

INVENTION

**Patent Weighing Device
For Use in Wind Tunnels**

➤ AN ELECTROMAGNETIC weighing device to measure the forces exerted on airplane models in wind tunnels has received patent number 2,685,200.

Its inventors, Hiram G. Slottow of Baltimore, Md., and Turner L. Smith of Havre de Grace, Md., assigned their patent to the government as represented by the Secretary of the Army. The device, they claim, combines the excellent dynamic properties of a mechanical spring scale and the accuracy of a beam balance, the two instruments previously used for such wind tunnel measurements.

The new instrument can detect forces up to 40 pounds at a "stiffness" of over 100,000 pounds per square inch. The forces are measured by the electric current generated in the system, such current being proportional to the velocity and displacement of a shaft.

Science News Letter, September 4, 1954

Questions

BIOCHEMISTRY—What is properdin? p. 156.

ELECTRONICS—What was "Project Tinkertoy?" p. 154.

ENTOMOLOGY—How do flies become DDT-resistant? p. 152.

NEUROPHYSIOLOGY—Where in the brain is the seat of the emotions? p. 150.

PHYSICS—How do A-bombs affect radio-carbon dating? p. 148.

VETERINARY MEDICINE—How does polluted water menace cattle health? p. 155.

Photographs: Cover, North American Aviation, Inc.; p. 147, General Electric Company; p. 149, Sperry Gyroscope Company; p. 151, Bell Telephone Laboratories; p. 154, National Bureau of Standards; p. 160, Bakelite Company.

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Booklet: "Introduction to Geology for the Layman" 50¢; Catalogue, 50¢.

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**Gathering Into Barns**

➤ AT HARVEST time, we are apt to become a bit satisfied with ourselves, regarding man as the only creature that looks toward the future and seeks security against its chances by laying in supplies.

Yet a moment's looking about will dispel this mistaken pride, for the world is full of other beings that also gather into barns.

Rodents as a class offer numerous interesting examples of this hoarding habit. Squirrels lay up stores of nuts and grain, beavers stock their ponds with sticks bearing tasty bark, certain wild mice lay by quantities of seeds, and the pika or little chief hare of the Rocky Mountains cures hay and packs it away in his rock-crevice home.

VETERINARY MEDICINE

Ants Threaten Cattle

➤ ANTS ARE serious enemies of cattle, a committee of the American Veterinary Medical Association charged at the association's meeting in Seattle.

The ants play host to the lancet fluke, one of the worm parasites that kills cattle. Workers found almost a third of the ants collected at two different locations in New York state to be infected with this fluke.

The cottontail rabbit, the committee reported, can also play host to this cattle destroying fluke.

The seriousness of the cattle parasite situation was shown by reports that some cows were found harboring over a million parasites in their stomachs.

About five percent of 1,900 animals on 10 Georgia farms were killed off by such parasites in slightly over one year.

Besides the ant threat, veterinarians heard of an entirely new disease that kills cattle and for which no remedy has yet been discovered. Known as "mucosal disease," it has already been found in 73 cattle herds in Iowa, and the death rate from it is 90%. Dr. K. F. Ramsey of Iowa State College reported.

Birds are not often thought of as hoarders; indeed, they are cited in the New Testament parable as among the creatures that take no thought for the morrow. Yet a few of them do store food.

The habit of the shrike or butcher-bird, of hanging his victims on thorns or the prongs of barbed-wire fences, is not a torturer's trick, as has been widely believed, but only a bit of packing-plant technique. California woodpeckers wedge acorns into cracks, or into holes of their own drilling, and come back later to consume them.

Often this hoarding habit runs away with itself. The bird or beast goes on storing and storing, in a veritable orgy of acquisitiveness, long after reasonable provision has been made for the future. Such creatures pass the thrift line and become mere hoarders, getting merely for the sake of getting, even losing track of all they have gathered.

An industrious California woodpecker, for example, will hammer away tens of thousands of acorns, and even stick smooth pebbles into his storage-crevices, and leave them there for years unused, while he just as assiduously stores the next season's crop.

Such excess of storing activity invites its own penalty. Bees are notorious for the way they will fill to overflowing whatever cavity they may chance to be inhabiting.

Beekeepers know this and pile super on super, letting them fill all the frames. Then they take away almost all the honey, leaving only enough to carry the bees through to the beginning of another season. And the poor, silly, exploited insects do not seem to have the least idea of what is happening to them.

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Winter and early spring, especially February and March, are the worst times for the disease.

An age-old disease of cattle, bloat, still causes great losses to farmers, Dr. R. E. Nichols of Madison, Wis., reported. Wisconsin farmers alone lose more than \$2,000,000 every year to this disease, for which scientists have yet to find the true cause and a sure remedy.

Bright spot in the gloomy livestock scene was the report of good results with the new vaccine against blue tongue of sheep. More than 90% of sheep given the new vaccine showed little or no reaction to the blue tongue virus when subjected to it six weeks after vaccination in trials in California and other western states. By contrast, more than 70% of unvaccinated animals showed severe to moderate reactions.

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The American *chestnut tree*, victim of blight for 50 years, is gradually being replaced by a new resistant hybrid, a cross between the original strain and an oriental species.