

Chemistry Basic to Progress of Civilization.

In these later years particularly, chemistry has revolutionized industrial processes and industrial methods. We have passed through the age of stone and through the age of iron, but it is only lately that we have come to the real iron and steel age, in which improved processes and methods have brought about amazing development in connection with the industrial enterprises which are engaged in production of various kinds. And we do not know where we are now. Out of iron comes steel, and steel processes which twenty years ago men did not dream of are now in active operation, developing the metalliferous resources of the world. Since earliest times we have been treading on banks of clay, but only within recent years have we come to find out the uses to which aluminium, for instance, can be put. We are now looking forward to an age in which aluminium will, in a great many things, take the place of steel and in which its different qualities will make a revolution in the manufacture of things necessary to the comfort and progress of the world. Here we get an idea of what chemistry has done so far as industrial processes are concerned. Of course, this is not news to any of you; I am simply trying to make a little sketch the application of which I shall bring out later.

Chemistry, however, has done more than link itself up with agriculture and with industrial processes. Chemistry has done things for the benefit of what is other than material. How many of the safeguards and comforts of life, which we enjoy to-day but which were unknown to our forefathers, are available to us because chemistry has done its work; has found out certain laws, processes, antidotes, alleviations—whatever you may call them. What an effect chemistry has had upon conditions in respect to pests, pestilent breeding places, alleviation of pain, processes of medicine and of surgery, the devising of antidotes, the working out of counteracting agencies to others of a harmful nature. Take, for instance, that prodigy of work, the building of the Panama Canal. Repeatedly this enterprise was undertaken, but always nature was too strong for the efforts of man. But at last that tremendous work was completed, and the achievement was made possible because of the purification of the isthmus from the deadly poisons and the unhealthy surroundings which rendered it almost