

# Learning to Duel in the Sky

How the towed target balloon is used in machine-gun practice

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A FEW weeks after America entered the war plans were made for the immediate training of thousands of air-fighters. Some of the best army men in the United States service were sent to Canada to find out something about the science of training men for aerial warfare.

The largest aerial gunnery school in Canada is the one at the Royal Flying Corps Headquarters, Camp Borden, Ontario. To-day there are several gunnery schools in this country modeled after Camp Borden, and the methods used in the United States are slight improvements over those adopted by Canada.

It is at the ground school that the prospective air-fighter first makes the acquaintance of a machine-gun. In order to graduate from the machine-gun division of the ground school he must be able to take down and assemble both the Lewis and Vickers guns.

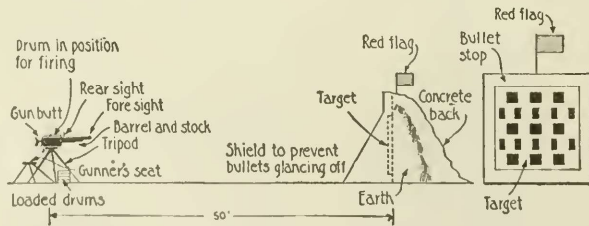
Firing, with trench machine-guns, at large targets placed in gun-pits, is the first actual firing done by the pupils.

After receiving Q. V. G. ("Qualified Very Good") on this ground gun work, the

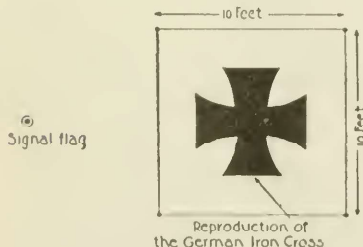
pilot takes his first actual lesson in aerial gunnery. A standard Curtis, two seater, ninety horsepower training biplane is used, altered so as to allow a gun to be fitted. The target, a square of white canvas bearing a reproduction of the German iron cross in the center, is laid out on the ground. Two signal flags are raised to warn the curious away.

You climb into the plane, and strap yourself tightly in your seat. As the gun (an eighteen-pound Lewis) will move up and down only about ten inches, the only way to get a shot at the target is to have the pilot shut off his motor and dive nose first to within a few feet of it. Then you grind out your shots and swoop up again. If your pilot doesn't open up his motor and swoop up in time, you crash. If you fire at too long a range the instructor will call your attention in no gentle way. If your pilot shows fear in not getting close enough to the target, both of you will get a worse reprimand than if you were to smash several machines.

About a week later you will be ready for advanced air practice. This time the target is a pear-shaped



The target, fifty feet from the gun, consists of white canvas with black squares painted on it



Appearance of the target, at which the flyer directs his fire, as his aeroplane dives down

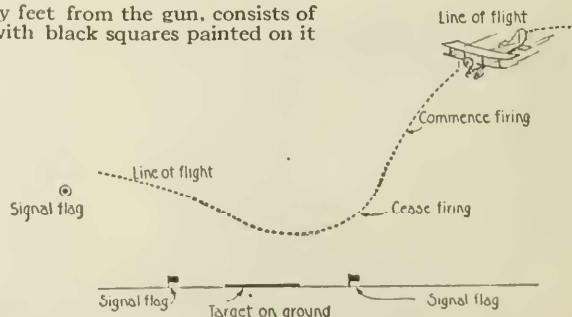
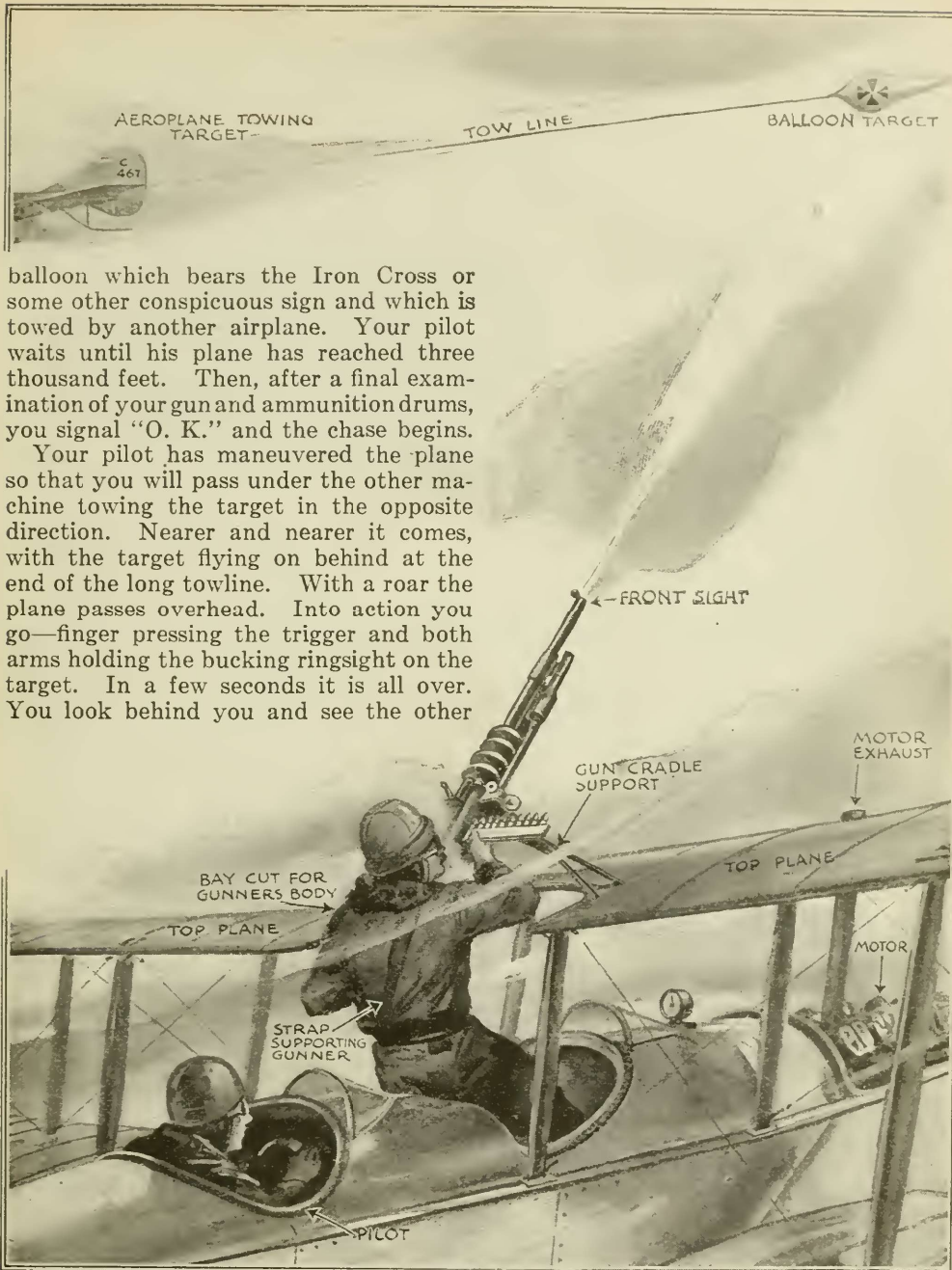


Diagram showing the line of flight in practice and marking the proper position for firing

## How Dueling in the Air Is Taught



balloon which bears the Iron Cross or some other conspicuous sign and which is towed by another airplane. Your pilot waits until his plane has reached three thousand feet. Then, after a final examination of your gun and ammunition drums, you signal "O. K." and the chase begins.

Your pilot has maneuvered the plane so that you will pass under the other machine towing the target in the opposite direction. Nearer and nearer it comes, with the target flying on behind at the end of the long towline. With a roar the plane passes overhead. Into action you go—finger pressing the trigger and both arms holding the bucking ringsight on the target. In a few seconds it is all over. You look behind you and see the other

plane flying serenely away. The target is undamaged. You have wasted a drumful of cartridges on the empty air. "Rot-ten," you say to yourself. Obedient to the control of your pilot the plane goes over in a loop. You come out of it pointed in the right direction and are off

again after the elusive target. This time you are more careful. Your shots go home. With the shattered target flying in the wind, the hunted plane spirals to earth. A few minutes later you are on terra-firma again, receiving a report from your instructor on your exploits.