

## Do You Know?

*Pork liver* is higher in iron than other animal livers.

There is approximately one *horse or mule* in the United States for every 10 persons.

The *sponge* is capable of standing great abuse without being killed; but it cannot live long out of water.

A single pocket *gopher* has been known to dig an underground tunnel over 600 feet long in 48 hours.

The United States produced in 1942 approximately 119,000,000,000 pounds of *milk*, or about 440 quarts per person.

*Wool waste* to clean greasy machines is replaced in part at least with a material made from peanut shells, rice hulls, corncobs, and other farm wastes.

A typical *hen* of a well-bred laying stock, weighing 4½ pounds, produced 385 eggs weighing 48 pounds in two years; she consumed 160 pounds of feed.

The tallest living *tree* in the United States, 364 feet high, is a California coast redwood in Humboldt State Park; some claim it is the tallest tree in the world.

*Chemotherapy*, the treatment of infectious diseases with specific chemicals, originated in the 16th century, when the beneficial effect of mercury in the treatment of syphilis was discovered.

*Red squill*, one of the most important poisons used in the control of rats, is again coming into the United States from North Africa as a result of improved conditions in the Mediterranean area.

A *diamond* of gem quality, weighing about 530 carats in the rough, was recently found in Sierra Leone, Africa; this is more than twice the size of any previously found in this British Colonial Empire.

*Oil wells* will soon be drilled in the Cerritos channel between Los Angeles and Long Beach to recover an estimated 17,000,000 barrels of oil in 92 acres of government-owned property without interference with shipping.

### AERONAUTICS

## Folding-Wing Airplane Has Hinge in Middle

► A FOLDING-WING airplane designed by E. G. Dickinson of Olcott, N. Y., and S. T. Payne of Kenmore, N. Y., has been granted patent 2,343,645.

Most present-day planes in this class either fold their wings up over their backs more or less like butterflies, or swing them back along their bodies, like flies or bees. The present invention introduces a new feature. The bases of the wings are hinged to turn upward, but somewhat less than half-way along the wings' length is a second hinge, enabling the outer portions to swing down.

In resting position, therefore, the outline of the plane suggests a bird with half-folded, drooping pinions. This method of folding is claimed to give greater stability to planes on the ground or flying boats on the water because the center of gravity remains in essentially the same position in both folded and extended states. It also saves stowage space in carriers or hangars.

Rights in the patent are assigned to the Curtiss-Wright Corporation.

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**HERCULEAN**—This hydraulic press, one of the largest ever built for powdered metallurgy, was designed by the Hydraulic Press Manufacturing Co., Ohio, for briquetting powdered carbides of tungsten, titanium or tantalum for carbide cutting tools, dies and inspection gauges. It can press downward with a 1,500-ton force and horizontally with a 1,000-ton force.

### BIOCHEMISTRY

## Like Permanent Wave

Blood clotting found due to change in molecular shape of same kind involved in giving hair a long-lasting curl, report from England states.

► A CHANGE in molecule shape of the same kind involved in putting a permanent wave in hair plays a basic part in making blood clot, it appears from reports received of experiments by Dr. K. Bailey, of the Biochemical Laboratory, Cambridge University, and Dr. W. T. Astbury, Dr. K. M. Rudall and Dr. W. C. Evans, of Leeds University.

Blood clotting is due to the change of the fibrinogen in the blood into fibrin. This change, the English scientists have found by X-ray analysis, depends on a change in molecular shape of the same kind as occurs in the contraction of muscle tissues and the elastic stretching of skin and hair.

"In fact," says the report in the British Council's *Monthly Science News* (February), "the permanent wave set in a lady's hair and the curls in a ram's horn set up by nature depend on the

same kind of molecular change as occurs when blood clots."

The existence of the same molecular machinery in all these varied tissues suggests to Dr. Astbury and his colleagues that all of them spring from the same peculiar shape of the molecule and are therefore probably all adaptations of a single root idea.

"Like other biological discoveries," the report continues, "it suggests that the vast variety of living things springs from variations on a few root ideas and mechanisms. This in turn leads to the thought that many of the complications of nature may be unlocked by a few simple keys, and that biological problems which seem at present utterly insoluble will one day be solved quite simply."

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