

There have been no complaints of overcharging since the new method was tried in Detroit, Mr. Austin said, although the streets of the city were icy for almost three months of the winter.

EGGS BY THE POUND POPULAR, SAYS OREGON WEIGHTS EXPERT

A hen's life is just one thing after another. Take Oregon now. It isn't enough for a hen in Oregon to turn out her quota of eggs per year, but she has to lay eggs weighing at least one and five-sixths of an ounce, if she wants to come up to the standard set in the recent state egg law.

All because Oregon dealers are rapidly abandoning the old American tradition of selling eggs by the dozen and are selling eggs by the pound.

How this innovation is working in the state and how it is becoming popular - with the dealers if not with the hens - was described at the recent meeting of the National Conference of Weights and Measures, by William A. Dalziel, deputy state sealer of weights and measures of Oregon.

Mr. Dalziel exhibited some of the types of weighing devices which have come into use for weighing eggs to determine their grade. Some of the devices being used are not accurate, he declared. He urged that, since the practice of selling eggs by weight is spreading ateadily, the devices used for grading them should be standardized and placed under the weights and measures laws.

NEW STRUCTURAL MATERIALS TO MAKE AIRCRAFT SAFER

Structural material, andnot engines or machine design, is the big problem today in aircraft development. Such is the experience of J. H. Kindelberger, engineer in charge of United States mail and military airplane construction in Santa Monica, Calif.

The imminent failure of the spruce lumber supply normally available from Oregon and Washington means that the all-metal plane is now the only real prospect of the future. Strangely, no material has yet been found, even in the domain of heat-treated steel and light alloys, which is equivalent, pound for pound, to straight-grained clear spruce for the main skeletal support of an airplane. Millions of feet of spruce in fact the major stocks of the northwest mills, have recently been rejected, however, by airplane lumber scouts. The few thousand feet of lumber deemed suitable for the work will be utterly inadequate in the face of the extensive development of the air service now in prospect. Thorough and most extensive research is now progressing with alloys of aluminum, copper and manganese.

Sheet metal stampings and seamless tubes of aluminum alloys are proving successful for cross braces and minor support members, also for flooring and sheathing of various sorts. Castings, heretofore considered unsafe under the strain of air service, are being made of more ductile metal, and will be available.

In naval practice the aluminum alloys frequently come to grief, due to the great chemical activity of aluminum when exposed to sea water. Atmospheric oxygen, water and salt transform an aluminum hydroplane skeleton into a mass of white powder. This oxidized powder may still retain its original form on account of the dried varnish shell about it, and accordingly be a source of deceptive danger. Inasmuch as resistant metals are all relatively heavy, little hope is offered of an alloy that will stand actual contact with the sea. New varnishes are in prospect, however, to meet the situation with light-metal alloys.

HEAT-RESISTING BACTERIA EVOLVED IN LABORATORY

The bacteria produced by selective breeding may display as scientifically startling qualities as any white mouse or guinea pig of hand (or laboratory) picked ancestry. Dr. C. A. Magoon of the Bureau of Plant Industry in the U. S. Department of Agriculture has recently announced through the Journal of Infectious Diseases that he has been able by a process of selection to produce a strain of bacterial spores twenty-five times as resistant to heat as the original spores with which he started his experiments.

It is a phenomenon familiar to scientists that in a given strain of bacteria a few hard-boiled individual spores are much more resistant to heat than others. A spore is a heat and cold resisting form developed by bacteria that in many ways may be compared to the seed of higher plants.

Since a large amount of food spoilage and sometimes food poisoning is caused by the bacteria that develop from heat resistant spores it is essential that as much as possible be learned of the reasons for this variation in heat resistance and the factors influencing it.

Dr. Magoon began his experiments with spores of one of the common soil bacilli that had survived seven minutes in an oil bath at the temperature of boiling water. Breeding from the most resistant spores each time, he then proceeded to produce several generations the spores from each of which would stand a longer period of boiling without being killed than the preceding ones. Their period of germination was found to vary considerably, some starting growth within twenty-four hours while others required more than twelve days.

Dr. Magoon says in conclusion: "Preliminary studies only have been made to determine the basis for these differences in thermal resistance among spores and the evidence in hand is insufficient in amount to warrant definite conclusions. More information upon this important subject is greatly needed, for until more is known of the reasons for these differences, satisfactory and reliable methods of spore destruction cannot be developed, and the technology of food preservation will continue to be subject to the laws of chance".
