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REMINGTON ARMS COMPANY, INC.
 Bridgeport, Connecticut

ACTIVITIES OF TECHNICAL DEPARTMENT

FIRST QUARTER, 1945

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Submitted by:

R. E. Evans - Manager, Ammunition Division
 G. R. McCormick - Manager, Arms Division
 J. K. Hamil - Manager, Mechanical Experimental Division
 H. A. Brown - Manager, Development Division

Approved by:

G. O. Clifford
 G. O. Clifford
 Technical Director

.30 Cal. Taper, Head to Shoulder Length
 .30 Cal. Swage, Strike Up, Head and Stamp, Bridge Thickness
 Shotshell Half-Heading, 12 Gauge Head Diameter
 Shotshell Assembly, Wad Weight on all brands for 12, 16,
 and 20 Gauge
 Shotshell Heading, Head Thickness on all brands of 12, 16,
 and 20 Gauge
 Shotshell Priming, Depth to Primer Cup, Depth to Battery
 Cup Flange
 Shotshell Battery Cup Cutoff, Overall Length
 Shotshell Battery Cup Pierce and Flange, Inside Depth
 .22 Cal. Heading, Head Diameter, Head Thickness
 .22 Cal. Cutoff, Overall Length

Miscellaneous:

Extensive statistical analyses have been performed upon data collected by the Ballistics Standardization Group upon the possible factors affecting pressure and velocity performance of .30/06 guns.

Considerable progress has been made in developing methods for the application of correlation analyses to engineering problems.

Consultation service has been given to various members of the Technical and Production Departments.

A Statistical Training Program has been set up for interested members of the Technical Department.

ARMS DIVISION, G. R. McCORMICK, MANAGER

Project: Model 721, Bolt Action, High Power Rifle - L-3121
Personnel: M.H.Walker, Design Section; M.H.Smith, P.Henriksen,
 H.C.Moss, R.W.Angell, Engineering Section
Authorized Amount: \$71,000 Total Expended to Date: \$33,865

Nature of Problem:

Development of a low cost high power rifle to take the place of the present Model 720.

Summary of Progress from Inception:

A design was conceived and built in which the objective of simple parts was met very successfully. Twenty-three of the fifty parts are blank and form operations or springs which can be furnished by vendors specializing in this field. Basic process records have been written for the remaining twenty-seven parts, which are being reviewed by a committee representing Design, Tool Design, Estimating, and Production Engineering of the Technical Department. In processing the gun, operations little used at Ilion, such as internal broaching, rise and fall milling, induction

brazing, swage rifling, and automatic machine finishing of barrels, are planned. The recommendations of the Arms Study Processing Report are being given careful consideration.

This Quarter's Work:

Certain minor revisions are being made in the models in order to obtain greater standardization of parts and to improve extractor life. A report of the test indicates that this increase in extractor life is the only improvement to functioning that is needed. Minor appearance changes resulting from Products Committee action are also being made.

Proposed Next Quarter's Work:

Complete and test these revisions, and turn drawings over to the Engineering Section for processing; get prices from vendors for parts to be constructed; start tool design; and submit models for consumer acceptance evaluation.

Project: Model 760, Slide Action Center Fire Rifle - H-1029
Personnel: J.D.Howell, C.C.Orloff, H.W.Young, Gun Design Section
Authorized Amount: \$89,000 Total Expended to Date: \$72,055

Nature of Problem:

Design a high power slide action rifle capable of handling ammunition more powerful than any previously handled in slide action rifles and yet weighing less and costing less to produce than our present medium power slide action center fire rifle.

Summary of Progress from Inception:

A model was constructed in .30/06 caliber and tested for 3000 rounds. Tests indicated certain sliding surfaces break down due to heavy load. Weight is satisfactory. Costs are higher than desired, but lower than present line of slide action center fire rifle.

This Quarter's Work:

A model containing the revised action was finished and shot a few times before being shown at a Products Committee meeting. Considerable thought was given to appearance of the receiver, and a wood-appearance model showing certain minor revisions in line proposed by the Development Section is being prepared for Products Committee approval.

Proposed Next Quarter's Work:

Precision cast a receiver showing the lines approved by the Products Committee, and run preliminary tests. If tests are successful, die casting dies and sample castings will be procured.

Project: Model 740, Autoloading High Power Rifle - L-3122
Personnel: H. W. Young, Gun Design Section
Authorized Amount: \$48,100 Total Expended to Date: \$17,147

Nature of Problem:

Design autoloading means which could be applied to the