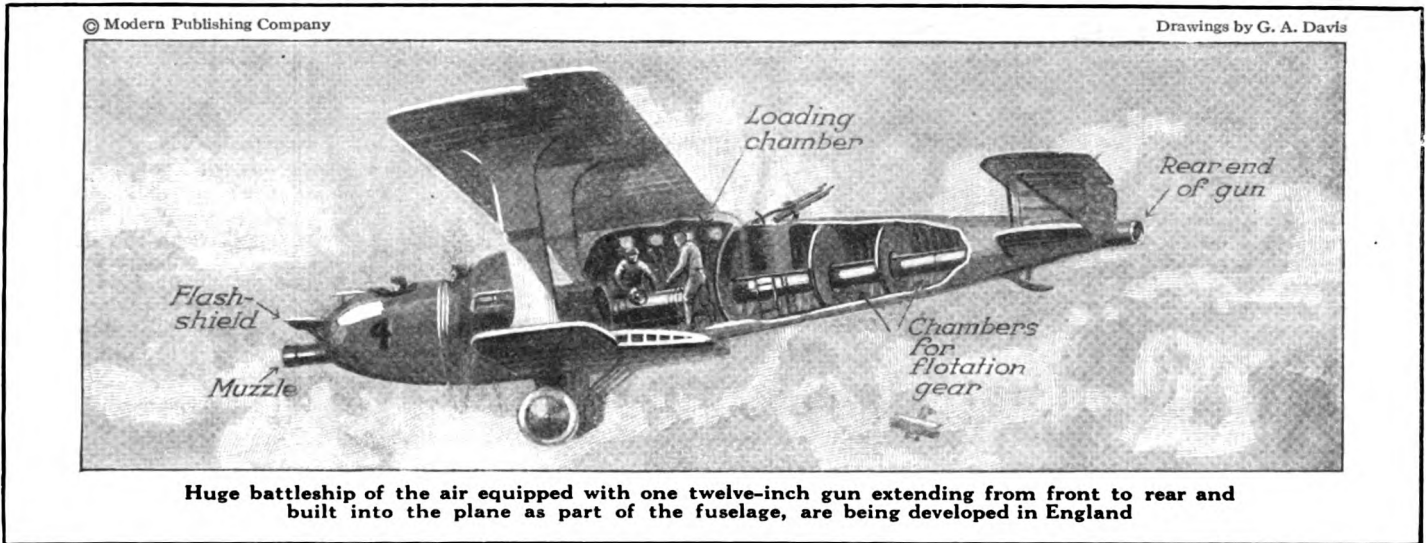


# England Designs Battleplane to Carry 12-Inch Gun

## Weapon with no recoil is to be built into fuselage

By P. J. Risdon, English correspondent of Popular Science Monthly



**D**READNAUGHTS of the air carrying guns as large as those of a modern battle cruiser comprise a late aerial development that follows close on the heels of the recent battleship-bombing tests in England and America. The gun used is the "no recoil" Davis gun on which experiments were being conducted during the later days of the war. It is the unusual principle of the gun and not the construction of the plane that makes the combination possible.

When an ordinary gun is fired, the enormous explosion that expels the projectile reacts on the gun itself with a resultant force known as the "recoil" or "kick." The heavier the shell and the more rigid the mounting, the greater the recoil.

Knowing this, it is obviously impossible to fire a rigidly mounted twelve-inch gun from an airplane in flight without totally destroying the plane. But by constructing the gun with the breach in the center and open at both ends, and filling the rear end of the barrel with finely divided material such as birdshot, the gun may be fired with no apparent recoil. The recoil is present, but it is expended in driving the fine shot from the rear end. This is the idea of the Davis gun. The range of the projectile is considerably reduced with a rifle of this design, but that matters less with a plane than with battleships and land forts.

Elimination of the recoil allowed the inventors to cut down the thickness of the gun walls and especially the rugged construction of the breech mechanism. The weight of the twelve-inch gun thus reduced makes possible its use on airplanes.

As at present designed, the airplane to carry the Davis gun will be of the monoplane type with cantilever wings stayed only from below to avoid all outside wiring. The gun itself will be mounted inside the fuselage and will extend from end to end of the streamline body. Any backwash of flame and gases after the gun has been fired will be overcome by fitting a metal nose to the machine and protecting the gun layer in the cockpit by a flash-shield similar to those used on British destroyers.

Strange to say, the big twelve-inch gun will be aimed by means of a machine gun

mounted in front of the gun layer in the cockpit and firing tracer bullets.

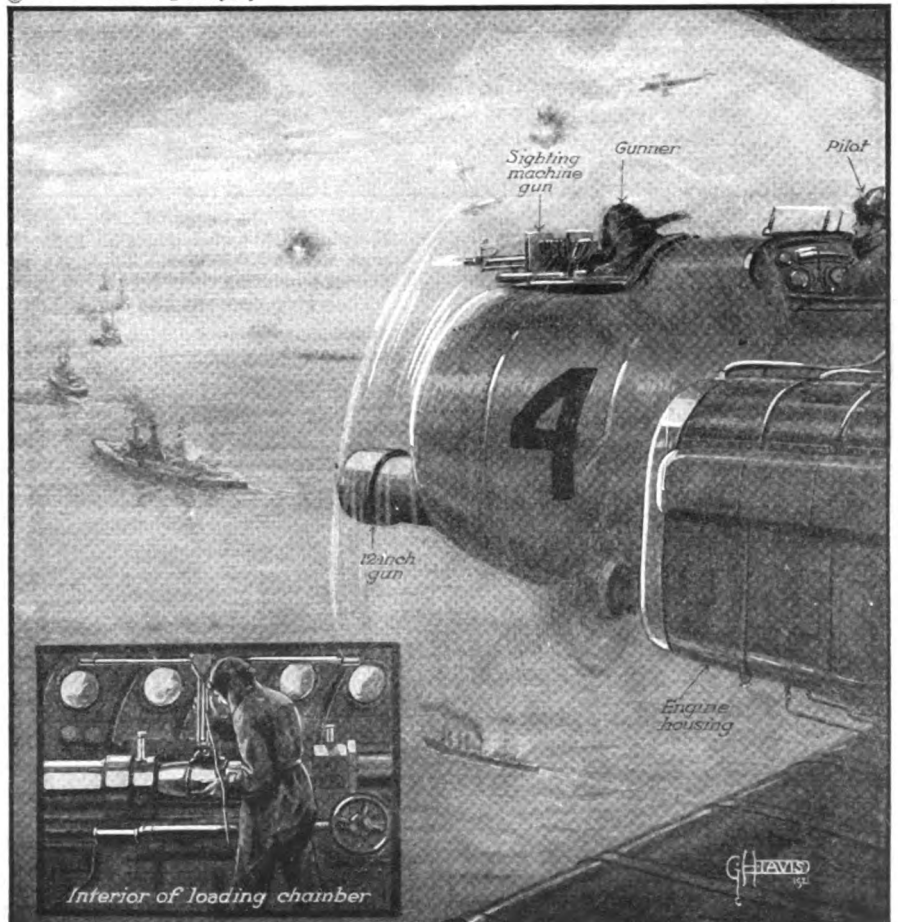
Although under normal conditions the pilot has complete command over the plane, it will be necessary to transfer this command to the gun layer during action. The duties of each member of the crew will be correlated by a complete system of telephonic communication.

Just how many twelve-inch shells can be carried on a plane has not yet been settled.

It may be that the weight of the gun will be such that the supply of heavy shells will be limited, in the same way that bombing planes are restricted in the number of bombs that can be carried. But further development along these lines may lead to an aerial fighting unit that will demand a complete reversal of tactics when "the next war" is upon us.

Such a development as the above is but one more stride in the airplane's progress.

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The aim of the gun will be determined by the direction of the airplane, but the accuracy will be checked up by a machine gun firing tracer bullets. The insert shows the gunner placing a shell

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