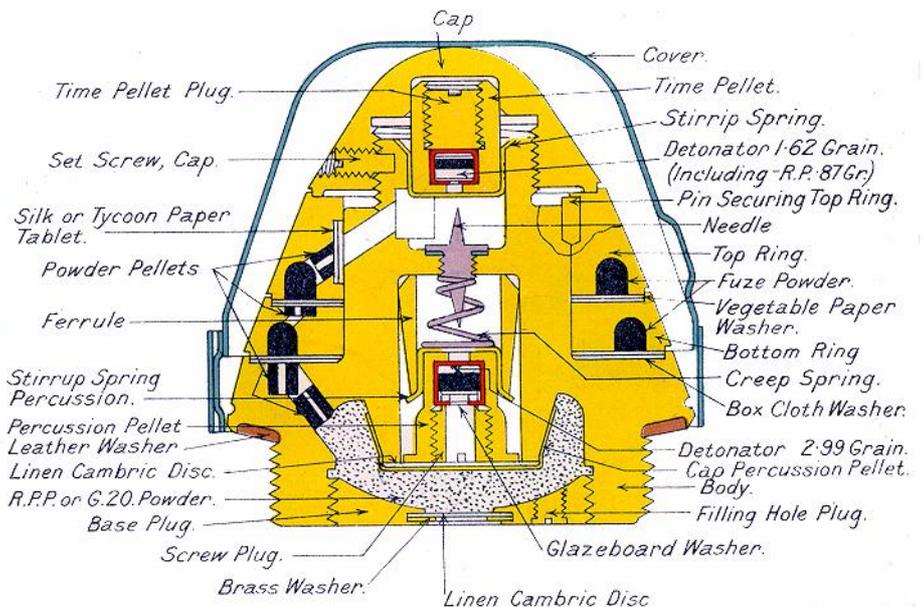
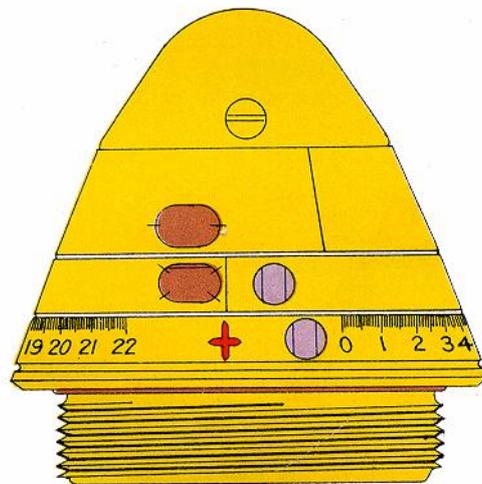


TIME & PERCUSSION No 80

Introduced in 1905 this fuze used two time rings of Krupp design and manufactured under license by Vickers Armament Industries. The fuze was used with the 18pr Shrapnel shell and historically it was the first of the then new 2-inch fuze hole gauge. Some trouble was experienced by the factories in converting from metric measurements to imperial with the initial production. It ran through 16 mark numbers and was in service as late as 1943.



ACTION.

At the moment of firing two events occur at the same time:

1. The time pellet sets back overcoming its stirrup and impinges onto the needle, thus firing the detonator
2. The percussion pellet sets back overcoming its stirrup, this action frees the percussion pellet, it is now free to move forward on impact. The creep spring prevents the percussion pellet from moving forward in flight.

The flash from the time pellet detonator passes through the flash channel and ignites the lead into the top time ring and, at the same time the flash ignites the powder pellet in the gas escape hole. This action blows out the brass sealing disc thus allowing the gaseous products to escape to air. (otherwise the build up of gas pressure would change the time ring burning rate).

When the flame front reaches the place at which the bottom time ring has been set the flame passes down the lead into the bottom time ring. This burns through until the flame front reaches the lead into the magazine and the flash from the magazine explodes the shell.

If the projectile impacts the target prior to the time element functioning the percussion pellet is driven forward by inertial forces thus driving the detonator onto the bottom part of the needle. The flash from this detonator is passed directly into the magazine and thence into the shell.



Clearly seen on the right is the movement of the time pellet plug downward onto the needle with the consequent straightening of the stirrup spring lugs, also the downward movement of the ferrule which straightens out the lugs on the percussion element stirrup spring. Photo courtesy of ALTC.