

CONFIDENTIALMONTHLY REPORTILION RESEARCH DIVISIONNOVEMBER 1957SHOTGUNSMODEL 870 - 28 & 410 Ga.

The first functioning model of the 28 Ga. has been completed and subjected to a preliminary test, which was satisfactory. A functioning model of the 410 Ga. is expected to be complete by January 1 for evaluation.

SPORTSMAN-58 - 28 & 410 Ga.

The functioning models for each of these two gauges are approximately 75% complete and should be ready for a design test and evaluation by January 1.

SPORTSMAN-58 - 12, 16 & 20 Ga.

Several design improvements have been made to the magazine cap with the idea of eliminating some of the difficulties which have been reported in the field by Sales. Samples are being prepared and will be submitted to Sales for comment.

A new corrosion resistant treatment has been devised for carriers which should eliminate complaints of rusting, and a sample lot is being processed for testing and evaluation.

CENTER FIRE RIFLESMODEL 725

Pilot assembly has been started and several samples completed for evaluation. There are some refinements which appear

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desirable. These include a change to the fire control housing to improve the function of the safety and also a change in the floor plate latch to improve stability of the latch spring assembly. Some adjustment to the rear sight assembly is also being made to provide more adequate operation.

MODEL 740 - Caliber 280

All work in connection with adapting this new cartridge to the rifle has been completed except for a final check on the gas orifice mechanism to provide proper operation with 125 gr. loads. This involved some changes that were being made to the ammunition, and loads for retesting should be available early in January.

MODEL 760 - Caliber 280

This new cartridge has recently been added to the Model 760 Line, and drawings have been transmitted to permit the Plant proceeding with tools necessary for initial production, scheduled for early 1958.

ALL PURPOSE STOCK - MODELS 721, 722, 740, 760

Sighting problems experienced in preliminary testing have delayed full production. This involved a "center of impact" with respect to the sight line. A change was made to the rear sight base which makes it possible to gain a wider range of elevation. The height of the front sight ramp has also been altered slightly and the

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combination now appears to be adequate for the full range of sighting differences required for the various calibers involved.

RIM FIRE RIFLES**MODEL 552 - LIGHT WEIGHT SERIES**

A 25,000 round test has been completed with two rifles and the results appear to be satisfactory. The proposed design of the barrel now utilizes two hardened pins at the breech in order to prevent upsetting of metal by the bolt. This would avoid necessity of more expensive construction such as using a hardened steel hub in combination with the aluminum jacketed barrel.

Several proposed improvements for the hanger have been devised and tested. This is an item which has also given trouble in the M/572, and a more rigid construction was considered necessary in the M/552 Light Weight Series.

Models of the design in colors have been prepared for submitting to the Operations Committee Meeting scheduled for December 6.

MODEL 572 - LIGHT WEIGHT SERIES

New stock finishing techniques are in effect for improving the quality and reducing cost of the "Sungrain" color.

Improved results are now being realized on limited production of brown colored receivers. The problem was one of

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MODEL 572 - LIGHT WEIGHT SERIES Continued

eliminating the large percentage of rejects because of white spots. The causes have been recognized and corrective methods are now being employed for improved results.

MODEL 555

Assembly of rifles for the pilot run of 200 units has been started. Stocks were successfully molded in two colors with a new formulation of molding powders and without the difficulty of splaying that was experienced during the first run.

In order to prove out the design and also develop more efficient fixtures, one half of the molded stocks and accessories are being assembled at Ilion, with the remainder of the lot being assembled by the vendor. It is expected that assembly will be completed and testing to be under way by the end of December.

GENERAL**OLYMPIC RIFLE AND AMMUNITION**

Rifles and ammunition were tested at Aberdeen Proving Ground and the results were sufficiently favorable to continue into extended testing scheduled to be fired at Ft. Benning early in December. In this connection, it was decided to load a small quantity of Cal. 7.62 for lower velocity since tests indicate considerable improvement with reasonably favorable wind conditions.

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