

AERONAUTICS

# World's Largest Airship Being Prepared For Flights

**New Design Will Enable Dirigible to Move Vertically  
While Triple Keels Impart Greater Strength Against Wind**

**T**HE U. S. Navy's Akron, an air cruiser and the largest lighter-than-air craft in the world, was christened by Mrs. Hoover at Akron Saturday and will take to the air for trial flights within the next few weeks.

The huge rigid airship is nearly twice as large as the Graf Zeppelin, having a gas capacity of 6,500,000 cubic feet, while the capacity of the Graf is 3,700,000 cubic feet and of the Los Angeles, 2,470,000 cubic feet. The ship has a length of 785 feet and a maximum diameter of 132.9 feet.

Carried up by non-inflammable helium gas, of which America has a monopoly, the Akron will exert a gross lift of 403,000 pounds and a useful lift of 182,000 pounds. And powered by eight Maybach engines capable of attaining 4,480 horse-power she will be able to reach a maximum speed of 84 miles per hour. At a cruising speed of 50 miles per hour, engineers have estimated that the ship will travel 10,580 miles without refueling.

Thus, because of her size, the Akron will greatly excell all airships. New features of construction also give her additional advantages. For example, instead of one keel she has three which strengthen the ship to withstand vertical air currents.

## Reduces Air Resistance

All engines are within the bloated cigar-shaped framework and the propellers project 18 feet through the fabric. Thus the air resistance of protruding cabins is done away with. The engines are reversible and the propellers can be turned through an angle of 90 degrees to carry the ship vertically up and down as well as forward. By means of a condenser system enough water will be recovered from the exhaust gases to make up for the weight lost by the consumption of gasoline.

The Akron contains a hangar for small airplanes and will be able to discharge these planes and receive them again while in flight. It is also expected

that she will be equipped with a number of rapid fire guns.

Dr. Karl Arnstein and engineers who came with him from Germany designed the Akron. During the World War Dr. Arnstein had charge of the construction of some seventy military and commercial airships, many of which were used in night attacks on England. The Los Angeles, now the United States' only rigid airship, which was built by the German Zeppelin Company for this country, was also under Dr. Arnstein's direction.

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**DR. ARNSTEIN**

*The German designer who has just completed his 71st airship. Dr. Arnstein was in charge of construction of 68 German military and commercial Zeppelins for use in the World War. Some of them took part in the air raids against England.*

FORESTRY

# High Winds and Drought Make Fire Control Problem Acute

**U**NPRECEDENTED high winds which parch the land and sweep flames along tree tops have made the fire control problem in northwest forests exceedingly acute. Western Montana and Northern Idaho are the focus of raging conflagrations which have cost homes and lives of stock, and have ruined hundreds of productive acres.

Eastern Montana is drier now than ever before, while the whole state as well as Washington, Idaho, and Oregon suffer from the cumulative effect of a drought increasing steadily for the last ten or eleven years. Lack of spring rains, according to Roy Headley, of the U. S. Forest Service, resulted in forest fires breaking out in these states in April of this year. Never before at such an early date, he said, have such destructive blazes been encountered.

During the latter part of June, some precipitation occurred in the northwest region but was quickly nullified by the intense wind and heat which dried up the moisture. Wyoming, Colorado, Utah, and South Dakota have been in the grip of the drought until recently

when some rainfall occurred, Mr. Headley said. In Arizona and New Mexico summer rains have made conditions normal. Destruction by fire has been reported in forests throughout the west; since July fires have not been serious along the Atlantic coast. In general, the drought conditions and resulting fires are believed to be considerably worse this year than last.

Figures from the U. S. Forest Service show that already in the national forests alone, at least 251,000 acres have been severely burned, while the total for 1930 was only 205,000 acres, and the season of fires is far from being over.

Lightning is charged with causing almost two-thirds of the fires in the Pacific northwest. Lookouts report them as soon as sighted and the rush begins to surround the burning area and prevent it from enlarging. Sometimes it is possible to look at a storm and tell whether it is the kind likely to cause a fire. Besides the natural agencies which start fires, Mr. Headley stated, the careless smoker is the worst.

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