

SHOTGUNS - contd.MODEL 870, 28-410 GAUGEMODEL 1100, 28-410 GAUGE

R & D reported that to provide further power to accommodate low impulse ammunition, the orifice size dimension for the Model 1100, 410 gauge 2½" chamber gun was increased to .076" from the previous .073" diameter. The object is to obtain positive functioning but without possibility of encountering excessive Bolt velocities to cause pulled heads or other problems in "fast" guns.

In the meantime, R & D has continued work to confirm what seems to be an optimum dimension of .055" diameter for a proposed new double orifice design on future Barrel production. This is to avoid possible loss of power in event of rotation of the piston to cause slots in piston and seal to become aligned with the single gas orifice.

Development of a new and more efficient piston seal of a molded material is proceeding. The object is a seal which might help compensate for excess dimensions and/or misalignments in the gun. Functioning results are very good but endurance disappointing. In the meantime, the piston area and volumes are being rechecked to provide optimum conditions for the small gauge guns.

Bridgeport R & D has been supplied with two (2) selected "slow" (bolt velocity versus impulse) guns.

Effort is being continued to establish controls for ammunition production which might result in a product having impulse characteristics above the known minimum for satisfactory functioning in gas operated guns. Ilion and Bridgeport R & D plan to continue efforts to determine causes for such extreme variations in impulse characteristics of 410 gauge ammunition and to find ways for correction.

One Model 1100, 410 gauge 2½" chamber gun having a mean characteristic was selected and shipped to Federal on July 11 rather than wait longer for availability of the proposed double orifices. Federal has also submitted samples of two lots of their 2½" shell. The first one responded low on impulse. Federal was advised of