert, as it has been known to do, upon the expert testimony; yet this is an event which does not occur very often at the present day. The jury may take up the burden of the issue and carry it through to a verdict, on an erroneous belief that the practice of medicine has gone a long way toward perfection, even assuming that the impossible in practice has

become very small. In some sense, the doctor or witness is taken at his word. He seems to say that he can do perfect work: but he cannot. So perhaps he is rightly blamed. It seems to me that no man can find fault, if we take him at his word.

165. That one surgical case may differ from another will be seen by the following illustrations. One man received a punctured fracture of the skull, and went about for two weeks having the sharp pieces of bone penetrating the brain. At the end of that time I operated on him. He did well, making an excellent recovery, and going back to his work in about three weeks after the operation. Another man fell on his head, suffered from concussion of the brain, and died in a few days. A post-mortem examination showed no fracture of the skull, and disclosed no tangible injury to the substance of the brain. Once more, contrast

the two following cases. Two thigh-bones were broken on the same day, one in a boy, and the other in a man. The two patients were brought to the College Hospital at once, and put in beds side by side. I treated them both. The man, who was about forty years of age, had broken his left thigh-bone. The boy, who was about twelve years of age, had broken his right thigh-bone. A question of great interest to surgeons and patients is the shortening of a limb after the repair of a broken bone, especially the thigh-bone. And there is generally less shortening of a limb after treating a fracture of the thigh-bone of a boy than one of a man. I gave the case of the man only ordinary attention, and when he was discharged from the hospital, both lower limbs were exactly of the same length. On the other hand, I gave the case of the boy extraordinary attention; and when he was discharged from

the hospital, the right lower limb was over an inch shorter than the left. Was the treatment of the boy bad, and that of the man good? Could the shortening of the boy's limb have been prevented? How can we explain the difference in the results of these two cases? In this way: the boy broke the thigh-bone in his shorter limb, and the man broke the thigh-bone in his longer limb. It might have happened in the case of the man that I might well have been praised for the excellence of my work; and that in the case in which I did very much I might have been blamed for an unfortunate result. In fine, a suit for malpractice could be built up on such a case as that of the boy, if an unscrupulous attorney could get the support of an ignorant and malicious doctor. But on the development of the real facts, an intelligent jury would render a verdict for the defendant. Hence in many ways each piece

of professional work stands by itself, and, as it were, rests on its own merits. So it is that we are constantly brought to the line which bounds and limits the territory in which work is possible.

166. The assumption of superior knowledge and skill by some surgeons has already been noticed. Now we may point out the fact that this assumption tends to break down the wall that stands between what we can and what we cannot do. Does a surgeon pretend and promise to do a piece of work that we know cannot be done, he not only sets up a false standard of practice, but he will fail to accomplish what he promises. It may be said that he is a dangerous man who assumes to have knowledge beyond others, who pretends to have skill that others do not possess, and who claims to be able to obtain practical results that others cannot reach, unless, perchance, he

can demonstrate that he has made actual advancements in his profession. His arts and his promises are like those of the transcendental seer and the bone-setter. He is one of the many causes of the suits for malpractice which have been brought against the members of the medical profession in this country.

167. What shall we study? What can we learn? What can we do? We should study structure and function, for in them is the basis of what we want to know. If we can, we should learn more and more completely the nature of disease and injury, so that we can cure and repair them in the most desirable manner. We should find out how far we can prevent and remove disabilities, ever keeping in mind the fact that there are some things that we cannot do. So the surgeon must seek to know and understand the limitations of his professional work. In

the territory that contains what he can perform with reasonable certainty lies our true responsibility. We are indeed bound to practice with ordinary skill, so says the law of the land; and we ought to practice with our best skill, so says the law of duty. So it is that any law seeking to compel us to do what it is impossible to perform must be unjust. After all, the true and the main difficulty consists in finding out what is impossible in the field of professional work. This question must be left to professional men, for they alone can answer it.

168. What, then, shall I promise my patient? Shall I promise him life, when I have none to give? Shall I tell him I can cure him, when he is incurable? Shall I warrant repair, when there is no material for repair? Let me rather say to him, that I will do my best to give him the benefit of all the knowledge and skill I have, but that I

cannot undertake to do anything which is impossible in the art of surgery. If this does not suit him, he is free to seek and find some one who can promise and do more for him than I can. But under no circumstances can I promise to do what I know to be impossible. If this plan were followed in general, it would soon come to pass that suits for malpractice would, in the main, cease. I am certain that suits for civil damages, if any were brought, would result more justly. Let this practice become the rule. Counsel will be better able to interpret and expound the facts of evidence, as given by experts; judges will cease to make animadversions on expert witnesses, and charge juries more wisely; juries will bring in verdicts that are more just and satisfactory: and doctors will deserve and possess the respect of all right-thinking men.

169. Finally, we may not forget that the

field of professional possibilities may be enlarged in the future, as science and art make substantial progress. My appeal is, first, to the medical profession. Let its members coöperate under the influence of an ancient, and I hope not forgotten, *esprit de corps*. And may the coördinate profession of the law, inspired by the same spirit, work with us in the discovery of truth, in the search for evidence, in the detection of falsehood, and in the promotion of justice.

170. We must add a few suggestions in regard to the expert who gives evidence as to poisons which have been administered with criminal intent. In this field of work the chemical expert is of the greatest importance. This is so because his knowledge and skill are special, because he alone is competent, or most competent, to answer certain questions. These questions relate to the detection of poisonous substances

which have been given for the purpose of destroying life, and which are found in the dead body. As an expert, the chemist testifies to the presence or absence of poisonous substances, after he has made an analysis of matters taken from the dead body in cases of suspected murder. The great care required in making this analysis is familiar to all, and the rules to be followed, in order that the testimony may be relevant, need not be stated here. A general statement will suffice. The expert must be certain that the matters he analyzes were taken from the dead body in question; he must take pains to identify them beyond a reasonable doubt; and he must keep them in such a manner that they cannot be tampered with by any one. In addition to this, a very important subject has come to the attention of medical jurists within the last few years, the chief points of which may be stated as follows: —

171. It is generally known that many of the vegetable alkaloids are very poisonous. In more recent times there have been discovered a number of putrefactive alkaloids, called ptomaines, which are generally highly poisonous. They are found in the dead body. Some of them have a very close resemblance to the vegetable alkaloids. Ptomaines that are like coniine, nicotine, strychnine, morphine, atropine, digitaline, veratrine, colchicine, and delphinine have been found in the dead body. In some instances of trial for murder, a putrefactive alkaloid, or ptomaine, has been mistaken for a vegetable alkaloid. Each one of these substances can cause death. But the putrefactive alkaloid is developed after death, and is a result, not a cause, of death. The vegetable alkaloid must be administered to cause death. We illustrate by the following extracts from the work of Vaughn

and Novy on Ptomaines and Leucomaines: "The most celebrated case in which a substance giving reactions similar to those of coniine has been found was the Brander-Krebs trial, which took place in Braunschweig, in 1874. From the undecomposed parts of the body two chemists obtained, in addition to arsenic, an alkaloid which they pronounced coniine."

172. "This substance was found to be highly poisonous. Seven centigrams injected subcutaneously into a large frog produced instantaneous death, and forty-four milligrams given to a pigeon caused a similar result. On account of its poisonous properties the jury of medical experts decided that the substance was a vegetable alkaloid. Otto (expert chemist) says that this decision astounded the chemists."

173. "In a criminal prosecution at Verona, Ciotta obtained from the exhumed but

only slightly decomposed body an alkaloid, which gave a crystalline precipitate with iodine in hydriotic acid, a red coloration with hydriotic acid, and a color test similar to that of strychnine with sulphuric acid and potassium bichromate, and with oxidizing agents. This substance was strongly poisonous, but did not produce the tetanic convulsions which are characteristic of strychnine." . . .

174. "In the Sonzogna trial at Cremonat, Italy, the experts seem to have confounded a ptomaine with morphine. . . . In frogs it arrested the heart in systole, which is said never to happen in poisoning with morphine." . . .

175. "In 1870, General Gibbone, an Italian of prominence, died suddenly. His servant was accused of poisoning him. Two chemists of some reputation reported the presence of delphinine in the viscera." This

substance comes from a plant which grows in Southern Italy. But "Ciaccia and Vella showed that while delphinine arrests the heart of the frog in diastole, the suspected substance arrests in systole."

176. These facts, as well as many more, are truly astonishing, not only because they are new, but also because of their very great importance. That the greatest chemical experts are alone competent to deal with them, and, if need be, bring them into court and make them plain, is so evident that no one is found to contradict it.

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Suggestions to the Medical Witness

Leslie Adams MD

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