

we are now entering upon a period of almost mastless fighting ships. Some turn in the evolution of the perfect man-of-war may possibly cause history to repeat itself, as it has a way of doing, in which case we may again see, as in the days of yore, the fighting top pouring its missiles upon the decks of an opponent.

In our illustrations there are shown several types of fighting tops, which illustrate the developments from the earliest times to the present. It will be noted that in the case of the very latest military mast, as used on the later ships, built for our navy, not only has the fighting top entirely disappeared, its place being taken by a simple platform for the fire-control officers, but the structure and appearance of the mast has been totally changed. Up to the time of the appearance of the Brit-

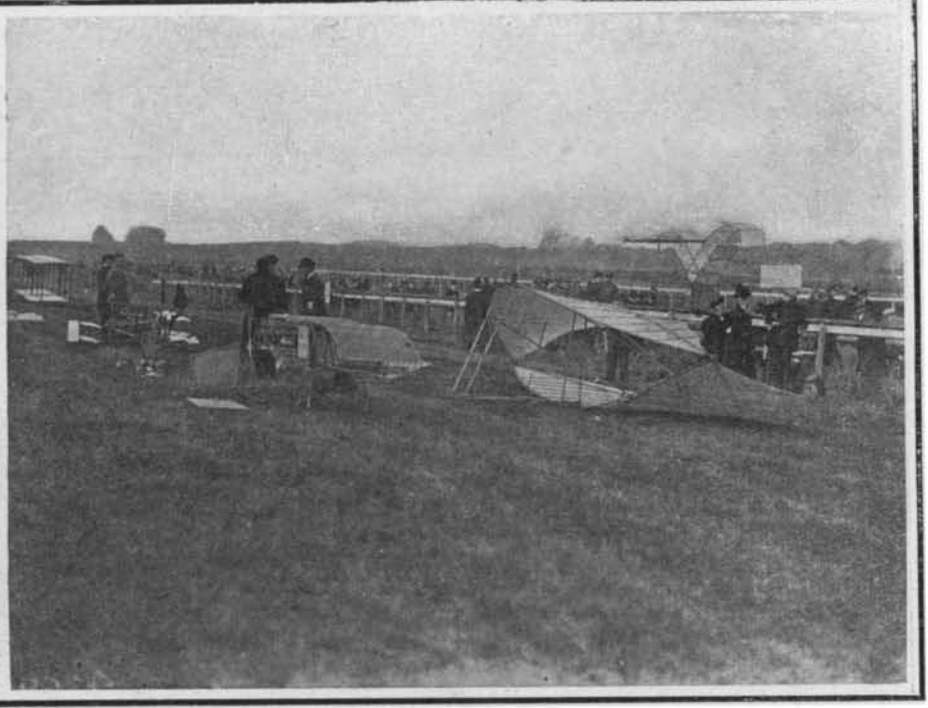
'tubes might be cut through without endangering the stability of the whole mast. Unfortunately these good qualities are obtained at the expense of ship-shape appearance—for anything less nautical than these gigantic baskets it would be hard to imagine.

THE AERONAUTIC SOCIETY'S FIRST EXHIBITION.

On Election Day, Morris Park, which has been the scene of many horse and automobile races, was opened as an aeronautic ground by the Aeronautic Society. The society's first exhibition was held in the afternoon in conjunction with the championship motorcycle races of the Federation of American Motorcyclists, and while nothing especially novel happened in the aeronautical line, there were some very fast motorcycle races and some interesting experiments with gliders.

considerably in advance of the lower one, which does away with nearly all interference. The machine has 120 square feet of supporting surface, and it carries 1½ pounds per square foot. At the first trial Lesh made a successful glide and alighted safely, but the second time he rose sharply to a height of about 40 feet, and then, losing his equilibrium, plunged downward to the ground at a sharp angle, breaking his leg just above the ankle in alighting. The accident was caused by lack of experience with the glider, which was not fitted with rudders as the previous ones had been.

The lower pair of photographs which we reproduce illustrate an improved type of aeroplane, which was invented some three years ago by Gustave Whitehead, of Bridgeport, Conn., and which has since been patented both in the United States and abroad. This

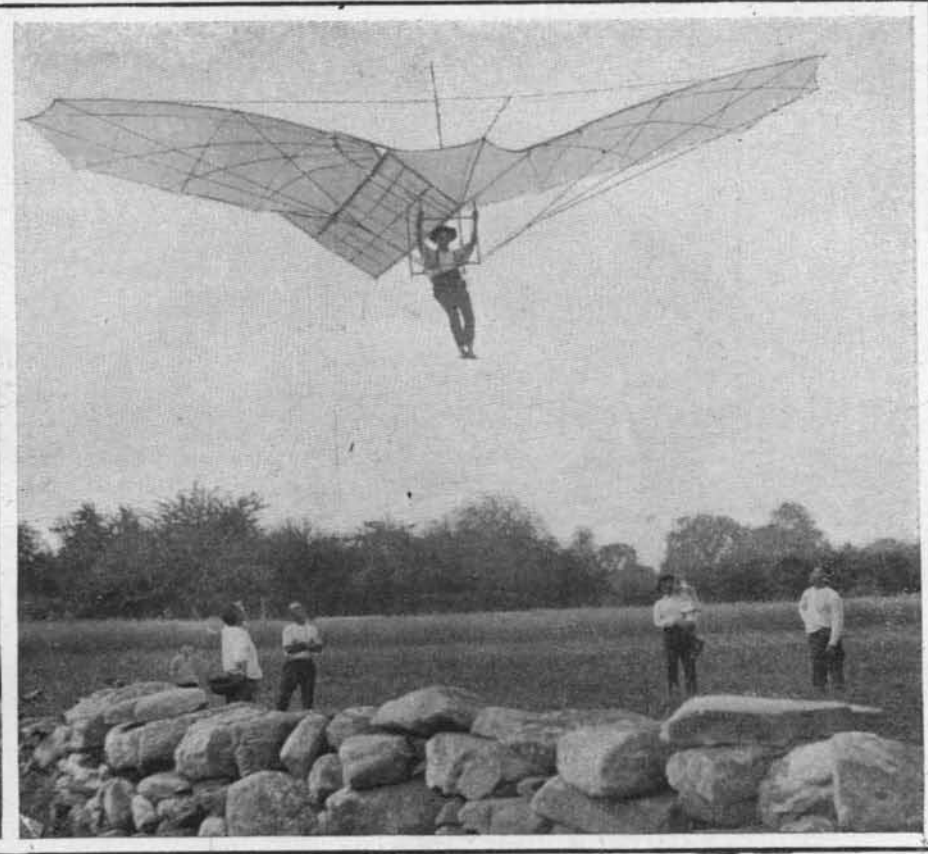
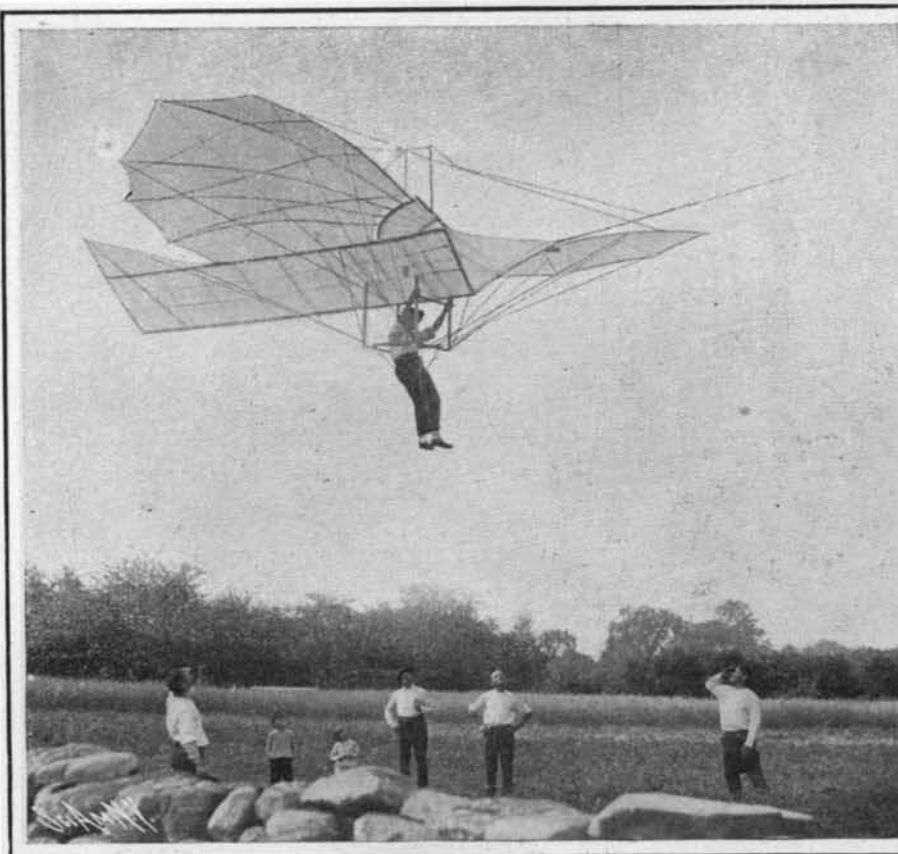


The 'Konnd-the-World' Thomas car towing Laurence J. Lesh in his glider.

This was the first time Mr. Lesh had been raised by an automobile, though last summer he was towed 10 miles above the St. Lawrence River by a fast motor boat.

Glders and models exhibited on the lawn.

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| Ordinary 2-surface glider. | Farman type model of Percy Pierce. | Model aeroplane of Miss E. L. Todd. | Leesh's glider. | Large model aeroplane of Arthur Mitchell. |
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Side view of Whitehead glider in free flight.

Front view of Whitehead aeroplane making a glide.

THE FIRST OPEN-AIR EXHIBITION OF THE AERONAUTIC SOCIETY.

ish "Dreadnought," modern military masts consisted of a single vertical, hollow cylinder of steel of greater or less diameter, according to the fashion of the particular navy to which the vessel belonged. The masts of the "Dreadnought" consist each of three masts formed into a tripod, this form being used as a protection against the complete wrecking of the mast by a single shell, something that might readily happen to a single mast. The Bureau of Construction of our own navy have improved upon the masting of the "Dreadnought," by using the type shown in our engraving, which consists of a series of intersecting steel tubes, rising in spirals from deck to platform, 120 feet above the sea. One-half of the tubes have a twist from left to right and one-half from right to left. The basket-like structure thus formed offers great resistance to complete destruction by gun-fire, for several of the

A considerable number of inventors were present with models of their apparatus. They were invited to place their models upon the lawn in front of the grand stand, where they could be inspected by the spectators. One of our photographs shows some of the apparatus as it was displayed upon the lawn. In the foreground is seen the double-surface glider of Laurence J. Lesh, the sixteen-year-old Canadian, who made sensational flights during the past summer above the St. Lawrence River, when his glider was towed by a motor boat. This glider is an improved apparatus designed by Mr. Lesh after numerous experiments and consultations with Mr. Octave Chanute, with whom he has collaborated.

The general appearance of the Lesh glider is similar to that of the "June Bug" aeroplane, but the glider is distinctly novel, in that the upper surface is placed

machine, owing to its long triangular body with a bow at the forward end and a tail at the rear, is far more stable when in the air than is the Chanute double-surface machine. The foldable wings resemble those used by Lilienthal, with whom Whitehead at one time experimented in Germany. The main feature of the machine is the central body portion. A glider of this type can be made to lift a man when it is towed by another man against a fifteen or twenty-mile wind, and once it is well up in the air, the rope can be cut, and the machine will always alight on a level keel. Should it start to plunge downward, it will immediately right itself automatically. The aviator does not have to balance it by kicking out his legs, and it is possible to tow one of these machines behind an automobile with perfect safety to the man hanging from it.