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## PROGRESS IN SANITATION<sup>1</sup>

By Professor EDWARD BARTOW

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WHEN the title of this address was sent to the secretary, the plan was to describe the progress in sanitation for the past thirty years, that is from about 1906, when *Chemical Abstracts* was started and when "Standard Methods of Water Analysis" was first published by the American Public Health Association. Then it was decided to discuss the progress of water chemistry for about seventy years, that is, from the time when Wanklyn published the first edition of his "Water Analysis."

Again the plan was changed, because of a visit to the German Industrial Museum at Munich, the discovery of a book on "Water," written in 1757 and because of a statement attributed to a president of the American Mathematical Society. He said that mathematics is *the science*, while all other sciences are merely divisions of mathematics. For example, phys-

ics is the noisy part, zoology the messy part and chemistry the smelly part.

I do not propose, as might be expected from this introduction, to try to prove that chemistry is *the science*, and that all other sciences are mere branches. Quite the contrary, I wish to show that chemistry helps the other sciences, that chemistry is dependent on other sciences in the building of what we might call the house of chemistry and that it is the service science.

The house of chemistry, or perhaps we should call it the mansion, castle or palace of chemistry, can not exist alone. Can we not imagine that it is built on the rocks of geology and mineralogy? Indeed, the alchemists looked for the philosopher's stone and attempted to turn the baser metals into gold. This mansion is built in the garden of agriculture. Its foundation is in the healing art of medicine, for the alchemists and the early chemists sought for the elixir of life, and at all times medicine has been an incentive to chemical re-

<sup>1</sup> Address of the president of the American Chemical Society, Pittsburgh, September 9, 1936.

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