

Questions

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In what way are the XF-91's wings unusual? p. 397.

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SURGERY—How can patients with aneurysm of the aorta now be saved? p. 386.

...

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Do You Know?

For its protein value, rats, mice and some insects eat *glue* made from animals.

If it is not caught, the *lobster* will live about 50 years.

Including the widowed and divorced, the proportion of married American *women* now is at a record high.

Fuel oil *fires* occurring in storage tanks can be reduced in intensity and sometimes can be snuffed out completely if air is bubbled through the tank from the bottom.

Said to be the smallest in existence, a recently developed electrical *transformer* weighs only 1/100 ounce complete with its protective casing.

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GENERAL SCIENCE

Top 1952 Science Stories

► THE TOP ten important advances in science and technology during 1952 as picked by Watson Davis, director of SCIENCE SERVICE, are:

1. Successful testing of the hydrogen bomb or thermonuclear weapon and hints that its fusion reaction might be applied to peaceful uses.

2. Development of the most powerful anti-malaria drug, Daraprim (pyrimethamine), which holds the possibility of eradicating the world's number one disease.

3. Use of a new drug, isoniazid, in the treatment of tuberculosis with promising results.

4. Three promising approaches to polio protection: gamma globulin and two virus vaccines.

5. Detection by visual and radio tele-

scopes of spiral arms of the Milky Way galaxy, in which sun and earth are located.

6. Design of an atomic accelerator or cosmotron which will develop 100 billion electron volts.

7. Discovery that Jericho has had a continuous history of 6,000 years which makes it the world's oldest town.

8. Progress toward forecasting daily weather by processing great masses of numerical data through electronic calculators.

9. First jet airliners went into commercial international service.

10. The formation of petroleum at the present time in off-shore marine sediments demonstrated chemically and by radio-carbon dating, exploding theory that oil formation requires millions of years.

Science News Letter, December 20, 1952

INVENTIONS

Patents of the Year

Numbers following items are U. S. Patent numbers. Printed copies of patents can be obtained from the U. S. Patent Office at 25 cents each. Order by number, do not send stamps, and address order to the Commissioner of Patents, Washington 25, D. C.

Notable and interesting inventions patented during the year include:

An improved method of extracting uranium from bituminous shales that will substantially increase the yield. Patent 2,597,504.

The synchro-cyclotron, one of the most powerful atom-smashers. Patent 2,615,129.

New germanium alloys with gases and metals, and rectifiers made from the alloys. Patents 2,588,253 and 2,588,254.

A new system of making movies by first televising the scene and then photographing the result, thus making possible lighting by lamps of lower intensity. Patent 2,607,845.

A system for sending full color pictures over wirephoto or radiophoto circuits in a single transmission. Patent 2,598,504.

A system of five lenses for large-scale projection of television pictures without loss of sharpness. Patent 2,586,866.

A method of transmitting television over long distances by using flying airplanes as relay stations. Patent 2,598,064.

"Sofar," a method of transmitting sounds thousands of miles through ocean water, using a sound channel located at about 4,200 feet under the surface. Patent 2,587,301.

A computer in a torpedo which figures out the course and speed of a target ship and corrects the torpedo's course to correspond. Patent 2,600,159.

A method for making relatively heavy crude oil out of coal while it is still underground, and then pumping it out for refining into motor fuel. Patent 2,595,979.

A process for doubling the amount of insulin extracted from animal pancreas glands, for use in treatment of diabetes. Patent 2,595,278.

Steps in the ultimate synthesis of cortisone. Patents 2,596,562 and 2,596,563.

Use of soybean as basis for a glue suitable for high-grade, low-cost fiberboard. Patent 2,580,391.

Means of strengthening taconite pellets by addition of starch or sodium silicate. Patent 2,596,132.

Five new titanium alloys that will add to the strength of this defense-important metal, which is already twice as strong as many steels. Patents, 2,596,485 through 2,596,489.

Exhaust circuits in buildings to take away deadly fumes in case of fire. Patent 2,586,797.

A radar system which can be used from airplanes for contour aerial mapping and can be used over water to develop a contour of the underwater surface. Patent 2,616,077.

A bullet-proof, self-sealing gasoline tank for military aircraft made of silk, wool or other cloth with self-sealing liner. Patent 2,601,525.

An automatic control system that feathers the propeller blades of an airplane when an engine fails. Patent 2,605,849.

A water-repellent glass cloth for use in clothing, tents and awnings. Patent 2,604,688.

A pilot's suit made of diagonally woven mesh to provide proper pressure for combating effects of gravity at extremely high speeds. Patent 2,605,065.

An automatic radio weather station to transmit meteorological data from unmanned observation posts. Patent 2,605,343.

A "three way" antibiotic preparation to fight infection by successive attacks by sulfadiazine, penicillin and sulfamerazine. Patent 2,602,038.

Sterilization of raw canned foods by use of high frequency radio waves. Patent 2,576,862.

An automatic headlight control which dims the lights at the approach of a car in the opposite direction. Patent 2,615,079.

Non-electrolytic method of coating aluminum with rust-resisting zinc. Patent 2,580,773.

A typewriter that will type Chinese characters. Patents 2,613,795 and 2,613,794.

An improved ocean depth finder that determines depth by measuring the time necessary for ultrasonic impulses to bounce from the ocean bottom. Patent 2,599,586.

Science News Letter, December 20, 1952

New 1953-model cars carry an average of 30 *light bulbs* each.