increased vigor of the plants, probably due to an increased rate of the use of plant foods."

In another experiment, performed on individual plants in the greenhouse, the pistil, or seed-bearing part of the flower, was treated with a paste containing colchicine and indole acetic acid. Unpollinated pistils produced fertile seed, which thus had a mother but no father. Plants are now being grown from those seeds. The cotton fibers from the colchicine-treated flowers were longer and stronger than that from untreated flowers.

Science News Letter, January 11, 1941

GENERAL SCIENCE

Dr. Irving Langmuir Elected New A.A.A.S President

Scientists Honor Man Whose Study of Surfaces Led To Brighter Light Bulbs and Wetter or Drier Water

See Front Cover

WHENEVER you switch on an electric light you are getting the benefit of one of the many researches of Dr. Irving Langmuir, newly elected president of the American Association for the Advancement of Science. For Dr. Langmuir, who won the Nobel Prize in chemistry in 1932, is responsible for the present-day practise of filling light bulbs with gas (usually nitrogen) that prolongs their life, makes them more efficient, and cuts down your monthly light bill.

This, however, is only one of the applications that have been made of a central principle that has dominated the long series of physical investigations which he and his staff have been carrying on in the research laboratories of the General Electric Company at Schenectady, N. Y., during the past thirty years and more. What Dr. Langmuir is really interested in is what happens at surfaces where two substances come together. He was led to the discovery of a way to make better and longer-lived electric lamps by his interest in what went on when molecules of various kinds of gases were in contact with the surface of hot metals. Nothing much goes on when nitrogen or another inert gas touches hot tungsten—and that is why a gas-filled lamp keeps on shining so brightly and so long.

Another of Dr. Langmuir's accomplishments has been the production on a large scale, and the industrial utilization, of what is known as dissociated hydrogen. Ordinary hydrogen, such as every high school chemistry student makes by pouring acid on zinc, consists of two atoms tied together to make one molecule. These two-atom molecules can be split apart into single atoms by squirting hydrogen through an electric arc.

Making dissociated hydrogen was only a kind of scientific stunt until Dr. Langmuir took it in hand. He devised a way to control the jet, and to turn it on metals to be welded. The single molecules of hydrogen, eagerly seeking mates, end their solitary state in a union that produces very high temperatures. These high-temperature jets are particularly good for welding, because there is no oxygen present, as there always is in ordinary flame, to produce troublesome oxides and scale.

Dr. Langmuir has lately been performing some other interesting but as yet apparently useless scientific stunts with ways to make the surface of water and other liquids wetter or drier than they normally are. What use will be made of this is not yet evident—but if past records mean anything, those "stunts" will doubtless bear watching.

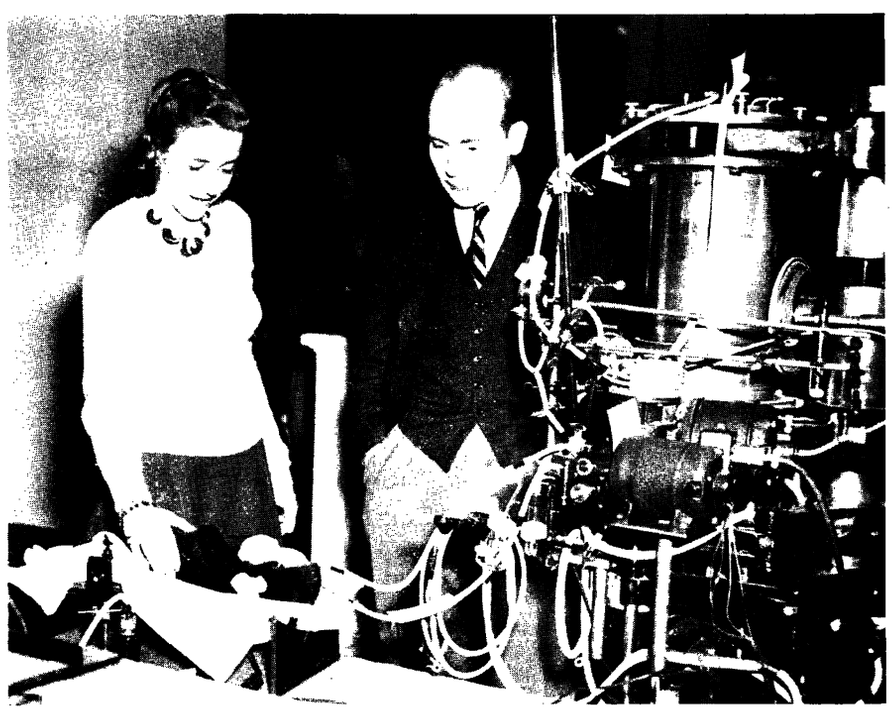
Science News Letter, January 11, 1941

ENTOMOLOGY—BOTANY

Insect Resistant Plants Are Now Being Bred

PLANTS that "bugs" don't like are being bred by American agricultural scientists in a new offensive against the insect menace. While the new kinds of plants become untouchable to devouring insects, they remain tasty and nutritious to man and beast for whom they are raised as food.

Instead of trying to fight the insect foes of our farms only with poison and



ARTIFICIAL LUNG AND HEART DEVICE

The toy monkey that Miss Margery Kitchen is admiring has an artificial heart and lung device attached to him. The apparatus is used to withdraw the blood from an animal's veins and return it to his arteries after treating it much as the lungs would. Charles Kraul demonstrated the apparatus for the Harrison Department of Surgical Research at the meeting of the American Association for the Advancement of Science in Philadelphia. The apparatus was designed by Drs. John H. Gibbon, Mary H. Gibbon and Charles Kraul.