

THE "MAYFLY"—THE FIRST IRISH BIPLANE. AND HOW SHE WAS BUILT.

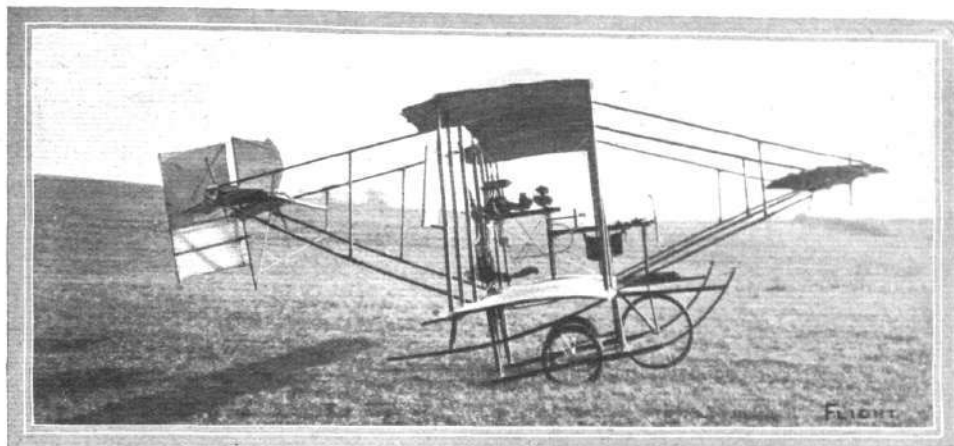
By LILIAN E. BLAND.

IN view of the considerable interest which has been taken in my biplane, which has gradually been evolved from a glider, I have, at the request of the Editor, written the following description of it:—

As the principal dimensions of the machine are given in the scale drawings, it will be unnecessary to repeat them here. The wood used for the main spars is ash, the curve of the wing tips being steam

removed in one piece either with or without the engine, which is held in place by four bolts.

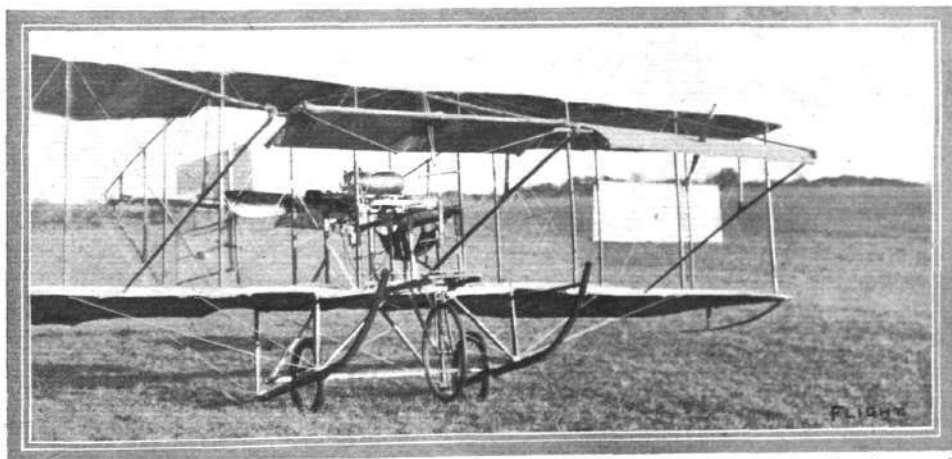
The controls consist of a bicycle handle bar which rocks and turns. Turning the handle to the right raises the right hand elevator and depresses the left, the connecting wires being crossed. The elevators are connected to the horizontal tail planes, which



THE "MAYFLY."—This side view shows the machine as she now is, but in the new tail Miss Bland contemplates fitting, the fin in front of the rudder will not be used.

bent. The ribs and stanchions are of spruce, the outriggers of bamboo, the skids of ash, and the engine bed of American elm. This engine bed is really a separate chassis set across the main spars to which it is clipped; stays run from the rear spar to the chassis, which is also wired out to the upper and lower spars, so that it would be impossible for the engine to shift unless the whole

work in the opposite direction to the elevators; all controls are double, wire and strong waterproofed whipcord. The balancing planes, which are hinged to the rear stanchions, are controlled by the back of the seat, leaning to the right pulls down the right hand balancer and *vice versa*. The vertical rudder is worked by pedals. The engine controls consist of a butterfly valve which regulates the



THE "MAYFLY."—View of the front of the biplane, showing how one elevator rises and the other lowers. In this photograph also the wiring of the wings to the skids is noticeable. The angle of the machine on the skids is 6 degrees.

machine were wrecked. Additional strength is also given to the wings by the wiring. The chassis carries the tank and the pilot's seat, the latter being slung by four straps. In front of the seat, which is enclosed on all sides so that it is impossible to fall out of it, is the bar for the elevator control. The whole chassis can be

petrol supply, an air throttle, and a lever to the magneto, while when starting one cylinder is cut out. All these controls may sound complicated, but in practice they are quite simple to work, and I think it is a great advantage to have the engine and aeroplane under complete control, as it is not always necessary to run the engine all out.