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Eight heavy shells suspended in a French biplane in which is no sighting instrument

How French Air Fighters Handle Bombs and Machine Guns

BEFORE the great war, no military officer really knew what was to be expected of bombs dropped from aircraft. There were radicals who not only denied that a dropping bomb could be aimed, but also declared that air bombs would be harmless because their destructiveness would be limited to a small radius. When the war came, the practical French settled the question by dropping their regulation artillery shells from large, weight-carrying aeroplanes. They removed only the copper ring which in ordinary use guides the missile through the rifle barrel, adding instead a guiding windvane in the rear, to make sure that the contact fuse strikes the ground first. The accompanying photo-



Photo
Amer. Press

The slightest contact will cause the bomb to explode

graph, showing eight heavy shells suspended in a French biplane, is particularly interesting, because of the utter absence of any sighting instrument. Evidently the bombs are aimed by a trained instinct. The manner in which they are suspended suggests that they are first unhooked, that the contact-fuse is then "sensitized," and that the bombs are dropped over the side of the fuselage, all by hand.

A still more interesting feature of the picture is an aerial "gun turret" for the machine gun. From such a rotatable machine-gun carriage more is demanded than from a battleship's turret. The arc of fire is the whole horizon, and the gun must be ready to fire at angles of over forty-five degrees, up or down. That is why this mount is so very simple. It is really but a circular track around which the gun is shifted, and on any point of this track the gun may again be independently turned through a wide arc, right or left and up or down.

The problem of obtaining unobstructed fire in nearly all directions has been solved in an ingenious way—the marksman simply stands in the center of the circular track.

Fishing for Enemy Aircraft with an Aerial Death Hook

AN aerial bomb has been invented by Joseph A. Steinmetz, of Philadelphia, which simulates the old-time torpedo in that it is suspended from an aeroplane or dirigible by a long cable. There are three projecting arms or hooks on the bomb, any one of which coming in contact with an object causes the bomb to explode. A contact fuse would serve the same purpose, however.

When an airman sets out to "hook" an enemy craft he soars high into the sky, lets out his bomb to any desired length, and then looks below him for victims. If he spies enemy aeroplanes he descends quickly, letting down the bomb until the projecting arms come in contact with the enemy craft.