

DETROIT'S ALL-METAL DIRIGIBLE

DETROIT, WHICH PRODUCED THE "TIN LIZZIE," now brings forth what a number of facetious editorial writers dub the "flying tin can"—an all-metal dirigible. But the scoffers were put to rout when this metal airship, the first of its kind, successfully completed the first test, and later was flown to the Cleveland air races. In fact, the *Cleveland Plain Dealer* looks upon the designing and construction of this large "blimp" as "the greatest single step in the development of the airship since Count Zeppelin began experimenting with them thirty years ago." Up to this time, we are reminded, dirigibles have been covered with cloth and rubber fabric, stretched over metal frames; the metal covering is said to be more durable and less subject to the fire hazard. Heretofore, the trend in dirigible construction has been toward larger and longer ships; the egg-shaped ZMC-2, a Navy craft built from Navy design, can withstand the buffeting of the winds much better than her larger and more unwieldy sister ships, believes the *Marion Star*. It is even possible, thinks this daily, that the new metal dirigible "could have withstood the storm that broke the *Shenandoah* in two." We read on:

"The chief differences between the new craft and those in use are three.

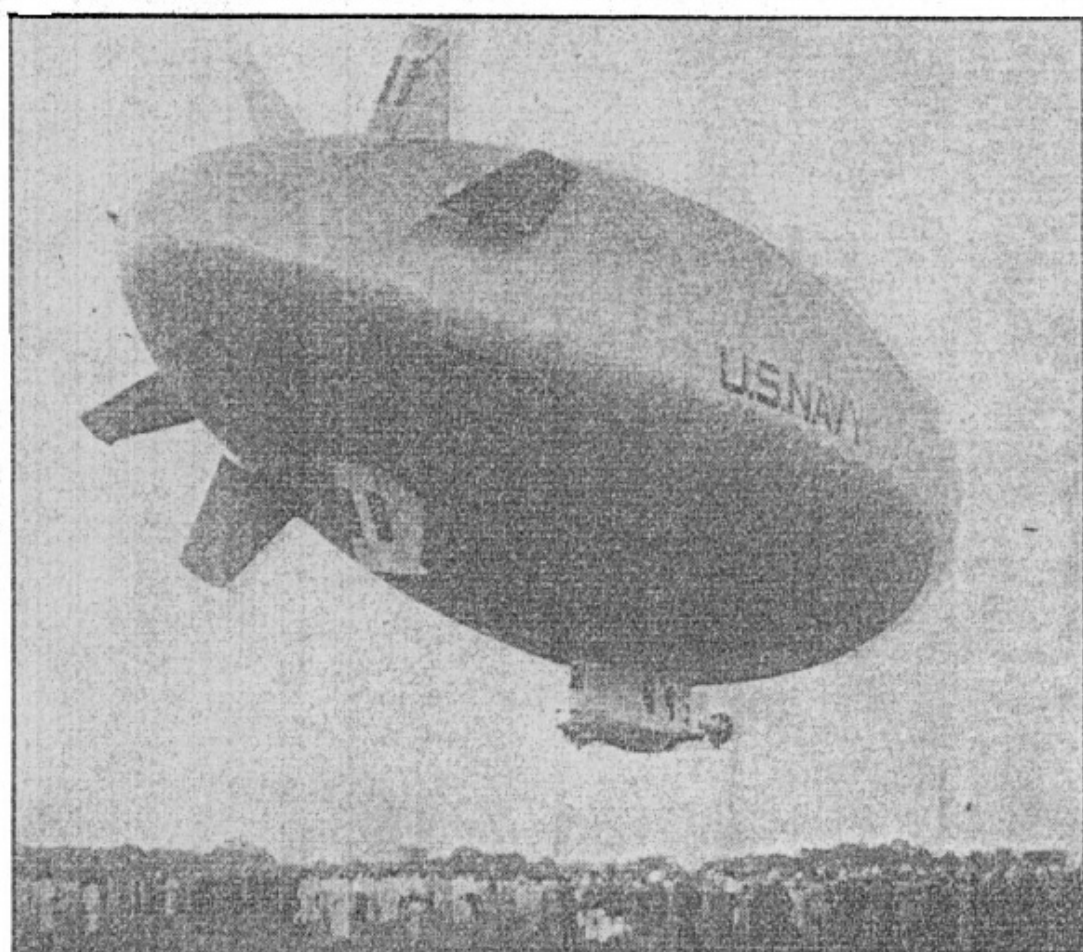
"The first of these is the covering of its rigid framework. A thin skin of 'alelad,' an alloy of copper and aluminum, has been substituted for the customary cloth fabric. The alloy is almost as strong as steel, yet sufficiently light not to offer a handicap to the ship's buoyancy, which is afforded by the use of 200,000 cubic feet of helium gas.

"A second marked departure is its method of control, which differs radically from any in use. Its elevators and rudders, which regulate its maneuvers up, down, and sideways, instead of being at the rear end, are in the form of eight fins projecting from the hull about thirty feet forward of the stern.

"The third divergence from the Zeppelin type of rigid airship is referred to by experts as its unusually low 'fineness,' which may affect its speed capabilities in comparatively good weather, but assures greater rigidity in bad. Unlike the Zeppelins, the lengths of which are from eight to twelve times their diameter, the new craft is in the ratio of three to one. Its length is 149 feet and five inches, and its diameter fifty-two feet and eight inches.

"Weaknesses now unforeseen may develop, but, barring the unexpected, the United States has in the Detroit ship a model which will lead to a great advance over any lighter-than-air craft in present operation."

The ZMC-2, we are told, was built for the Navy by the Aircraft Development Corporation, of Detroit. If she is easier to maneuver than her fabric-covered sisters, as her builders claim, she may, thinks the *Philadelphia Evening Public Ledger*, "modify considerably the ultimate design and construction of airships." Of course, admits the *Detroit News*: "only expert judgment can pronounce finally on her advantages or disadvantages."



THE WORLD'S FIRST ALL-METAL DIRIGIBLE

The ZMC-2, which is said to have cost a million dollars, confounds the skeptics by carrying a pilot, mechanic, and three passengers into the air at Detroit on August 19, and later flying to the Cleveland air races. She is built of hundreds of strips of paper-thin metal running around the circumference of the ship, and riveted together with a "sewing-machine" which operates with very thin wire. The ZMC-2 is equipped with two Wright "Whirlwind" air-cooled engines of 200 horse-power each.

*The
Literary Digest
for
September 7, 1929
~p. 10~*