M. H. WALKER

January 7, 1963

Weekly Report
Special Products Section
Week Ending Jan. 6, 1963

Model 40X-B

D. E. Bullis

The past week was spent on the Military Version - M/40XB.

Model 700

L. J. Hagen

Redesigned extractor cut in the Bolt Head .222 Rem. and .222 Rem. Magnum.
One Bolt Head is in the custom shop to be completed.
Redesigning Extractor to fit redesigned Bolt Head.

High Pressure Rim Fire

N. W. Dam

Finished the casting drawings; they are ready to be taken to Gray-Syracuse, Inc. for a final accurate price quotation.
Work has been started on the master patterns.

Model 700 Report

J. W. Blair

Draft of Final Report being prepared for completion the end of January.

Other projects being worked on were completed or temporarily suspended during the past week.

Miscellaneous Projects

L. P. Gogol

The M/40X barrels for the proposel Rim Fire Rifles will be done by Jan. 8th and ready for assembly. Rails are being machined for these rifles.

Rifling and related processes are being investigated to help eliminate the rough and pitted bore conditions. Improved ream, and possibility of rifling without the cuprodine or deplating immediately after rifling, being investigated.

The vacuum chuck has been received and electrical connections for the pump. This will be used for the DuPont plastic machining job.

Approximately 40 .222 Rem. and .222 Magnum light and heavy barrel assemblies have been processed and will be ready for assembly and targeting.

Following pressure barrels have been shipped to Frank Coursey:

2	223 Caliber	cut rifled
2	6mm	9" twist cut rifled
6	7mm	

New M/40X 2 Oz. Trigger — R. J. Sanzo

10 new M/40X 2 Oz. Trigger Assemblies were completed this week. The trigger pull on three of the assemblies was found to be greater than 6 ounces. The reasons for this were thought to be:

1. Misalignment of holes in trigger housing.
2. Certain surfaces on sear lever not being perpendicular and parallel to the center line of hole in sear lever.
3. Not enough clearance between the sear lever, connector, and the walls of the trigger housing.
4. Mating surface between sear lever and the connector not being smooth enough.
5. Lessening the contact surface between the sear lever and the connector.

All of the above problems were corrected in succession with no evidence of improvement in trigger pull.

Have started designing Safety for the new 40X 2 oz. trigger.

High Pressure Rim Fire — R J Sanzo

[redacted]
Have started tolerance stack-up of high pressure rim fire. Design of fire control is not complete and tolerance stack-up of this phase will have to be completed later.

M/415 Stun Safe Rifle — J. W. Brooks

New sear lock seems to function properly. Parts sent to heat treat, and an operating rifle will be assembled next week.

A dry cycle test on an N12 rifle with standard production sear and cyn heat treated firing pin body shows no appreciable wear after 50,000 cock and fire cycles. The receiver shows wear and head space has increased approximately .005". The cocking cams are noticeably worn but still function. The test will continue to 100,000 cycles.

A receiver and barrel from an N12 were cyn heat treated in preparation for a dry cycle test. A firing pin/body with increased cam bearing surface will be used in the bolt assembly if the rifle functions properly on preliminary tests.

Bullet Manufacture

37 samples of rolled and cut off lead slugs were weighed and length checked. The maximum variation in weight was 1.2 grain. One flier made this spread. Spread without flier was .88 grains. More samples will be run keeping a slight positive pressure on wire to see if more constant length can be achieved.