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TO: S. M. Alvis
FROM: Signal Army
SUBJECT: MODEL 721 - RIFLE REMINGTON RIM

Four Model 721 rifles were recently tested to compare two styles of Bolt. Data is recorded below.

Load - 4 - 220-gr. slug lodged in barrel and
super-proof load of 3.4 grams proof powder
with a 220-gr. bullet

No. 1 - New Style Receiver

Copper braided, decarburized and heat treated bolt to give a soft shroud.
Results: Barrel failed over chamber, apparently caused by a seam in the barrel.
Receiver ring split
Stock damaged
Bolt intact

No. 2 - New Style Receiver

Bolt - Same as No. 1
Results: Bottom lug of receiver failed in shear.
Bolt lugs not back enough to shear off bolt handle and leave shroud unsupported.
Bolt shroud failed
Firing pin blown to rear past cocked position.
Stock shattered.
Magazine and floor plate bent.

No. 3 - Old Style Receiver

Bolt - Braided and heat treated simultaneously.
Results: Bolt head separated from bolt sleeve.
Bolt handle torn off.
Bottom lug of receiver failed
Shroud blown from bolt.
Bolt head in receiver but out of line badly.
Stock shattered.
Magazine and floor plate bent.

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No. 1 - New Style Receiver

Bolt - same as No. 3

Results: Bottom lug of receiver failed in shear.
Top lug of bolt sheared off.
Bolt shroud blown off.
Bolt handle sheared off.
Bolt blown to rear until stopped by bottom bolt lug
wedging in fire control slot.

A receiver with a different loading ramp cut is being made and will be tested and reported on at a later date.

It is our belief that these tests should be continued and an effort made to standardize the test for more uniform results.

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