the end of a second 2-minute flight, struck one wing in landing while attempting to make a sharp curve, and damaged the machine slightly. The first flight was made at 6:30 A. M., and there was a fresh breeze blowing at the time. This seemed to have no effect upon Mr. Wright's control of the machine, however, and he soared to a height of from 50 to 60 feet, and maintained this elevation with the greatest ease. As no material was at hand for repairing the aeroplane, several days will be required in which to do this.

The flights of Mr. Wilbur Wright have completely vindicated him in the eyes of the foreign aeronautic world, and all the aeronauts and men of science have watched his performances with the greatest enthusiasm. His brother, Orville Wright, expects to experiment with the aeroplane built for the United States government, during the present week, or the week immediately following, at Fort Myer, near Washington, D. C.

THE UNITED STATES AND BRITISH GOVERNMENT AIRSHIPS.

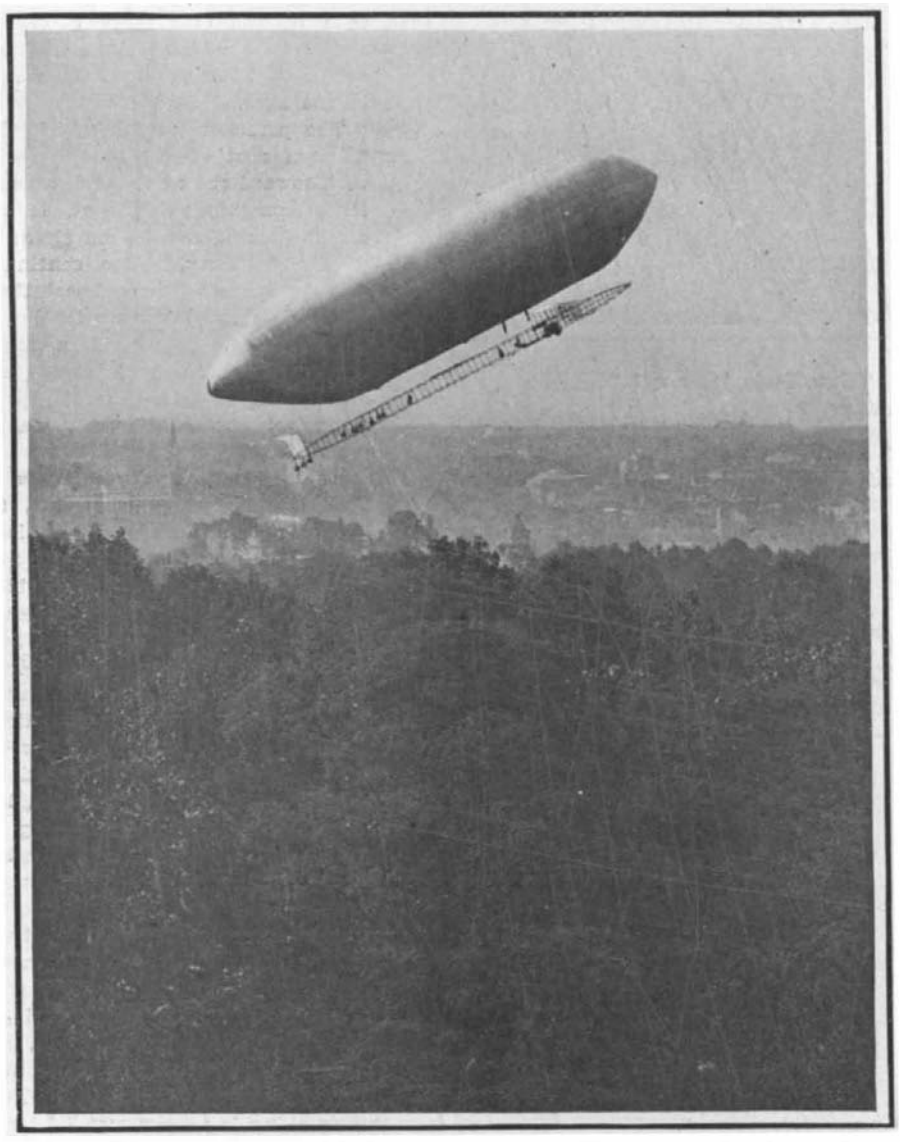
The dirigible balloons illustrated on this page are the two which have been built by Capt. Thomas A. Baldwin for our government, and by Col. Cody for the British military authorities. The Baldwin airship, as noted in our last issue, has been undergoing tests at Washington as to its speed and enduring qualities. The first trial of the three allowed for the purpose of testing the speed of this new airship, occurred on August 12, but owing to trouble with the wiring of the 8-cylinder Curtiss motor, no favorable showing was made in this test. The previous day, however, the airship flew about 4½ miles against a strong cross wind, and developed a speed of some 15 miles an hour. The flight was from Fort Myer to Balston, Va., and back. The distance of 2¼ miles was covered in 8 minutes, or at a speed of 15.2 miles an hour. The return flight was made in the same time, but in returning the airship rose to an elevation of 1,000 feet. Upon reaching its destination the aeroplanes at the forward part of the body framework were directed downward, and the machine was made to descend slowly and gracefully to earth. Capt. Baldwin makes use of a drag rope in alighting, as by means of this the machine can be drawn down if necessary when it comes to rest.

The second and third official speed tests of this new dirigible were made on August 14 over a course extending from Fort Myer to West Cherrydale, Va. In these two tests the airship is said to have averaged between 18 and 21 miles an hour. The official figures were not obtainable at the time of our going to press. Capt. Baldwin expected to make the 2-hour endurance flight, in which he must average 14 miles an hour, the following day.

The plans of this new dirigible were published in SUPPLEMENT No. 1684. Unlike most of the foreign airships, Baldwin uses a long quadrangular framework below the gas bag and suspended from it by netting. The motor and the small aeroplanes, which act as a horizontal rudder, are placed at the forward end of this framework. The motor drives the propeller direct. The airship carries two men, one of whom operates the motor and the aeroplanes for up-and-down movement, while the other steers.

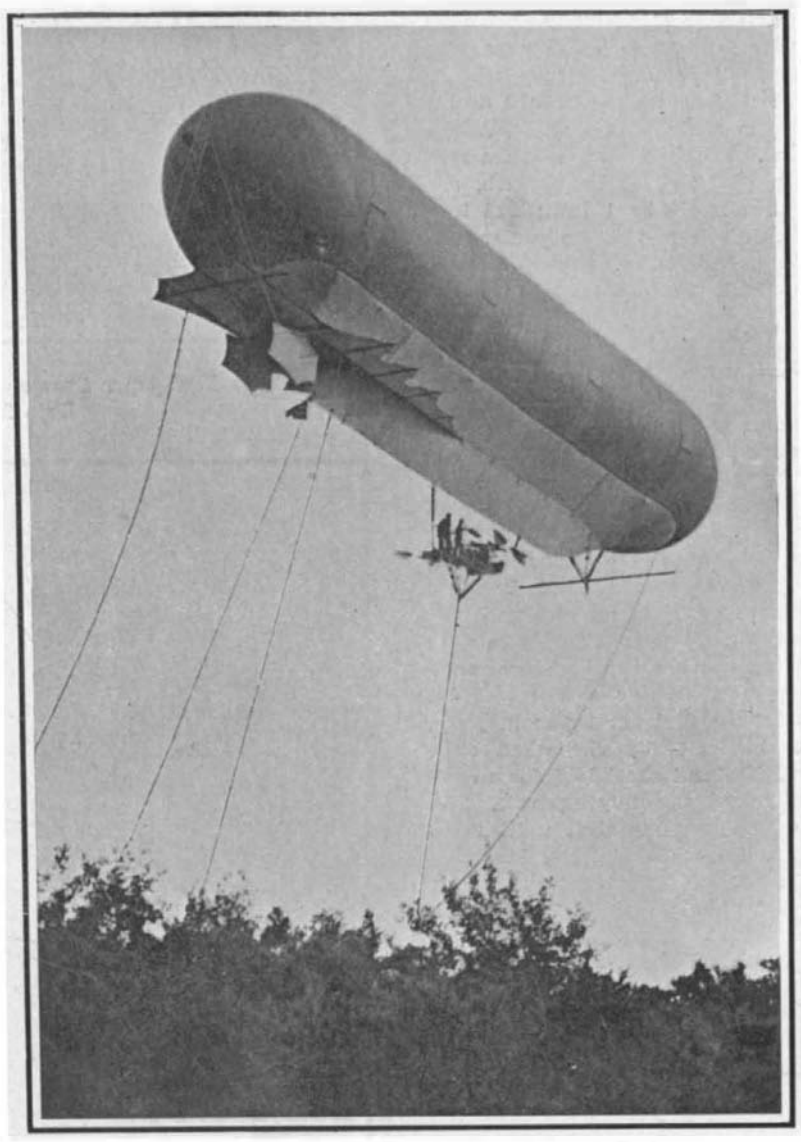
The British military dirigible, which we illustrate, is the "Nulli Secundus" of last year remodeled, fitted with a larger motor, and improved in various ways. In place of the old engine, a 50-horse-power Antoinette motor is now used. This is located in a short car placed below the center part of the airship, and it drives two propellers, one on either side of the car. The gas bag has been fitted with a flat surface on its under side, and the car is suspended below this. Hexagonal twin rudders are used at the rear in place of the single one employed before, and a horizontal rudder is placed in front. There is no netting on this airship, the framework of the horizontal plane and car being supported by heavy bands of fabric placed around the gas bag at intervals. The length of this airship is 120 feet, and the diameter 26 feet. Its 56,000 cubic feet of hydrogen gas give it a reserve lifting power of from 700 to 800 pounds. It is capable of carrying three men readily. The car is about 12 feet long, and the total height from the bottom of the car to the top of the balloon is about 45 feet.

On its first trial on July 24, the airship traveled 9 or 10 miles against a wind of 15 miles an hour. It rose to an elevation of about 1,000 feet, and there was no pitching noticeable. The chief trouble met with was the slipping of the driving belts which operate the propellers. After further trials have been made, it is expected that this airship will be put in use by the balloon corps of the British army.



Capt. Baldwin's New Dirigible, Which Was Constructed for the U. S. A. Signal Corps, Making an Ascent at Fort Myer, Near Washington.

This dirigible differs from foreign ones in having a long quadrangular body framework suspended from netting that covers the gas bag. The propeller is at the front end. Small superposed aeroplanes form a double horizontal rudder near the front end.



The Remodeled "Nulli Secundus"—the First British Military Dirigible Balloon.

Note the flat tail and rounded substructure of the gas bag, as well as the horizontal and vertical rudders front and rear, and the small car with its two propellers.

THE NEW AMERICAN AND BRITISH MILITARY DIRIGIBLE BALLOONS.

The Argentine Ant Makes Its Appearance in California.

One of the most dreaded insect pests is the Argentine ant, the scientific name of which is *Iridomyrmea Humilis Maye*. It is very small, being less than one-eighth of an inch in length, but is so pugnacious that it quickly exterminates or drives out the native ants of any territory of which it takes possession. It is a native of South America, and is almost unknown in the northern part of the continent, except in the Mississippi Valley, where it is found chiefly in the neighborhood of New Orleans. The efforts to exterminate it in the Mississippi Valley have proved fruitless. In Louisiana whole sugar-growing districts have been devastated by the pest, which not only works enormous injury itself, but protects plant scale and cotton-plant lice, rendering them highly destructive to the cotton fields and to fruit and ornamental trees. No wonder, therefore, that its arrival in East Oakland, Alameda County, Cal., where it has occupied a square mile of territory, is viewed with alarm by entomologists. Many residents in the infected region have discovered it, and sent notice of its arrival to the entomological department of the University of California at Berkeley, Alameda. County. At a conference held by the members of the entomological department on July 14, the advent of this formidable ant was the chief subject of discussion, and Prof. C. W. Woodworth, who has been investigating the ant, has sent the following communication to J. M. Gillett, Governor of the State of California:

"I have the unpleasant information to report that the Argentine ant has gained a foothold in East Oakland, and now occupies about one square mile of territory. The insect is known elsewhere in the United States only in the region about New Orleans; and the secretary of the Louisiana Crop Pest Commission, in the last report of the Governor of that State, writes that the insect has proven itself to be one of the most injurious that has been introduced into the United States from foreign countries. A most serious aspect of the problem is found in the destruction of orange and fig crops in the southern parishes by the ant, and the danger to sugar cane by its continued increase. It seems to me that the introduction of the insect is a far greater menace than the introduction of the white fly, discovered a year ago at Maryville. I have already reported the matter to State Horticultural Commissioner J. W. Jeffrey, but I consider it important enough to report direct to you."

Japan's advance in machine building is indicated by the fact that its exports during the last year were five times greater than the average for the last five years. A large proportion of the exports consists of cotton gins, textile machinery, and printing presses, for China.