

The Hawks of the Royal Flying Corps

What contact patrol means in the fierce fighting on the western front

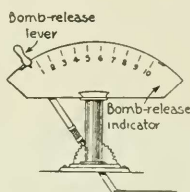
CONTACT PATROL—"A flight of one or more planes over the lines to give General Headquarters information regarding the position of Allied and German troops and also to take offensive action against enemy troops on the ground."

The average reader who sees this definition probably concludes that contact patrol is as uninteresting as it sounds. Definitions are never as thrilling as the things they define. Any fine morning on the sector of the western front held by the British you will find back of the lines at the Royal Flying Corps' airdromes, squadrons of planes preparing for contact patrol work. The airplanes used are generally of the same type (the F.E.2.B. "Pusher"), two seaters with one hundred and twenty horsepower Beardmore engines. While not particularly fast, these planes are easy to handle. Because their work is done mostly at a low altitude, they are slow climbers. It takes them about twenty-five minutes to climb ten thousand feet, but in straight-away flight they can do about one hundred miles an hour. With the motor throttled a contact patrol machine will glide sixty miles an hour, which is possible because the plane has a nice gliding angle. The armament consists of one down-pointing Vickers machine-gun, fixed alongside the fuselage or body and operated by the pilot, and one Lewis machine-gun operated by the observer. This Lewis gun can fire up or down and also straight ahead. The motor is in the rear, so that it cannot interfere with the firing

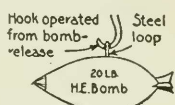
of the gun. Under the fuselage are suspended several bunches of steel arrows; also two 100-pound bombs, or ten 20-pound high-explosive bombs.

They Carry Bombs, Armor and Machine-Guns

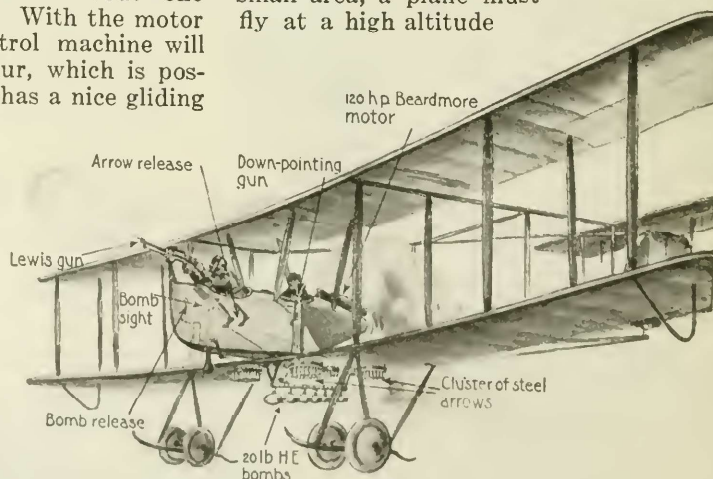
All these missiles of death are released from the observer's cockpit by a bomb-firing trigger attached to a bomb-sight. This bomb-sight is not used on contact patrol, as the airplane has to spend considerable time over an objective before it can be used. At a given height there is only one point of space where the airplane must be, if the bomb is to hit its objective. A miscalculation, no matter how slight, means a miss. When this happens, the aviator must turn his plane around and try once more to make the imaginary path of his machine pass exactly through the proper point. These repeated tricks are made for half an hour. The aviator must maneuver at will, unhampered by other planes. It is obvious that when the bomb-sight is used over a small area, a plane must fly at a high altitude



The turn of a lever releases a bomb. A slight miscalculation means a miss



This shows the hook to which the bomb is attached



A "contact airplane" armed for its arduous duties, with machine-guns, steel arrows, and twenty-pound bombs

and alone. On contact patrol, planes fly very low and have done such effective work particularly with their machine-gun fire, that the Germans have found it necessary to dig bullet-proof trenches alongside the roads on which their troops march. At the alarm, the regiments dive for these trenches where they are comparatively safe.

Generally five planes are assigned to a contact patrol squadron. They fly in the usual V-shape formation. Once over the lines, their work commences. They remind one of hawks hovering over a chicken yard. Eagerly the pilots and observers scan the ground below, undaunted by the hail of lead poured up at them from machine-guns and "Archies."

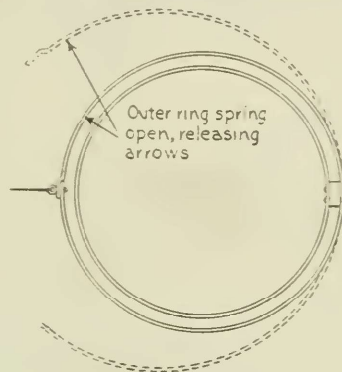
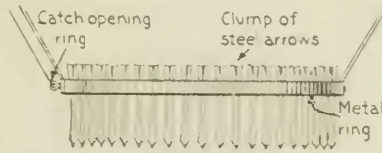
What's That? A Regiment of Germans?

What the observers in the machine want to see most is a train or railroad or road-bridge. As soon as they see one, down they swoop. One after the other lets go a load of bombs and climbs again. The observers note the damage, etc. Suppose they see a regiment marching rapidly towards the front. In a fast glide, they descend almost on top of the startled soldiers. The machine-guns mow the Germans down, and often one plane of the squadron, flying higher than the rest, releases several clumps of the steel arrows.

If there are no safety trenches at the side of the road, it is possible that almost the whole regiment may be wiped out. Should there be trenches, no doubt machine-guns

will be hidden in them with the result that perhaps one or more planes of the squadron will be brought down by their fire. Hostile ammunition and gasoline depots, headquarters, railway junctions, detraining stations and aircraft hangars are

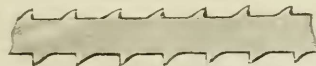
all objectives for the pilots of a contact patrol squadron. It may be that there is a detachment of enemy engineers busily engaged in preparing the site for a new battery or building a bridge. If seen, rest assured that the planes will give them a warm reception.



These arrows, dropping from a great height, have considerable penetrative force, but a steel helmet affords protection

Submarine Saws for Water Weeds

A SUBMARINE saw is used to clear weeds from irrigation canals on the project of the United States Reclamation Service at Orland, California. It is five-sixteenths of an inch wide, one-fiftieth inch thick, and the teeth are spaced seven-sixteenths of an inch apart. It is made of special steel in flat, flexible, tape form and has toothed edges. Two men, one at each end, operate the saw by means of ropes, starting at the lower end of the section to be cleared and working up-stream. The saw is placed diagonally across the stream, one man keeping slightly ahead of the other. It is held at the bottom of the canal by iron weights placed at intervals of about three feet. To remove the



The saw, from 150 to 300 feet long, cuts the weeds; a wooden grating collects them and a rake removes them

weeds, planks are placed across the banks, about six inches above the surface. Slanting wooden pieces project into the water forming a grating which catches the mown weeds.