

resulted in too much breakage. Methods of providing support for the washer have included an enclosing metal ring in the fore-end which did not function satisfactorily, and a shoulder on the barrel guide ring. This performed satisfactorily, but made the barrel guide ring non-uniform with that used in other guns, and also increased the cost substantially. It has been found possible to achieve the same result by adding a supporting segment on the metal ring now used in the fore-end. It is believed that this could be produced from powdered metal in the same die now used for the barrel guide ring, requiring only a new punch. Product cost would not be materially changed. This device is now being tested in four guns, and has so far been satisfactory. It is believed that this new device could be introduced one month after the completion of testing which Research and Development will expedite.

Rusting of the Magazine Cap

The stud used to assemble the magazine cap and selector is now being nickel-plated, and the bright surfaces of the selector are being sealed with a rustproofing compound. It is believed that these steps will give adequate protection against rusting.

Magazine Spacer

Use of a new nylon magazine spacer will commence shortly. This will provide better support for the magazine springs, will eliminate the potential difficulty from loosened retaining pins, will be easier to assemble, and will be slightly less expensive.

Research and Development is testing a number of other design improvements, but they are not prepared at this time to submit a recommendation. These include the following: (1) an increase in length of the receiver rail on the left side for additional support of the action bar, slide, and breech bolt to improve endurance; (2) a new design of firing pin for improved endurance; (3) a redesigned magazine cap to prevent forward leakage of gas; and (4) powdered metal triggers to reduce cost and improve appearance.

Receiver Decoration

Although it has been decided that the gold-toned nickel decoration in the inscribed portion of the receiver should not be adopted at this time, Research and Development has secured certain additional information for record. It has been found that the vendor cost for the nickel plating would be 15 cents per gun, giving a total factory cost of perhaps 25 cents per gun. The supplier of materials used in the black oxide bath reports that nickel would not poison any of the chemicals used in the bath.