healthy condition, their flesh proves to be tender, juicy beef, but not so firm or so sweet and well flavored as if wholly fed on grain, or even grass. The second-class beef is from animals wholly confined in these large distilleries, fed the greater portion on swill, with plenty of hay, and occasionally a little grain. I might add, that the Northern distillery swill is of a superior quality to that which is run into troughs at the various distilleries where it is sold by the hogshead or other particular quantities. These Northern distilleries own both the swill and the cattle, and the quantity of swill made by them is fed up clean. This second class of animals, although they may be fat, produce a softer quality of beef, not so well flavored, but juicy and tender. When they are slaughtered, the flesh will show or produce the peculiar smell attached to this beef. The third class is to be found in some of your neighboring distilleries, where the visitor could almost swear (unless he could see the hay given to the animals) that they had little else to eat than the thin, poor, and sometimes spoiled swill. The beef from the general run of the third class has a very peculiar, unpleasant smell, especially when slaughtered. I have known it so disagreeable as to create nausea, especially on opening the animal to take away the paunch or belly: this and some other parts I have sometimes opened to discover some signs of hay, and in some instances found none. This class of beef retains that smell, especially when cutting it up fresh into pieces, and also when cooking it. It is usually flabby or soft, and often appears adhesive or sticky, like very young veal that had not yet lost nature's first flesh. My conclusions and convictions were made up long before this subject was so strongly agitated, both as to the meat and milk of the distillery-fed cow, which I have considered under the third class; and these conclusions are that neither the milk nor the flesh of these animals can furnish healthy human food." The committee, in summarizing its labors, says that the beef produced from the animals fed in the distillery stables is unsavory, and easily recognized by its offensive odor; that the odor is not dissipated even by the process of cooking; and that the fibre is flaccid, and its cellular tissue is infiltrated with watery fluids instead of solid fat. The milk of these cows does not exhibit the characteristics of wholesome milk: it presents almost invariably an acid re-action. The cases collected by Dr. Percy demonstrate the fact, independent of any chemical examination or any a priori reasoning, that the milk procured from these swill-fed animals is injurious to those who use it. In view of the disclosures made, the committee states that it is evident that the traffic in the milk of swill-fed cows is one which is detrimental to the health of the community, and should be discontinued.

Sanitary Control of the Food-Supply.' By W. K. NEWTON, M.D., health officer of Paterson, N.J. (*Third Annual Report of* the State Board of Health of New Hampshire.)

Distillery waste, and sometimes beer-grains, produce a quality of milk of low nutritive powers, and dangerous to infants.

References are also made to the following authorities: 'Milch-Cows and Dairy-Farming,' by C. L. Flint (Boston, 1874 and 1887); 'Infant Mortality,' by E. Jarvis (*Fourth Annual Report of State Board of Health of Massachusetts*); and 'Milk,' by C. F. Chandler (*Johnson's Cyclopædia*).

[To be continued.]

BOOK-REVIEWS.

Preliminary Report of the Commission appointed by the University of Pennsylvania to investigate Modern Spiritualism in accordance with the Request of the late Henry Seybert. Philadelphia, Lippincott. 12°.

THAT peculiar medley of alleged fact and fanciful theory, of Occidental pseudo-science and Oriental mysticism, which goes by the name of 'Modern Spiritualism,' has been examined more or less frequently, publicly and ably. The advocates of the tenets which this belief imposes have given little attention to the adverse opinions, explaining them away by a piece of logic which would be admirable did it not need such frequent modification, and were it not so evidently manufactured for the purpose, and have vaunted and gloried over all their successful efforts, large and small, in securing proselytes. The commission, whose long-expected report is now before the public, is most favorably constituted for receiving a hearing destined to be called authoritative, and for registering an important turning-point in the rather sad history of the modern movement. The commission takes its name and its resources from the fund intrusted to the University of Pennsylvania by the will of Henry Seybert, a strong believer in Spiritualism and its physical manifestations. The personnelle of the commission leaves nothing to be desired. Its members originally appointed were Dr. William Pepper, provost of the University of Pennsylvania, Profs. Joseph Leidy, George A. Koenig, Robert Ellis Thompson, and George S. Fullerton, all of the same university, and the eminent Shakspearian Dr. Horace Howard Furness. To these were afterward added Mr. Coleman Sellers, Drs. J. W. White, C. B. Knerr, and S. Weir Mitchell. The members individually expressed entire freedom from all prejudices against the subject, and readiness to accept any conclusion warranted by facts; Dr. Furness, moreover, confessed to a leaning in favor of the doctrine.

The method of work of the commission was to take a definite subject for investigation, invite both professional and non-professional mediums (had they been able to procure them) claiming the power of presenting the desired manifestations, and to meet them under fair conditions. The mediums were often exorbitant in their charges (asking a hundred dollars from the commission for what they would do for five for a private citizen), and arbitrary in their conditions. Nevertheless the commission has seen enough to tell a very important and a very interesting story.

They first looked about for a 'professional independent slatewriting medium.' This medium was to take a double slate firmly fastened together, with a bit of slate-pencil placed between, and produce writing on the previously blank slate, professedly the work of spirits in answer to questions addressed to them. Their first medium (a Mrs. Patterson) kept them waiting one hour and a half, and on another occasion one hour and twenty minutes; but the slates remained as clean as at first. Their next medium was the famous Dr. Henry Slade, with whom they had several sessions, all with the object of obtaining the slate-writing under conditions varying in detail, but not in principle, from that above described. Dr. Slade has two methods: for the long, clearly written messages, he substitutes at a favorable moment a prepared slate for the one given him; for the short, hardly legible messages, he in one way or another writes on the slate while hidden from view of the two or three observers (he allows no more) seated with him. Every particular of the process has at one time or another been seen by the committee. In fact, on the day when Dr. Slade received three hundred dolllars in payment for his services, he was so excited that he could hardly sign the receipt; and the cause of this excitement was simply that shortly before, Dr. Furness had kicked over a slate placed at the foot of the table, and thus exposed the prepared writing upon it. In short, their verdict with regard to the doings of this their most famous medium is, "that the character of those which passed under our observation was fraudulent throughout. There was really no need of any elaborate method of investigation : close observation was all that was required."

Next with regard to rappings. Their preliminary conclusion reads that "the theory of the purely physiological origin of the sounds has been sustained by the fact that the mediums were invariably and confessedly cognizant of the rappings whenever they occurred, and could at once detect any spurious rappings, however exact and indistinguishable to all other ears might be the imitation."

The commission attempted to procure some 'spirit photographs,' but were asked three hundred dollars for this luxury, and were to be excluded from the room at the critical moment. They very properly refused any such terms.

The brother of the would-be photographer (Keeler is the family name) is also a medium. His specialty is to 'materialize' a right hand when apparently holding his neighbor's wrist with both his hands, and have this hand perform the usual simple tricks with the musical instruments, etc. The trick was afterwards repeated by one of the commission, and consists in really holding the wrist with one hand only, but producing the feeling in the owner of the wrist of its being clasped by both. The right hand is then free to do all the hocus-pocus. Another medium did about the same thing with his hands apparently tied. That his hands were loose enough for all that was done, was glaringly evident.

Thus far the commission as a whole. Their verdict is everywhere the same : "No new facts and many old frauds." Individually the members have seen much, in fact, more than the mediums intended. The experiences of Dr. Furness, the acting chairman, are especially interesting, and recorded with a humor that does much to relieve the monotony of this record of constant fraud and deceit. Dr. Furness was repeatedly assured by several Spiritualists that there was in him the making of a magnificent medium; and so he sacrificed himself for the cause, and 'sat for development.' Every day for six months Dr. Furness sat with a slate for half or threequarters of an hour, and, in addition, constantly wore a bit of magnetized (!) blotting-paper on the top of his head, until he was allowed, by the dispensation of the medium under whose direction he was studying, to wear it around his neck. The paper had to be changed every twelve hours, and the medium received a dollar for each sheet. Although he was promised writing, or at least some zigzag lines, in three weeks at the utmost, at the end of six months 'not a zig nor a zag.' "Let spiritualistic reproaches of investigators, for lack of zeal and patience, be heaped up hereafter until ossa becomes a wart.' I care not : my withers are unwrung.

Dr. Furness next experimented with sealed letters. A question carefully sealed was sent to the medium, and the answer to the unopened letter returned. Many mediums were written to. They gave contradictory answers when asked the same question, and in every case the letter had been opened, and mucilage and skill been used to cover up the deception.

Dr. Furness's description of the materializing seances can only be appreciated when read in full. Everywhere he found fraud where he looked for honesty. The fraud is so gross, so easily made to leave its hiding-place and snatch the bait offered by an ingenious question, that it becomes ridiculous.

Professor Fullerton's account of the famous Zoellner investigations with Dr. Slade is a highly valuable contribution. He has personally examined Zoellner's confrères in the investigation, and finds that Zoellner was of unsound mind at the time; that Fechner was partially blind, and relied on Zoellner; that Scheibner was too myopic to see any thing, and was not quite satisfied with the seances; that Weber was old, and did not recognize the disabilities of his associates. On the evidence of these men, — deservedly honored in their own specialties, as they are, — without knowledge of the arts of a conjuror, has rested one of the most famous proofs of the truth of Spiritualism and its connection with the fourth dimension of space.

A device by which Dr. Knerr detected a fraud is too ingenious to be left unnoticed. He arranged a mirror about his person so that it reflected the hands of the medium at work on a slate under the table. He plainly saw the hand open the slate, read the question, and noiselessly write the answer, which the fair medium had the impudence to present to him the next minute as the work of departed spirits.

The mysteries and miracles that shape people's beliefs upon that which is most sacred to the human heart, thus resolve themselves, under the scrutiny of careful scientific observers, into a mass of vulgar frauds and low deceptions. The mystic theories and spiritual messages are ' disgusting cant ;' the medium, a criminal.

The psychological process by which believers are convinced is the key to the secret of the success of Spiritualism : this is the problem that lies closest to the securing of that mental health with which such practices and beliefs are incompatible. If any one will recall the feelings of utter bewilderment on leaving for the first time a good performance of a professional trickster, and will imagine in addition that the things he holds dearest were at stake in the explanation of what he saw, he will easily understand the excited state of mind of a susceptible person on leaving a spiritualistic seance at which he has seen but not understood. If your friend is a believer, and urges your ignorance on to belief, you are apt to yield, and assume that credulous state of mind which accepts all and examines nothing. It is this state of mind that is to be prevented; it is this state of mind that is dangerous to mental sanity, that becomes morbidly hungry for something unusual, something mystic, something occult. There can be no better check to the spread of this mental temperament (except, of course, a sound training in scientific reasoning) than such a report as this, of sincere, able, scholarly men, anxious to learn, and meeting only with practices for which the law provides the jail.

That these men have not yet exhausted the art of detecting deception is shown by the fact that they are confessedly unable to discover the methods by which a prestidigitateur performed slatewriting tricks in their presence: this needed more training than they as yet possess. But the magician confided his methods to one of the commission, and showed that they were simply tricks. This suggests the final point to be here noticed : this is, that the Spiritualists will have a roundabout way of explaining these frauds. They will say, "That does not prove that real manifestations do not exist." This the commission admit, but it makes it improbable in more ways than one. They claim that their explanations of how the things are done are rational from their point of view. They need the dark because darkness is negative; if the spirit takes on the peculiarities of the medium, that is a habit of the spirits; if the writing does not occur when the slate is looked at, it is because the magnetism of the eye is unfavorable; and so on, and so on. This is perfectly true. There is no proposition so absurd, no fancy so insane, as not to be capable of some kind of support, on the basis of some kind of a theory. But the logic upon which civilization is built is a marvellous network of mutually corroborating laws and observations, multiplying the probabilities of the truth of its conceptions in a geometrical ratio, and similarly dwindling into insignificance the possibility of theories opposed to its fundamental tenets. Of such a character are the explanations offered by the Spiritualists. They are not impossible in an extremely exact, ulti-From a practical point of view, they are utterly mate sense. impossible. But, after all, it is not the logic that convinces. It is because this system goes deeper, and appeals to the feelings, that it blinds its adherents to sense and reasoning.

The commission has done its work well, has set an excellent example in recording what they saw *accurately* (for all turns here, as in jugglers' tricks, upon the apparently most insignificant detail), in subjecting mediums to ingenious tests, in treating them courteously and sympathetically, as well as in exposing them plainly and mercilessly. The present report, though only a preliminary one, should do much to hasten that day, which Dr. Furness thinks not far distant, "when the more elevated class of Spiritualists will cast loose from all these physical manifestations, which, even if they be proved genuine, are but little removed from materialism; and eventually materializing seances, held on recurrent days and at fixed hours, will become unknown. JOSEPH JASTROW.

NOTES AND NEWS.

THE New York Electrical Society has decided to give an electrical exhibition in this city during the coming fall in the large exhibition-building of the American Institute. The exhibition will open Sept. 28, and continue to Dec. 3, 1887, and is intended to include all that relates to the science and application of electricity in its broadest sense. No electrical exhibition has ever been held in New York, and it is confidently believed that the one now to be given will attract a large number of visitors, both residents and from other cities. The American Institute has provided ample means to carry out the designs of the society, which is also assured of the co-operation of the American Institute of Electrical Engineers.

— The *Political Science Quarterly* for June is a splendid number, the articles covering important topics in economics, history, and administrative science. Dr. Seligman's masterly article on the interstate commerce law, an abstract of which was read before the American Economic Association, is the leading article in the number. It is sufficient to say that the paper amply sustains Dr. Seligman's reputation as a master of the railway question in all its phases. Prof. Woodrow Wilson writes on the study of administration; and William M. Sims, chamberlain of New York City, discusses municipal government, making generous use of his knowledge of the details of the municipal machinery of the metropolis. Professor Burgess's paper on the Culturconflict in