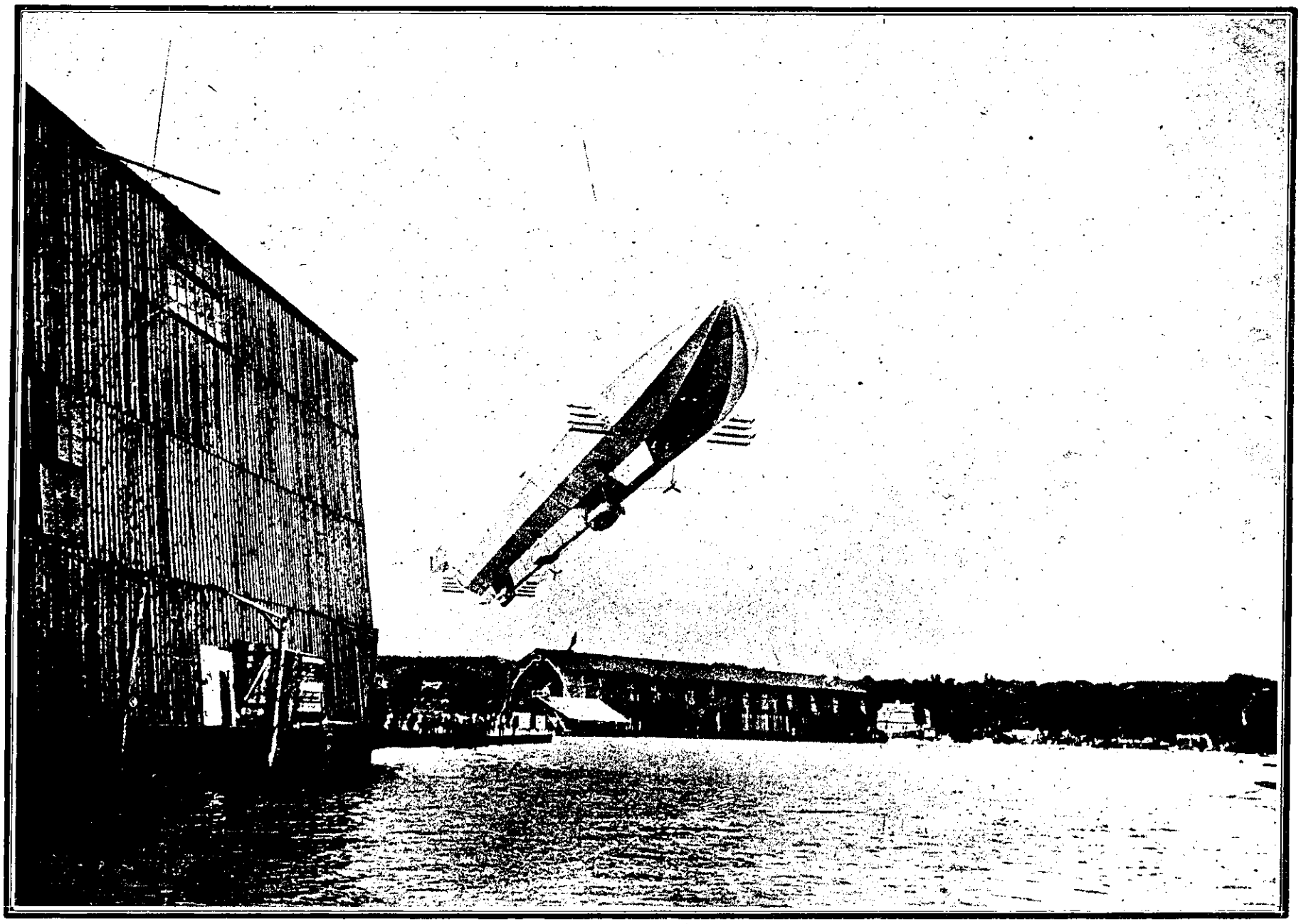
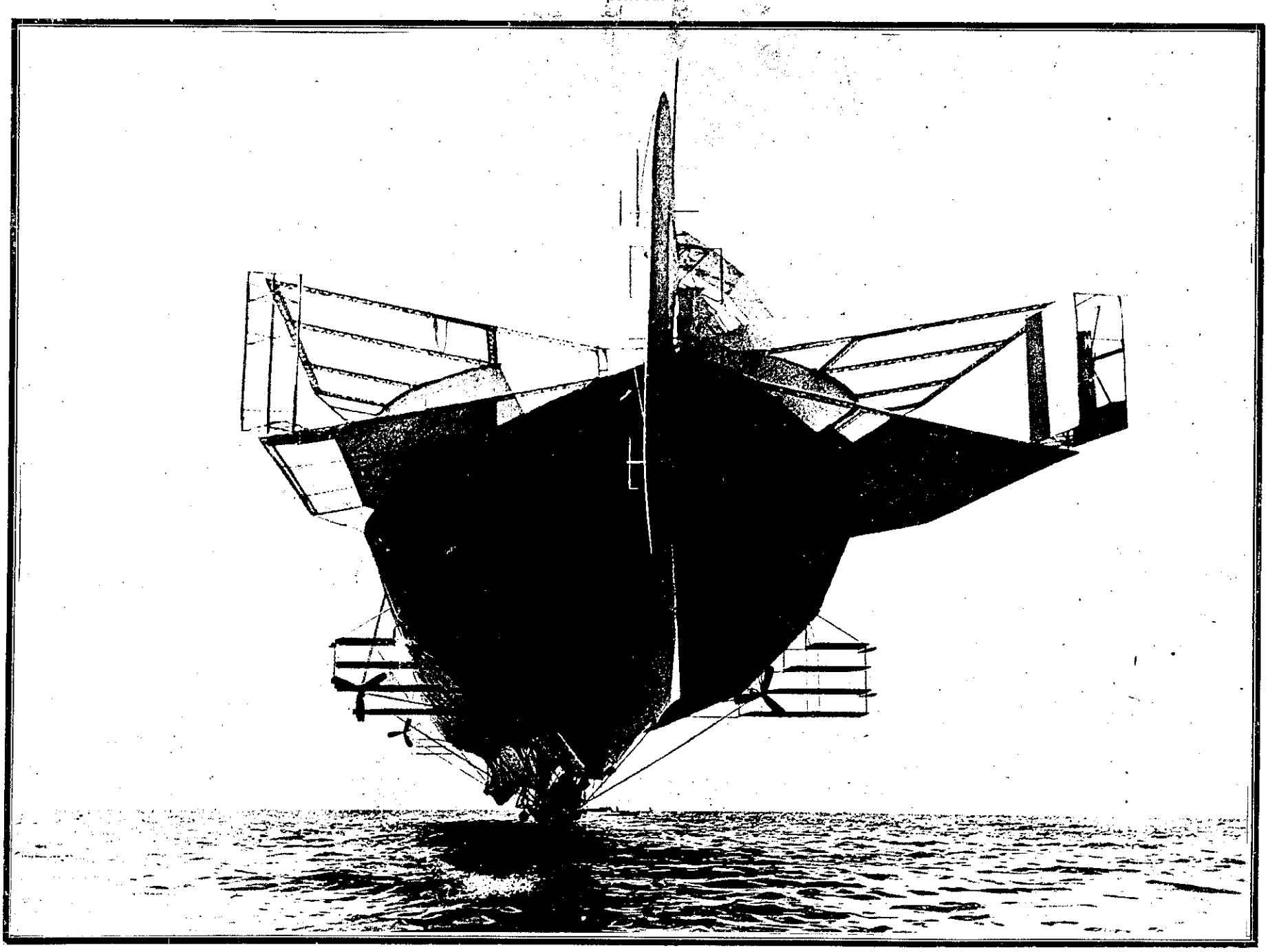


A ZEPPELIN LEAVING ITS SHED FOR A LENGTHY FLIGHT—A Zeppelin airship can be steered in two·ways—either by static or by dynamic means. Steering by static means is effected by descending a portion of the water ballast that is carried, when the airship becomes lighter and ascends, or by allowing the escape of portion of the hydrogen gas, when the airship becomes heavier and descends. Steering by dynamic means is effected upwards and downwards, by operating the horizontal rudders. As the airship is driven forward through the air these rudders act as planes, causing the airship to rise or descend, according to the position of the rudders. In this case neither gas nor water ballast need be expended.



A ZEPPELIN RUNNING CLOSE TO THE WATER, SHOWING THE HULL.—Underneath the framework and running along its whole length is placed a keel of triangular section, made of lattice work, covered with the same material as the hull. At two or four points in the length of the keel it is interrupted to allow the suspension of two or four boat-shaped cars, between which, and along the keel, weights run on rails, whose positions may be regulated in order to preserve equilibrium. These cars are built with a double bottom, and protected with strong rubber buffers. Thus precaution is taken for descending on water as on dry land. Each car contains an engine, which is an explosion motor, or so-called internal combustion motor. The liquid fuel is stored below each car and automatically pumped to the engines.