

AERONAUTICS

**Propeller Feathered
When Engine Fails**

► AIRPLANE CRASHES may be reduced in the future by an automatic control system that feathers the propeller blades when an engine fails.

The automatic propeller feathering system warns the pilot with signal lights when an engine fails. At the same time, it begins to turn the propeller blades so they face into the wind.

That reduces drag on the plane and may mean the difference between a safe flight and a catastrophe. If the propeller blades are not feathered, they act as a windmill, creating considerable resistance and seriously hampering flight.

Sometimes engines fail at the most critical times in flight. An engine may go dead during take-off, for instance, when a plane needs all the power it can muster to lift itself off the ground. Under those circumstances, the pilot has to act quickly.

It would take him a few moments to see which engine was stopping, and then a few more moments to get the propeller feathered. Sometimes all that cannot be done before the blades begin "windmilling" and start slowing down the plane.

Invented by Lawrence J. Bordelon of San Diego, Calif., the automatic system should relieve the pilot of that bit of work during emergencies when his attention is needed elsewhere. The patent was given number 2,605,849 and was assigned to Consolidated Vultee Aircraft Corp., by its inventor.

Science News Letter, August 16, 1952

PALEONTOLOGY

**Discover Rare Fossil,
Ten-Rayed Starfish**

► DISCOVERY OF an extremely rare fossil, a 10-rayed starfish that lived about 325,000,000 years ago, has been reported by Prof. John W. Wells of the Cornell University geology department, Ithaca, N. Y.

The only other specimen of this species is a fragment in the American Museum of Natural History in New York.

The find was made five miles east of the Cornell campus by two graduate students looking for snakes on Mt. Pleasant in the Cascadilla Creek valley.

Three of the 10 rays in the Cornell fossil are complete and it is nearly seven inches in diameter. Another rarity is the small round disk known as the madreporite or sieve plate which is preserved with the fossil. The starfish lived in the Devonian period, or Age of Fishes, in the Paleozoic Era.

The species was named *Ptilonaster Princeps* in 1868 by James Hall. The fragment he described has only three rays, one complete. The sharp angle between these, however, showed that the species had more than the usual five rays.

Science News Letter, August 16, 1952

GALAPAGOS TORTOISES—*Smallest of these scarce specimens now in the National Zoological Park weighs 250 pounds, while the tortoise on which Miss Joyce Grissom of Washington sits weighs about 400 pounds. The two tortoises are a gift from Ecuador.*

METEOROLOGY

Climate Change Foreseen

► "THERE IS a possibility of a quite appreciable permanent change in the world's climate in the next 25 to 50 years," Dr. C. E. P. Brooks, British meteorologist, told a meeting of U. S. Weather Bureau experts in Washington.

If the present trend continues, he said, the world will warm up to such an extent that it will have important economic and political effects. However, he said, variations in the average temperatures between one year and the next are now sometimes greater than the permanent change that could take place over 25 to 50 years.

Dr. Brooks pointed out that the world's glaciers and the arctic ice pack have been retreating for the past 100 years. If this retreat continues, he said, then the climatic changes he predicts will come about.

Dr. Brooks said that, in 1000 A.D., Norsemen who colonized Greenland were able to grow crops and to become self-sustaining on those crops. While he did not see the ice retreating to quite this extent, he thought the climatic changes would have an advantageous effect on Canada's already booming economy and on other northern parts of the world.

The glaciers are now, he declared, at their farthest stage of retreat since 1650. Furthermore, he said, such a process, once started, is hard to stop. Yet it could be stopped by a few very cold and snowy winters occurring in succession.

Along with the change in temperature, Dr. Brooks said there would be a tendency for more frequent dry years to occur.

If the Greenland and arctic ice were to melt away entirely, which is doubtful, he said, the waters of the oceans would rise about ten feet, thus cutting back the land areas of the world.

Science News Letter, August 16, 1952

AGRICULTURE

**Increase Sugar
In Sugar Beets**

► GROWTH - REGULATING SPRAYS, such as maleic hydrazide, may prove useful in increasing the sugar concentration of sugar beets if applied shortly before harvesting, Dr. David Ririe, University of California agronomist, reported at the Annual Sugar Beet Day held in Davis.

Low sugar concentrations at harvest, Dr. Ririe stated, may be due to continued active growth or to excessive seed stalk production by the plants. This tends to use up sugars manufactured in the leaves rather than storing them in the roots.

Such a situation is particularly true when sugar beets are growing under conditions of ample nitrogen supply and relatively warm night temperatures, or under conditions which tend to produce bolting.

Science News Letter, August 16, 1952