

C O P Y

Ilion, New York
August 31, 1954

MODELS 721-722 IMPROVEMENTS

Early in 1950 work was started to develop various improvements to these models. Designs were developed and models built for the following:

1. New wide trigger
2. New style bolt handle
3. New trigger guard
4. New magazine floor plate
5. New safety
6. New barrel specifications
7. New front and rear sights
8. Machine checkered grip and fore-end
9. New "Super Grade"

These items were reviewed in detail at the meeting of November 17, 1953 and were further considered at subsequent meetings. As indicated in Minute #5 of July 1, 1954, it was decided to defer further action on improvements until January 1, 1955. In the meantime, the Arms Research Division was requested to reconsider the problem on basis of what might be done in the way of "minor changes" to reduce cost as well as enhance saleability incidental to consideration of offering these models at lower selling prices. Without undertaking major design, the following recommendations were made, applicable to calibers 30-06 and 270 in the Model 721, and calibers 300 Savage and 257 in the Model 722:

1. Barrel - Reduce length from 24" to 22" and eliminate the "hub" in which the present dovetail cut is milled for attaching rear sight.
2. Provide a new open sight arrangement to permit use of only one style (high comb) of stock with either telescope or open sights. This involves a higher front sight together with a higher front sight ramp used in combination with the new rear sight base for attaching the present rear sights.
3. Complete development of lower cost finishing for barrel and receiver; i.e. Supersheen and black oxide.
4. Provide new oil finish for stocks in place of present lacquered finish.

The advantages to be gained by the above includes a new "Carbine" appearance, improved handling qualities and especially for use as a "saddle gun". With the new sighting arrangement it is possible to provide a feature of interchangeability to the shooters so that either telescope or iron sights may be used without having to interchange from high comb to low comb stocks. It also will provide a new and tougher finish on the stocks. Appearance of the rear sight is improved through use of a new base.

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From the standpoint of manufacture, advantage will be gained through eliminating requirements for providing both high and low comb stocks, tooling for barrel processing is simplified and cost reduced for machining and grinding through elimination of the barrel hub. The proposed stock finish is a "scuff resisting" penetrating oil finish which was developed by duPont for use on floors and other heavy duty requirements. It appears to bring out color of grain in the wood. At the present time we have not had sufficient experience to confirm any reduction in cost using this material; however, it appears to offer such a potential.

Estimated tooling and product cost for proposed changes are as follows:

	Unit Factory Prod. Cost	Annual Factory Cost	Total Expend.
1. Reduce barrel length to 22"	6-3/4¢ Red.	\$ 1,600 Red	\$ 600
2. *Eliminate barrel lug	2.2¢ Inc.	780 Inc.	8,435
3. Provide new front sight & front sight ramp & new rear sight base	17.1¢ Inc.	6,000 Inc.	5,200
4. Reprocess barrel & receiver finish to SuperSheen with black oxide	48.6¢ Red.	17,000 Red.	10,000
Total	36.0¢ Red.	\$11,820 Red.	\$ 24,235

*The reason for showing an increase in cost for eliminating the barrel lug is to reflect the additional estimated purchase cost required for providing a rear sight base.

It has been estimated that actually there would be an estimated saving of approximately 3.2¢ each or \$1,120/yr., for eliminating the lug on the barrel if it were not necessary to provide a new base for mounting the present rear sight.

Firm estimates have not yet been developed as to total time required to provide facilities for incorporating the above changes; however, it is the opinion of Research & Development that this would be within a range of at least 3 to 4 months. If it were decided to adopt the proposed design for the shorter barrels and/or elimination of barrel lugs, etc., it may be well to review the status of warehouse stock and work in process as follows:

	<u>Warehouse Stock</u>	<u>Barrels in Process</u>
30/06	2440	2859
270	1953	155
300 Mag.	758	341
300 Sav.	1256	12
257	1941	325
222	1787	1190
	<u>10135</u>	<u>4882</u>