

recognized as soon as it was opened, as the foremost of its kind in Christendom. He directed that when completed it should be a part of the University and, accordingly, when the time came for organizing a medical and surgical staff, the principal professors were simultaneously appointed to the chairs of one institution, to the clinics of the other. They were to be constantly exercised in the relief of suffering and in the education of youth. For the lack of the requisite funds, the University at first provided only for instruction in those scientific branches which underlie the science of medicine. At length, the organization of the school of medicine was made possible by a very large gift of money, received from a lady of Baltimore, who was familiar with the requirements of medical science, and eager to see that they were met. By her munificence the University was enabled to organize and maintain that great department, which now reflects so much honor upon this city and which does so much by example, by publication, by systematic instruction, and by investigation to carry forward those varied sciences, anatomy, physiology, physiological chemistry, pharmacy, pathology, and the various branches of medicine and surgery. In accordance with the plans of the University, the generous donor made it a condition of her gift that candidates for the degree of Doctor of Medicine should be those only who had taken a baccalaureate degree based upon a prolonged study of science and the modern languages. A four years' course of study was also prescribed and women were admitted to the classes upon the same terms as men. The liberal and antecedent aid of women throughout the country in the promotion of these plans is commemorated by a building inscribed "the women's fund memorial building." The excellent laboratory facilities, the clinical opportunities, the organization of a training school for nurses, and especially the ability of the physicians and surgeons have excited abundant emulation and imitation in other parts of the country,—a wonderful gain to humanity. It is more and more apparent among us that a medical school should be a part of a university and closely affiliated with a hospital. It is also obvious that the right kind of preliminary training should be antecedent to medical studies.

I must ask the indulgence of our friends from a distance as I now dwell, for a moment, on the efforts which have been made to identify the Johns Hopkins University with the welfare of the city of Baltimore and the State of Maryland. Such a hospital and such medical advisers as I have referred to are not the only benefits of our foundation. The journals, which carry the name of Baltimore to every learned society in the world are a minor but serviceable advantage. The promotion of sanitary reform is noteworthy, the study of taxation and in general of municipal conditions, the purification of the local supply of water, the advancement of public education by courses of instruction offered to teachers, diligent attention to the duties of charity and philanthropy, these are among the services which the faculty have rendered to the city of their homes. Their efforts are not restricted to the city. A prolonged scientific study of the oyster, its life history, and the influences which help or hinder its produc-

tion, is a valuable contribution. The establishment of a meteorological service throughout the State in connection with the Weather Bureau of the United States is also important. Not less so is the Geological Survey of Maryland, organized with the coöperation of the United States Geological Survey, to promote a knowledge of the physical resources of the State, exact maps, the improvement of highways, and the study of water supplies, of conditions favorable to agriculture, and of deposits of mineral wealth, within this region. To the efficiency of these agencies it is no doubt due that the State of Maryland has twice contributed to the general fund of the university.

Nor have our studies been merely local. The biological laboratory, the first establishment of its kind in this country, has carried forward for many years the study of marine life at various points on the Atlantic and has published many important memoirs, while it has trained many able investigators now at work in every part of the land. Experimental psychology was here introduced. Bacteriology early found a home among us. The contributions to chemistry have been numerous and important. Here was the cradle of Saccharine, that wisely diffused and invaluable concentration of sweetness, whose manufacturers unfortunately do not acknowledge the source to which it is due. In the physical laboratory, light has been thrown upon three fundamental subjects:—the mechanical equivalent of heat, the exact value of the standard ohm, and the elucidation of the nature of the solar spectrum. For many years this place was the chief seat in this country for pure and advanced mathematics. The study of languages and literature, oriental, classical, and modern, has been assiduously promoted. Where has the Bible received more attention than is given to it in our Semitic department? where the study of ancient civilization in Mesopotamia, Egypt, and Palestine? where did the Romance languages, in their philological aspect first receive attention? To American and institutional history, persistent study has been given. Of noteworthy significance also are the theses required of those who are admitted to the degree of Doctor of Philosophy, which must be printed before the candidate is entitled to all the honors of the degree.

I might enlarge this category, but I will refrain. The time allotted to me is gone. Yet I cannot sit down without bringing to your minds the memories of those who have been with us and have gone out from us to be seen no more: Sylvester, that profound thinker devoted to abstractions, the illustrious geometer whose seven prolific years were spent among us and who gave an impulse to mathematical researches in every part of this country; Morris, the Oxford graduate, the well trained classicist, devout, learned, enthusiastic, and helpful, most of all in the education of the young; accomplished Martin, who brought to this country new methods of physiological enquiry, led the way in the elucidation of many problems of profound importance, and trained up those who have carried his methods to every part of the land; Adams, suggestive, industrious, inspiring, versatile, beneficent, who promoted, as none had done before, systematic studies of the