## Gunning for Bird-Men

Some recent anti-aircraft guns with improvised mountings

## By Carl Dienstbach

HE art of war has reverted to a state similar to that which the introduction of the use of gunpowder

and firearms produced in the fifteenth century. Then, conditions and methods had to be readiusted to meet the changes produced by a new and powerful agent of destruction. not yet fully understood; now, new means of warfare, evolved

The Belgians mount field guns on improvised revolvable platforms to be used as anti-aircraft guns

by the marvelous resources of modern science and engineering, have again unsettled conditions and caused an upheaval upon a fearfully exaggerated scale.

As in the fifteenth century, infantry and artillery had to be armed with makeshifts-hand grenades and ponderous bombards, improvised under the very stress of battle. The chief importance of infantry is once more in its bodily impact; the rôle of artillery is again to smash and overwhelm everything by enormous pro-

jectiles.

When it was found necessary to use the heaviest naval and siege guns with the least possible delay, mounts had to be improvised, which bear a curious resemblance to bygone makeshifts. Even of the lighter cannons, of smaller caliber, many have undergone a curious metamorphosis which makes them resemble the medieval "falconets" which occasionally had to be pointed skyward to reach the enemy's scouts stationed on the watchtowers of castles perched on lofty crags. These

modern guns also must be pointed toward the sky to fire at the enemy's scouts seated in airplanes.

Several standard types of antiaircraft guns were invented, but so enormous was the increase in the number and activity of military airplanes and other aircraft, that the supply of standard antiaircraft guns could not

keep pace with the demand. It became imperative to improvise such guns by

adapting field guns of ordinary type to



A British gun, mounted on an automobile truck, can be used horizontally as well as vertically

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the requirements of high-angle firing. Some of these improvisations are shown in the accompanying illustrations.

Field guns of regulation type were mounted in different ways, but always so that they could be aimed vertically as well as horizontally or, changed from one position to the other with the least pos-

possible difficulty. In the case of the Belgian gun shown in one of the pictures the complete field gun, with carriage, its tail and all the rest has been chained to a column with a revolving platform. Only the barrel with its recoil tube has been utilized to adapt the gun for the automobile truck. But note the ingenious fork in which the gun is mount-

ed. It gives the gun a complete horizontal firing circle, and, at the same time enables it to be pointed vertically with the greatest ease. This result has been achieved by constructing the fork so that it supports the barrel at a considerable distance from the base column upon which the fork is pivoted. Hence it is possible to stand right beneath the breech of the gun and to aim it as conveniently as one points a fowling piece.

Twin guns are shown on a French torpedo boat, small enough to enter the Aisne Canal. That the guns are, primarily, intended to form part of the boat's armament against an enemy on shore or on water is apparent from the gun shields which give protection only against projectiles fired from approximately the same level. By a few changes in the gun shields and other details these guns have been adapted for use against aircraft,

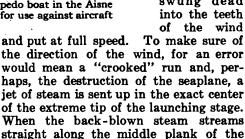
if the emergency should arise. That this adaptation is purely an improvisation is shown by the fact that the breech of the guns, when they are pointing vertically or nearly vertically, is so close to the deck that it is extremely difficult to aim them.

In contrast to the fixed gun, which can be used only against aircraft, the gun on

> theautomobile and the deck guns on the torpedo boat can be used at any angle desired.

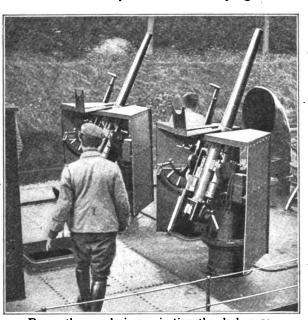
## Launching Seaplanes from Ships

HEN a big seaplane is to be launched from the deck of a ship (of whatever type) it is first "tuned up" on the launching stage. Then the ship is swung dead into the teeth of the wind



stage, the wind is "right.

At a signal by the captain the pilot starts his engine full speed, while two mechanics, braced against cleats on the deck, hold back the tugging seaplane. When the "tone" of the engine is right, the wing commander brings down his flag with a sharp jerk, falls on his face to avoid a collision, and the machine, freed from the grip of the men holding it, jumps away into space from the launching stage. If everything was right, when the seaplane started, its flight will be comparatively free from risk.



By a rather crude improvisation the deck guns on this small French torpedo boat in the Aisne Canal have been adapted for use against aircraft

