savage, or a horse gentle,—and, in general, any matter touching physical or mental manifestations or appearances, as well as all questions of identity, resemblance, duration, distance, dimension, velocity, noises, smells and many other matters where the inference drawn by an observer is commonly recognized and received as an equivalent for the congeries of facts that produce it. But testimony of this class, however, so far from being related to expert proof, rests upon diametrically opposite grounds.

The expert witness is one whose possession of special knowledge renders his opinion admissible upon a state of facts within his specialty, without regard to the manner in which the facts are established, and without requiring that they should have come, in whole or in part, under the personal observation of the witness; whereas, the sole ground upon which a witness may give an opinion as to matters of ordinary knowledge is that they not only came within his personal observation, but that they come into proof so blended with the opinion to which they give rise that it is receivable in proof as a substitute for a specification of the host of circumstances that called it forth.

A failure to observe this distinction results, at times, in the offer of an ordinary witness to give an opinion calling for special knowledge, merely because he has had actual observation of the facts, and at other times in the offer to prove an opinion upon a matter of ordinary knowledge arising from assumed facts, by a witness who has not himself observed them, upon the ground that he is expert upon the special subject. In either of these classes of cases the proof must be rejected; the rule being that mere opportunity will not change an ordinary observer into an expert, and that special skill will not entitle a witness to give an expert opinion when the subject is one where the opinion of an ordinary observer is admissible, or where the jury is capable of forming its own conclusion from facts susceptible of proof in common form.

PHYSICIANS CAN NOT TESTIFY.

The policy of the law is to make the relation of physician and patient confidential and sacred. Only the patient himself, or, in case of his death, his legal representative, may waive the seal of secrecy and confidence. Thus holds the Supreme Court of Indiana, in the case of *Gurley v. Park*, decided Nov. 23, 1893. The application given to this doctrine here is to the effect that in a case where there is no legal representative, as administrator or executor of a deceased person to make waiver, the physician who attended her can not testify in an action to set aside her will as to her mental condition at the time she made the will, he being present in his professional capacity. The law, this court says, forbids the phy-

sician from disclosing what he learns in the sick-room, no matter by what method he acquires his knowledge.

CHOLERA.

Cholera seems to be again on the increase at St. Petersburg. The average number of cases for the past week have been 150, and the deaths 20 daily. On December 23, the British steamer *Eton*, from Sovlina, at the Danube's mouth, for Rotterdam, was detained at Gravesend for twenty-four hours for fumigation and examination. There have been three cases of cholera aboard her. The man who was stricken last had recovered on December 13. Cholera has again broken out at Liege, where it was supposed to have been stamped out.

SICKNESS AND PAUPERISM.

We invite our readers' special attention to the paper of DR. BRYANT of Cambridge, which appears elsewhere in this issue, and to the discussion thereon.

No topic could be more timely, and the experience of the writer is such as to invest his utterances with great weight. Every city physician should read this paper of DR. BRYANT's and do what he can to act on its precepts for the prevention of pauperism.

DR. PAUL GIBIER read a paper "On a New Agent in the Treatment of Epilepsy," before the New York County Medical Society, on December 25. The material used was the nervous substance of the sheep, great care being exercised in securing absolute purity in the matter employed. He cited nine cases in which there were beneficial results, and in four of these there were positive cures. "To sum up my results," he said, "in the treatment of epilepsy by injections of extract of nervous substance, I shall conclude by repeating, as in my first communication, that this method is especially beneficial in adding to the favorable effects derivable from other therapeutic agents, and by its application in the majority of instances the improvement is most satisfactory."

CORRESPONDENCE.

An Open Letter on Inoculation as a Preventive of Yellow Fever.

ATLANTA, GA., Dec. 15, 1893.

To the Editor:—As you are aware, I have taken great interest in the matter of preventive inoculation against yellow fever since the publication of the experience of Dr. Domingos Freire appeared in Brazil, more than ten years ago. My efforts were first directed to enlisting the influence of Dr. Joseph Holt of New Orleans, in support of a thorough investigation of this subject, under the impression that the people of that city ought to feel an interest in the results of such an inquiry. As a sequel of the agitation of this question by him before the American Public Health Association, and through the public prints, it was deemed proper by the

United States Government to send Surgeon G. M. Sternberg, U. S. A., to Rio de Janeiro to observe the working of yellow fever inoculation and report upon the same. Being impressed with the great difficulties likely to be encountered by one individual in getting a proper understanding of the facts presented in connection with the use of inoculation in a foreign land, I sought to secure the coöperation of others in this undertaking.

Resolutions were adopted at the meeting of the AMERICAN MEDICAL ASSOCIATION at Chicago in 1887, upon a motion by me, requesting the President of the United States to send two other competent members of the medical profession to assist in getting the data requisite for a proper comprehension of what had been accomplished by Dr. Freire.

Upon your motion, this action was rescinded, after a vote of a large majority of the ASSOCIATION against a motion for reconsideration. This was clearly without the sanction of parliamentary usage, and yet availed to arrest any further steps in that direction.

The unfavorable verdict of the special commissioner is well known to all who are conversant with this matter, and was such as might have been expected from his mode of conducting the investigation.

Only upon one occasion since that time have I made any effort to bring this subject to the attention of the profession or the people of this country.

But had I been present at the meeting of the AMERICAN MEDICAL ASSOCIATION at Nashville, when the President in his annual address undertook to commiserate the shortcomings of Freire, I should have met him with facts. In like manner, your comments upon yellow fever inoculation in your address as Chairman of the Section on State Medicine would most assuredly have received my attention, appreciating fully the complimentary terms in which you were pleased to refer to me.

I suppose the snap judgment of the committee who passed upon the claims of yellow fever inoculation at that time may have been considered final by the Section, and that you may have written its epitaph with *requiescat in pace* inscribed upon the mausoleum. But the stone placed upon the tomb and the seals affixed are destined earlier or later to be removed, and it will be verified that "truth crushed to earth will rise again."

I am in possession of facts confirmatory of all that has been alleged in favor of the results of inoculation against yellow fever, as put in practice by Domingos Freire in Brazil, and expect to present them before the medical profession at an early day.

It has not been from any diminution of my faith in the efficacy of inoculation in modifying materially or preventing entirely the access of yellow fever, that I have kept quiet during the past five years in regard to it.

My time and attention have been too much occupied latterly with matters which were of more importance to me personally and professionally, than the attempt to convince people against their will of the reality of the exemption secured by yellow fever inoculation. But some of the problems, which I have been working out, are now solved; and I am disposed to take up again the investigation of the claims of inoculation to the adoption of our people in the South.

I was pleased to learn from Dr. Holt during my attendance at the meeting of the Southern Surgical and Gynecological Association in New Orleans, that he has not despaired of realizing the benefits of inoculation as a prophylactic against yellow fever.

Notwithstanding the diatribe against Freire's methods in an editorial of the *New Orleans Medical Journal* of January, 1886, and the soft impeachment against Dr. Holt and myself

as having acted precipitately and without due consideration in advocating his claims to recognition, we are very far from giving up the fight in behalf of inoculation as a prophylactic measure against yellow fever.

The attitude of experts in regard to the immunity afforded by an attack of yellow fever comes to the support of what has been demonstrated by the very small fatality of persons not acclimated, who have been inoculated in Brazil. I am aware that bacteriologists of repute claim that no such microbe as the *cryptococcus xanthogenicus*, which Freire has described, can be discovered by a scientific investigation. But let it be denied that such a representative element exists in the form he has delineated it, this fact does not set aside the positive results obtained with his attenuated virus as a preventive against the dreaded disease.

I am not aware that the microbe of smallpox or that of cowpox has been definitely determined by bacteriologists. Dr. Eugene Foster, in his article on smallpox for the "Reference Hand-Book of the Medical Sciences," says: "We have no satisfactory proof that either vegetable germs or bacteria constitute the essential elements of the disease." Yet no scientific investigator at present hesitates to accept the plan of vaccination introduced by Jenner for preventing or modifying materially the access of variola. Neither has the microbe of rabies been ascertained with certainty in the investigations of Pasteur, but he continues to record the prophylactic virtues of the rabic virus obtained from the dessicated medulla of infected rabbits. His last report of the treatment of persons bitten by rabid animals in the Pasteur Institute at Paris, shows a fatality of less than one-fourth of 1 per cent., and the reports from the Chicago Institute and the New York Institute indicate like favorable results, in this class of cases.

It is evident, therefore, that past experience in this prophylactic mode of dealing with such disorders has proved eminently satisfactory without a recognition of microbiology in using an attenuated virus. Call it empirical, but the efficacy can not be questioned.

I have an abiding conviction that you would magnanimously admit the claims of this great prophylactic measure for the protection of our Southern ports, if you could see this matter in its true light. Your energetic administration of the sanitary work of the Marine Service in former years must have impressed our people with your discretion and zeal in adopting efficient measures against the spread of yellow fever. Should your mind be directed to a thorough comprehension of the details of the practical working of yellow fever inoculation, disconnected with any scientific investigation of the microbial element, I should expect you to be so impressed with its benefits, that at least you would be disposed to test this process in places where yellow fever may occur in future years. If this is done, I shall yet realize my fondest hopes in the adoption of this process among us. Yours sincerely,

J. McFADDEN GASTON.

How to Encourage Criminals.

CHICAGO, Dec. 26, 1893.

To the Editor:—In THE JOURNAL of Dec. 23, 1893, Dr. W. P. Howle writes on "How to Manage Criminals." I approve of the publication of such articles by medical men to the end of becoming versed in sociology. Students of medicine are better prepared to give an opinion which approaches to accuracy concerning the health of a given criminal than is the ordinary layman.

Perhaps it was for want of space that the Doctor did not define crime, so that we might know who to brand as being wicked and deserving of punishment. Crime is the violation of a statute.¹ A criminal is one who knowingly violates a statute.

Since crime is by virtue of statutory enactments, it is pertinent to inquire whether the framers of our laws possessed more of virtue than they who violate them. In the case of William Lloyd Garrison and Wendell Phillips, it is

¹ The traditional decrees of judges, though unwritten, and called common law, are included in the term, statute.