

GENERAL SCIENCE

Science Problems Ahead

President-elect Eisenhower's term will probably be the most scientific yet. Issues range from country's health to manpower to artificial satellites.

► PRESIDENT-ELECT EISENHOWER faces grave decisions in what promises to be the most scientific of Presidential terms.

He will authorize the spending of eight billion dollars in four years for research by governmental agencies—Defense, Agriculture, Interior, Commerce, Public Health. Billions more will be spent on atomic energy and billions more on developing and producing weapons based on research.

He will face, and have to deal with, an ever-increasing shortage of scientific, technical and medical manpower. He will have to decide whether we shall continue to let young men go to college, thus keeping our supply of well-trained manpower replenished, or whether they are all needed in the Armed Forces immediately after leaving high school.

On his desk, perhaps even before he takes the oath of office on Jan. 20, will be a report on the explosion of the first H-bomb at Eniwetok. He will have to assess this report, then decide whether more H-bombs are to be produced or whether we stick to

A-bombs. He will have to decide how much of the Atomic Energy Commission's efforts can be directed to peaceful uses of the atom's power in medicine and for industrial power.

Sometime next year he will receive from the National Science Foundation a balance sheet on the nation's scientific effort. He will have to decide whether that effort is in balance, whether the government should support more fundamental research, whether some scientific fields are being neglected while, proportionately, too much is being spent on others.

Soon President Truman's Commission on the Nation's Health will report. The President-elect is not in favor of compulsory health insurance; neither, it is believed, will the commission favor such a program. Yet the report will recommend steps which the federal government can take to improve the quality and quantity of medical care available to all the people.

He will have before him, left over from President Truman's terms, the unacted-on recommendations of the Hoover Commission on consolidation of the government's medical services and hospitals. He will have to deal with shortages of doctors and nurses, especially nurses.

He will lead one of the world's healthiest nations, and a nation whose health is improving all the time. His problem will be to provide the leadership which will keep us healthy and improve on our good health. One field in which we shall probably go forward in the next four years is environmental sanitation—the problem of pollution of our air and our streams.

The water we drink and which irrigates and sometimes floods our fields, will receive even more federal attention. Ways to make sea water fresh on an economical basis, now being investigated by the Interior Department, may ease the threat of shortages on the West Coast. A more intensive engineering effort may ease the flood threat on the great plains.

The President-elect may have to decide whether to recommend the spending of ten billion dollars on the establishment of an earth satellite. Not only the problems of this world but of other worlds may face him.

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About 60% of the *milk* consumed by the world's population is produced by goats, one scientist estimates.

It costs a typical Boston family \$1,000 to \$1,700 to operate a new *car* 15,000 miles in a year, a survey reveals.

Do You Know?

Uncapped, abandoned artesian wells make excellent breeding grounds for cattle *liver flukes*.

The first *pencil* was devised in 1662 when a Nuremberg cabinetmaker incased thin graphite strips in wooden tubes.

Poor quality *sunglasses* can damage eyesight by distorting vision and by failing to shut out ultraviolet and infrared light rays.

Early removal of crop left-overs from the land may spell "death by starvation" for some *insects*.

Leather can be made from the skins of fish, and from every type of animal from goats to frogs.

No *antibiotic* or chemical agent so far discovered has been found effective against viruses of polio, flu, measles, mumps, and many diseases of livestock.

BIOCHEMISTRY

Poland Reports New Anti-TB Chemicals

► FROM BEHIND the Iron Curtain comes news of some new anti-tuberculosis chemicals. Named T 40, T 95 and T 139, they are newly prepared hydroxamic acids.

In nine cases of tuberculous meningitis, in which streptomycin had not been effective, adding T 40 to the treatment "produced a considerable improvement," Drs. T. Urbanski, S. Hornung, S. Slopek and J. Venulet of the Institute of Technology and the Institute of Tuberculosis in Warsaw and the Medical Academy, Cracow, Poland, report in *Nature* (Nov. 1).

Of 20 patients showing tuberculosis of the lungs in X-ray pictures, nine showed pronounced improvement of the X-ray picture, eight showed no improvement, and three became worse when treated with T 40. Some of the patients resistant to T 40 were treated with streptomycin but no improvement followed.

Science News Letter, November 15, 1952

ENGINEERING

Chart Shows Position Of Airplane in Flight

► A DOT of light on a wall chart in the airliner cabin will provide a constant answer to the passenger question, "Where are we now?" The necessary equipment is not yet perfected but it is under development by a British radio company and it is similar to a successful pilot's aid now in use.

The traveling dot of light on the chart is controlled from an automatic Decca Navigator mounted in the pilot's flight deck. This master unit is an automatic airborne version of the equipment already used at sea by hundreds of vessels. It picks up the same radio signals from ground stations that are picked up by the vessels.

The pilot's Navigator contains a strip map that moves on rollers. A stylus pen in front of the pilot follows the moving map and shows the pilot his geographical position. The same pick-up device will actuate the moving dot of light in the passenger cabin.

Use of the Navigator is growing as more and more ground stations are put into operation. Chains are now working in Britain, Scandinavia and Germany, and are being constructed in France and other parts of Europe. The pilot's master unit has already been adopted by British European Airways for its fleet and by next year will be widely used in flights over Europe.

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