REMARKS AT THE BREAKING OF GROUND FOR THE NEW LABORATORY FOR CHEMISTRY

I AM truly glad to be present on this particular occasion. As a chemist, the plans outlined for this institution are to me of the deepest interest.

It has been my privilege to go about the country quite a bit in the way of attending ceremonies when chemical laboratories were dedicated, or when their corner stones were laid, or when they were to be begun, as this one is, at this hour.

Chemistry, you know, is a very old science, and as I remarked earlier this morning, it is the human science. In its very beginnings men were trying, by the processes of change in matter, to see what they could do for themselves with the help of science.

Those early days were still dark days, and in them science in general, and chemistry in particular, was looked upon as magic, the aim seeming to be to convert everything that was ignoble into that which was noble, to convert, for example, the baser metals into gold and silver; such seemed to be the goal of the men in that earlier period; but as the years rolled on and it was found that gold and silver could not be obtained from iron and lead and zinc, and so on, then science was turned to the conversion of the products of Nature into useful objects, and men looked upon it with the greatest of favor.

The beginnings of the science in America run away back into the sixteen hundreds, but the period of scientific chem-

istry began much later; it began in the last decade of the eighteenth century, and since that time we have seen laboratories springing up, here and there, at intervals; but within the last twenty years such laboratories have appeared in almost every state of the Union and in almost every town of every state, because into the public schools have gone the students of this science, and our boys and girls are coming to be acquainted with the methods of chemistry, the purposes of chemistry, and the great public has been appealed to to take more than an ordinary interest in chemistry, for the reason that it is the science that touches the desk and the heart of every man.

I can recall when the dedication of a chemical laboratory was a rare thing, and I know now, this moment, that the chemists all over the country are happy in the knowledge that you are about to erect a palace to our science, as the University of Pittsburgh is about to do the same, and as Cornell is about to dedicate her million-and-a-half dollar laboratory shortly, and as Yale dedicated a two million dollar laboratory to chemistry a few weeks ago, and plans for laboratories in connection with universities in other sections of the country are being made, and these structures will go up, and before long laboratories will be as common almost as the administration buildings are, wherever universities and colleges exist.

Some of us who have been interested for years in chemistry and who speak of it as the human science, ask the laity to give their attention for just a moment to the wonderful things accomplished by our German brethren. Germany was made strong because she had given free range to the cultivation of the science of chemistry, and it was because of wide and accurate knowledge of chemical substances on the part of the Germans that the Allies had so much trouble

in overcoming them. If you go down the Rhine you come in contact with six great structures—chemical laboratories —where products of the greatest value are being made, among others indigo, which for many years was drawn from plants, but through investigations carried on in chemical laboratories became a commercially profitable artificial product. It is equally remarkable that the country of India, whence came the name of the original natural product, is actually doing away with the indigo plant and in its place raising wheat and corn. For this good result chemistry is responsible. Now those immense factories on the Rhine which are preparing beneficial substances might any moment be turned into factories for the preparation of the most destructive gases, the most terrible explosives that men have to contend with.

The day is coming. Of course human nature is frail, nor is this last war likely to be the last, but when war comes, chemistry is going to play a very important part; accordingly, chemists feel that everyone ought to have more than a superficial knowledge of chemistry and its power. Chemists do not want to go to war any more than military men want to go to war. Military men dread war. An ordinary West Pointer will tell you he would rather turn his back on it. It is the profession of military men, but they hope they will not have to practise it. And we chemists hope we will not be called upon to carry our profession against any nation, but if we must go into the struggle we want to be prepared away beyond those who oppose us.

So, at this moment, in Japan, England, France, and in Germany, and here in our own dear America, we are striving to put the science on such a footing and make our people so well acquainted with its beneficent side, as well as the fact that it can be a very disastrous science; we want them

to know all about it, what it means; and so we welcome every movement in the hope of advancement and progress. As I said a while ago, as chemists we thank the Trustees of the Rice Institute that in their wisdom they have decided to erect this structure to be devoted to the science of chemistry. I perhaps may add that personally I hope the time will never come when chemistry will again be used as it was in the late war.

Scientific chemistry began in the United States of America with the coming of that wonderful man, Dr. Joseph Priestley, in 1794. He gave impetus to true research in scientific chemistry, by his arrival on the eighth of June in New York City, by his going to North Pennsylvania and there building a little bit of a laboratory, and by journeying from time to time to Philadelphia and encouraging the young men he met. And I have brought down here this morning a letter which to me is a precious thing. It may not be precious to anybody else, but to any lover of chemical science and to any man who realizes for a moment that the oxygen of the air we breathe and the water we drink, without which physical life would be impossible, was not discovered until old Dr. Joseph Priestley discovered this gas as an element on the first of August, 1774. Now here is a letter written by his own hand in 1802 to a New York chemist by the name of Samuel Latham Mitchill, the first professor of chemistry in Columbia University, and the first United States Senator from New York State. And I want the Rice Institute to have this letter, and at the proper time to lay it in the corner stone of this building, for I believe if Dr. Priestley were on this occasion present in spirit, as indeed he must be, he is happy in the thought that this old letter of his, talking about old things chemical, is to find its final resting place in another new structure

devoted to a science of which he was one of the founders and fathers.

And so I commit to your care the letter, which, as I said, is precious to me, a very precious document; and I pray that the spirit of Dr. Priestley that shed so much light on the people up there in Pennsylvania, may also continue to enlighten people down here in this wide open country.

You know the persecutions he underwent in his own country, and later in this country, but he loved America, he believed in its future, and the future of our people. He said, among other things, that the American people would act wisely—that was in 1797— that if they followed the teachings of their constitution they would be happy and eventually obtain what they deserved.

EDGAR FAHS SMITH.

NOTE.—At the conclusion of these remarks, which were made immediately after the ninth commencement convocation of the Rice Institute on Monday morning, June 4, 1923, Dr. Smith lifted the first spadeful of earth for the foundation of the new laboratory for chemistry, and from his hands the spade passed in turn to Mr. William M. Rice, Jr., Vice-Chairman of the Board of Trustees; Professor Harry B. Weiser, Director of the Laboratory; Joseph L. Gillman, Jr., Bachelor of Science, first president of the Rice Chemical Society; and to Professor William W. Watkin, associated in the preparation of the plans for the building with Messrs. Cram and Ferguson, Supervising Architects of the Rice Institute.

The benediction was pronounced by Dr. Edward S. Ames.

TEXT OF A LETTER WRITTEN BY DR. JOSEPH PRIESTLEY TO DR. SAMUEL LATHAM MITCHILL, MEMBER OF CONGRESS

Dear Sir

I think myself much obliged to you and Dr. Miller for so early an admission of my Paper on Galvanism into the Medical Repository. I have sent another article, in answer