Stieglitz, Harkins, Schlesinger, Glattfeld, Rising and other members of the staff, besides the customary official documents.

A committee from the department of chemistry, of which Dr. Julius Stieglitz was chairman, recommended the choice of subjects for the carved figures of the building, and these are being put into position as the construction goes forward. *The University Record* says:

There are three niches, each large enough to hold one figure. For these three figures we have selected the following men: Lavoisier, the great French chemist of the end of the eighteenth century, who is considered the founder of chemistry as a science; Wohler, the great German chemist, who was professor of chemistry at Göttingen University and might be considered the founder of the science of chemistry of life, and, third, the great Russian chemist, Mendeléeff, whose periodic law for the chemical elements was enunciated about 1869.

For the head on the outside of the first floor of the west side of the building, Dalton was chosen, the great English chemist, who is considered the founder of the modern atomic theory.

At the entrance of the building a head of Willard Gibbs was selected; and on the other side, a head of August Kekulé. Gibbs was an American and the founder of modern physical chemistry. Kekulé, a German, is the founder of modern organic chemistry.

Other symbols include the Bessemer converter, indicating the fundamental connection between chemistry and industry; the medical caduceus to indicate the connection between chemistry and medicine or life; a balance, of the shape and type used by Lavoisier; a retort, a common symbol of the science of chemistry itself; a pair of crystals of optical opposite faces, which commemorate the great work of Pasteur, and a spectroscope, commemorating the fundamental work of Bunsen with the physicist Kirchhof. If the spectroscope should not lend itself to this use, the symbol of a hexagon, an important milestone in the development of organic chemistry by Kekulé, will be substituted.

HIGHWAY ENGINEERING

LEADING highway officials of all parts of the world are coming to the United States in 1930 to study the methods of road improvement and the use of roads in this country, according to a statement made by Thomas H. MacDonald, chief of the Bureau of Public Roads, who recently returned from a meeting of the International Road Commission held in Paris. Mr. MacDonald went to France as head of the official delegation representing the government of the United States. After the meeting he investigated highway development in the British Isles and countries of western continental Europe. Mr. MacDonald says:

Not only was the invitation extended by our congress through President Coolidge accepted unanimously, but from comments of delegates from other countries it is evident there is a deep-rooted, world-wide interest in what is being done to improve highways here.

The great distinction which exists between our program and that of other nations is that, while here the whole country has adopted motor transportation, elsewhere car use is still largely in the hands of a few.

The rapid expansion in the United States faced our engineers with an urgent demand for the immediate improvement of hundreds of thousands of miles of highway. At the same time, increased valuations growing out of bettered transportation facilities and a moderate tax upon the vehicle itself made it actually cheaper for the public to have roads than to go without them, so we were able to embark upon a construction program without parallel in the history of public works without dislocating our financial system.

Concurrently we were faced with the question of whether it was cheaper to build these roads slowly and laboriously by human labor, as most other countries now do, or whether we should work out mass production methods and so meet the national demand quickly. Experience has demonstrated that the latter plan is by far the more efficient and less costly.

Foreign highway engineers, who are as well versed as our own men in the technique of road building, or are better versed, are, in the main, only now arriving at the stage where they must meet similar problems in their own countries; hence their interest in the sessions here in 1930.

Further, because of the wide diversity of geographical, climatic and soil conditions in the United States, coupled with varying degrees of wealth and population, it is possible to approximate here the basic problems which confront engineers from abroad, whether they are interested in congested areas, such as England has, in primary roads, such as are needed in the newer countries, or in questions of mountain roads, such as those faced by Austria, Switzerland and other nations.

So the United States in 1930 will be a giant laboratory in highway development and motor transportation where highway officials from other countries will find an opportunity to see not only what has been accomplished from an engineering point of view, but also to observe the social and economic influences of our good roads.

At the same time our engineers will have an opportunity to learn what is being done in other countries and to compare notes with their foreign colleagues.

THE AMERICAN STANDARDS ASSOCIATION

UNANIMOUS approval by the thirty-seven member bodies of the establishment of the American Standards Association to succeed the American Engineering Standards Committee is announced by William J. Serrill, assistant general manager of the United Gas Improvement Company of Philadelphia, who was chairman of the Standards Committee, and now becomes president of the American Standards Association.