Stow by Mr. Davis proved to be quite free from poisons of any description. In one instance a slight hemolytic action was observed, but this was attributed to the acid reaction of the fungus. In all cases the heated extracts were without effect upon animals. This species is considered edible by most mycologists.

## GENERAL CONCLUSIONS

The examination of these various species of fungi, representing now nearly twenty distinct forms, demonstrates one or two facts which should be particularly emphasized. In the first place, our methods of chemical analysis of mushrooms, and especially the methods of isolating their poisons are now so developed that a little material, two or three small specimens in fact, and even one good sized plant, may be studied and an opinion be given as to the properties of the species. In the second place, a more extended investigation should be carried out in regard to the properties of all the mushrooms believed on clinical grounds to be poisonous, but of which no laboratory study has thus far been made. Finally such a piece of work, to be of lasting value to science, can only be accomplished through the cooperation of trained mycologists who can identify with certainty the species of mushrooms selected for study.

WILLIAM W. FORD

BACTERIOLOGICAL LABORATORY, JOHNS HOPKINS UNIVERSITY, June 20, 1909

## NOTES ON ELECTRICAL ENGINEERING AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

The cause of electrical engineering research and the advanced instruction of graduate students in electrical engineering has been advanced by the appointment of Dr. Harold Pender to the professorship of theoretical and applied electricity which is connected with the

department of electrical engineering at the Massachusetts Institute of Technology. Pender is a graduate of Johns Hopkins University and took the degree of Ph.D. at that university in 1901 under the direction of Professor Rowland. He thereafter taught for a year and a half, during which period he completed the classical experiments of Professor Rowland which demonstrated the magnetic effect of a moving charge of electricity. M. Poincaré having suggested the desirability of these experiments being performed in Paris, the Carnegie Institution of Washington arranged with Dr. Pender to go to France for the purpose. Upon returning from France Dr. Pender went into the employ of the Westinghouse Electric Company and he has since been in regular engineering employ. teaching at the Institute of Technology will consist of a course for third-year undergraduate students and courses for graduate students in the more advanced theories of electric current flow and the electric transmission of power, in addition to the direction of experimental research by advanced students.

The advanced lectures on the organization and administration of public service companies, on the design of power stations and systems, and on electrical measurements heretofore carried on by Professor Jackson, Professor Shaad and Professor Laws will be continued by the same professors.

As indicating the trend of electrical engineering study at the present time, it is notable that forty per cent. of the students just graduated from the electrical engineering course at the Massachusetts Institute of Technology already bore degrees of bachelor of arts or science, conferred, as a rule, in classical or literary courses. These men are going into a wide variety of activities, from the manufacture of electric instruments and of incandescent lamps to electric transmission of power and heavy electric traction.

Mr. H. S. Osborne and Mr. W. S. Rodman, who are candidates for the degree of doctor of engineering in the electrical engineering department, have recently been appointed fellows by the faculty of the institute. Mr. R. L. Jones has been appointed graduate scholar in electrical engineering.