



GIANT 9-LENS CAMERA

Sherman M. Fairchild is shown here with the giant nine-lens camera just built for the U. S. Coast and Geodetic Survey by the Fairchild Aerial Camera Company and said to be the largest single unit aerial mapping camera in the world. It has a focal length of eight and a quarter inches and photographs an area of 600 square miles from an altitude of 30,000 feet at one simultaneous click of its nine electrically operated shutters. It is loaded with a film 200 feet long, which is sufficient for 100 exposures.

PHYSIOLOGY

Transplanted Animal Hearts Keep Beating for Months

HEARTS of animals, transplanted to the bodies of other animals, kept on beating as long as their "adopted" bodies lived—a matter of three months or more.

Experiments with this unique outcome were reported before the meeting of the Zoological Society of America by Drs. W. H. Wright and H. H. Collins, of the University of Pittsburgh.

The animals were relatively lowly creatures—red-spotted newts, which are less-familiar cousins of frogs and salamanders. These animals will stand a good deal of surgery, apparently quite without embarrassment. Transplantations of legs and tails are quite an old story to them. You can stick a piece of newt almost anywhere on himself or on another newt, and it will grow. But

hearts had never before been attempted.

The hearts which Drs. Wright and Collins transplanted were taken from animals in their younger stages of development, and transplanted upon the body surfaces of adult animals. In some cases, the whole larval animal was thus grafted on an older individual.

In ten cases the hearts thus implanted continued to beat for more than 100 days, the maximum being 165 days. They stopped only when the "host" animal died, in every case. The blood vessels of an engrafted animal and its new heart frequently remained separate for a time, but finally united, so that both hearts were working on the same circulatory system. In all cases, the new hearts had a beat-rate different from the older hearts of the "host" bodies.

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PHYSICS

Improved Method of Chromium Plating Reported

BY FOOLING electricity and making it act differently from normal, University of Michigan scientists at Ann Arbor have developed an improved process for electroplating non-corrosive chromium on other metals. Much special equipment now needed to secure an even deposition of chromium can be discarded, according to Dr. Richard Schneidewind of the department of electrical engineering.

Electricity, including even lightning, takes the path of least electrical resistance and naturally tends to strike high sharp points such as church steeples—or for an electroplating bath, the little bumps and raised places on the metal surface.

Thus most of the electric current goes to the bumps and a heavy deposition of chromium there occurs. But nearby in a hollow place, a coating barely sufficient to cover the surface is secured.

Special networks of wires are used to conduct the current in the electroplating bath into the depressions and attain an even distribution of the chromium metals.

Dr. Schneidewind's new process uses complicated organic chemicals to attain this needed "spreading" effect for the electricity.

With the chemicals in the electroplating bath, the electric current no longer makes a beeline for the high spots but, instead, also plates the hollows.

One manufacturer, for example, found his production of chromium plated frying pans could be increased from 65 to 100 an hour because of the time saved in no longer needing to fit a special loop of wire into each unplated pan.

Science News Letter, January 18, 1936

VITALISM and MECHANISM A DISCUSSION

between

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and

JAMES F. PORTER

Is life a blind automatic machine or is it planned and directed to produce pure souls?

25 Cents

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