

Section I

Recommended Design Improvements

(Post Model 700)

Part III

"Intended to put us in a more secure position with respect to product liability:"
July 17, 1980 Operations Committee – Minute #14 –Pg. 26

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington

PETERS

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

Ilion, New York
December 1, 1975

TO: J. P. LINDE
FROM: D. F. BULLIS
SUBJECT: PROGRESS REPORT

ELECTRON BEAM WELDED EJECTORS:

The latest design ejectors have been machined, heat treated, blasted and put in test for endurance

M/700 TRIGGER (One Piece):

For test purpose only, a trigger was made by screwing a connector to a M/700 trigger making in effect, a solid one piece trigger. Preliminary tests indicate a one piece trigger may be acceptable.

A new design was drawn up and put in the shop of a trigger which has a back angle on the break away portion of the trigger, sear surface. A formed bar stock blank was also drawn up for cost estimate.

COMPETITION STOCK FINISH:

All stock assembly drawings were altered to contain both a shiny(RKW) and dull (VINYL) finish. A new drawing was required for the fore-end.

3200 RECOIL PADS:

Drawings were altered to show a .140 dia. hole for each screw position of the recoil pads, to eliminate the ragged look which develops from using a screw driver through the pad with no hole.

3200 TRIGGER GUARD REAR PIN HOLE:

A number of trigger guards were made up with the rear pin hole moved forward .010 & .015. They were put on guns at assembly and checked for appearance. It was decided that .015 better covered the gap we were getting behind the bottom tang and the stock. The guard drawing was changed to this effect.

PLAINTIFF'S
EXHIBIT

3086

AL (X)23392

1 of 2

January 19, 1977

FIRE CONTROL DESIGN CONSIDERATIONS
- BOLT ACTION RIFLES -

Tolerances

Fire Controls have many interacting parts. And their function requires minimum part movement. Because of this, tolerance buildup is the key problem in designing Fire Controls for mass production. This tolerance buildup problem can be solved in a variety of ways:

- Adjust tolerance buildup out by screw adjustment, bending, swaging, or filing.
- Have several parts sizes in inventory for a selective fit.
- Eliminate the tolerance buildup by performing a manufacturing operation during final assembly. For instance, a critical hole could be drilled during assembly using the assembly up to that point as a fixture.
- Design parts which can move a lot, to move even more to take up tolerance buildups.
- Parts whose function is not critical to safety can be tolerated statistically.

Safeties

Block Trigger Safety

This Safety blocks the movement of the Trigger. The Trigger, in turn, blocks the movement of the Sear which blocks the Firing Pin. When the Safety is disengaged the Trigger may be pulled to fire the rifle. In my opinion this is the ultimate Safety because it blocks all of the functions required to fire the rifle.

This type of Safety will not work on a target type Trigger because the Sear engagement might be adjusted too fine for the tolerances in the Safety. Then the rifle could be shot with the Safety on.

REM 0087454

LUN 0018788

Safeties - Contd.

Lift Sear Safety

This Safety lifts the Sear clear of the Trigger and blocks it so that, when the Trigger is pulled, it can not release the Sear. This Safety is used on rifles where the Trigger movement is too small to effectively block. It is especially useful on target rifles.

Problems can occur with this Safety if the Trigger binds. Foreign material in the Fire Control, or a bad trigger fit, can cause the Trigger to stick in the "pulled" position. When the Safety is released, there is nothing to support the Sear, so the rifle fires off safe.

This Safety requires more throw than a block trigger safety. This is because it has to do considerable work to lift the Sear against the mainspring force.

A Lift Sear Safety must have constant force camming between the Safety and the Sear. So that the Safety "on" force will be consistent in all tolerance situations.

Bolt Safety or Block Firing Pin Safety

This Safety lifts the Firing Pin from the Sear and blocks it. A binding Trigger will also cause a rifle with this type of Safety to fire "off" safe.

Safety Detents

Safety detents provide the following functions:

- Controls Safety "on" and "off" forces
- Provides positive position stops for Safety "on" and "off"
- Insures no "dead" positions between "on" and "off" where the Safety might otherwise hang up.

The force required to initiate movement of the Safety depends upon the detent spring thrust and the "contact" angle of the detent head. These work together

REM 0087455

LUN 0018789

July 1, 1977

M/552-572

All drawings have been transmitted to the Plant except the "Nylafil" trigger plate.

Nylon 66

A review was made with design consultant (Siro Toffolon) on a number of drawings of roll markings, different names, etc.. His present assignment is to prepare a rendering for a new design stock, and then make a 3D model.

Colors to simulate gold are being looked at for the diamond on the black gun.

Sample scope mounts are now 95% complete and will be ready for review in July.

M/700 Improved Trigger Assembly

Design work has started on one of three planned safety mechanisms for the M/700 rifle. The three designs include three position safety, two position safety with bolt release on bolt plug, and two position safety with bolt release on bolt handle. The three designs will be evaluated from the cost, performance, ease of function and safety standpoints, and the best design will be proposed. All three designs permit the rifle to be unloaded with the safety in the ON SAFE position.

M/870 Competition Trap Gun

The three models to be shown at the July Operations Committee Meeting are in the final stages of fabrication. These models will be tested extensively against the leading competition which are the M/12 Winchester, BT99 Browning, and Perazzi single barrel. A Research cost estimate is being prepared on manufacturing costs of the M/870 Competition.

T

AL 0031964

DON'T SAY IT—WRITE IT

To E. F. BARRETT

DATE July 1, 1977

FROM C. B. WORKMAN

LIMITED DISTRIBUTION

NOTES FOR MANAGEMENT STAFF MEETING

M/1100 Improvements

Carrier Latch Retainer - Testing has indicated that a change in timing to correct unloading problems creates trapped shells on the low bolt velocity guns. We are now looking at the problem as related to the 3" gun only, to correct the malfunctions.

Interlock System - One design prototype has been fired in the test lab for 2,000 rounds with no apparent problems. Testing will continue.

M/1100 - 12, 16 & 20 Ga. - Checkering & Roll Marking

Complete on all checkering patterns; roll marking will follow.

M/1100 LT-20

Slug barrels for this model are in the test lab for evaluation. No problems are anticipated since this is an add-use from the standard 20 Ga..

M/1100A

On schedule.

M/870 Trap Grade

Complete. Suggest dropping from report.

M/742-760

Four firing pins have been tested to date using 6150 material and shot peening. Two pins with a hardness spec Rc-54 went over the 2000 mark; two pins with hardness spec Rc-44 broke at 1000 rounds. Six additional pins are in the process of being shot peened and heat treated to Rc-54 for retest. Completion date for transmittal of drawings to plant is mid-July.

Note: One gun in 6mm has been test fired 8000 rds. with no other breakage.

AL 0031963



cc: C. B. Workman
(no attachments)

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington



BRIDGEPORT, CONN.
SEPTEMBER 14, 1978

TO: J. W. BROOKS
FROM: W. L. ERICSON
SUBJECT: THREE-POSITION SAFETY: RELEASABLE BOLT LOCK

An extensive search has been made for patents relevant to the prototype three-position safety shown in the "C" series photos you supplied us (stamped April 3, 1978 by your Photo Lab). No patents which could raise any infringement risks were found. The following are of interest with respect to the patentability of this design:

1,318,423 - Williams -
2,824,402 - Fischer -
2,869,269 - Couture -
3,138,838 - Brewer -

The Williams, Fischer, Couture and Brewer patents show various forms of three-position safeties having alternate "safe" positions in which the bolt is locked and released. However, it appears to me that none of these is so closely related to your prototype as to foreclose us from obtaining patent protection for it, in the event it is selected for use.

Williams uses a safety bar N which is slidable transversely of the bolt C, and has ribs O that interfere with ribs P on the firing pin F in two "safe" positions, but are cut away at Q to define a "fire" position. In one of the safe positions, the bolt C and its handle D are locked by the projection into a recess U of a spring-loaded detent S (see Fig. 9); but this detent retracts into a notch T₂ in the safety bar in its remaining two positions.

Fischer has a bolt lock button 12, 13 engageable with a notch 14 in the bolt 2 of a Mauser action (Fig. 4); this button carries an interlock pin 26 which is engaged by a safety lever 23 in its "fire" position 23A. to unlock the bolt. In an intermediate "safe" position 23B, the firing pin 4 is locked by a safety pin 13 (see Fig. 5), and the button 13 can be manually operated to either lock or unlock the bolt. In a second "safe" position, shown in solid line at 23 in Fig. 4, the button 13 is held in the locking position by a notch 28.

TO: J. W. BROOKS
RE: THREE-POSITION SAFETY:
RELEASABLE BOLT LOCK

Page 2
Sept. 14, 1979

Couture bears some resemblance to our Walker Patent 2,514,981 in that a bell crank lever 28 serves both as a safety and a bolt lock. However, Couture provides for three safety positions rather than two; these positions are determined by a spring-loaded lug 60 engageable in any of three recesses, shown unnumbered in Fig. 2. The safety has a stop member 54 which locks the trigger in either a rear or an intermediate position, and a longer arm 55 which engages a notch 57 in the bolt only in the rear position. (This mode of operation is the reverse of your prototype).

Brewer employs a sliding safety 190 that has a screw 228 which locks the trigger, and a lug 230 which engages a locking notch 234 in the bolt, in the rearmost safety position shown in Fig. 12. Forward movement to an intermediate position keeps the trigger locked, but disengages the lug 230 from the bolt notch. Incidentally, there are only two detent notches 229 and 231, which correspond to the rear "double-safe", and "fire" positions: so feeling the intermediate position would appear to be somewhat uncertain.

To summarize, the prior art most nearly related to your design is the Couture patent, but this is a one-piece trigger safety and bolt lock that is readily distinguishable both in construction and mode of operation. Patent protection should be obtainable on your prototype.

There is a mention in earlier correspondence of a three-position safety in the Model 725. If you have a sample, we might compare it.

Bill Ericson

W. L. ERICSON
SENIOR PATENT COUNSEL

WLE/dt
Attach.(5)

48.50

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington

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PETERS
125

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY" _____

RESEARCH MEETING

November 7, 1978

SUBJECT: BOLT ACTION FIRE CONTROL

Observations

1. "Can" or "Must" condition on unloading a rifle in "ON SAFE" position. Majority feel a "Must".
2. Unload magazine box without cycling thru chamber?
3. Gun must be safe when unloaded!

Further Criteria

1. Bolt handle must be locked down with round chamber and safe on.
2. Rifle must be unloaded with safe on.
3. Trigger feel safely adjustable by customer.

JW Brooks:T
Manual Firearms Design
Illion Research Division

AL 0016420

36 of 80

Bridgeport, Connecticut
November 16, 1978

C.B. WORKMAN
H.H. WALKER
J.P. LINDE
H.D. ALBAUGH W.R. FORSON

BOLT ACTION FIRE CONTROL - DESIGN REVIEW 11-14-78

- A gauge is being designed to check sear lift. The gauge is expected to be positive and simple enough to be used in the field. Completion of a prototype gauge is scheduled for mid-December.
- The following design requirements for a new fire control for bolt action rifles were tentatively established -
 1. Eliminate the "crick" condition. At this point the best solution appears to be adding a trigger block to the safety cam mechanism. This would prevent the trigger from moving in the "safe" position - eliminating the "fail to reset" possibility.
 2. The new fire control should be retrofittable.
 3. A bolt lock arrangement should be provided. At this point a locking device separate from the fire control appears most desirable.
 4. Adjustment for the trigger pull force should be provided for the user. Access to the adjustment should not require stock removal. Other adjustments - sear-connector engagement - should be eliminated.
- Program
 1. Marketing will conduct consumer tests of the fire control designs now in hand during December and January. These include a three position and a two position safety with an external bolt lock. A sample with the present fire control with the bolt lock removed will be included.

PLAINTIFF'S
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AL 0014774

2. Research will complete the design investigation and select a design approach by February 1, 1979.

3. Consideration will be given to introducing the new design in a limited quantity of restyled M/600s in 1980.

- M.H. Walker will prepare a letter with his views on renaming the "safety" mechanism.

E. F. Barrett

EFBarrett:jl

AL 0014715

2 of 2

REMINGTON ARMS COMPANY, INC.
Research Department

fil
cc: J. P. McAndrews
E. G. Larson

Ilion, New York
November 20, 1978

E. F. BARRETT
C. B. WORKMAN
J. P. LINDE
H. D. ALBAUGH - W. H. FORSON

BOLT ACTION FIRE CONTROL - DESIGN REVIEW 11-14-78

- One of the items discussed at this meeting was the use of the word "safety" to describe the mechanism used to block the trigger or the sear or the firing pin.
- Since the firearm is only as safe as the person handling it, the term "safety" is being misused. It was the consensus that the word "safety" should not be used and that other terms should be substituted. Some were suggested such as, trigger block, lock, stop, interrupter snubber, disconnecter, intersector, switch arrester, latch, etc.

MHC
MHWalker:bd

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AL 0023503

10P1

FIREARMS RESEARCH DIVISION

FIREARMS PROGRAMS

1980 - 1981

	1980		1981		Incentive	Estimated Completion
	Assigned Man Years	Estimated Expenditures	Assigned Man Years	Estimated Expenditures		
NECESSITY						
CF BUILT CASE IMPROVEMENT	.7	\$ 115M	.5	\$ 75M	Necessary to reduce product liability.	Prototype August 1980 Dec. 1980 Follow-up in 1981.
CF FIRE CONTROL IMPROVEMENT	1.2	120M	1.5	1.0 200M	Necessary to reduce product liability.	Three prototypes June 1980 Dec. 1981
IMPROV. FOR SAFETY	.3	20M	.5	.5 60M	Necessary to reduce product liability.	Six prototypes June 1980 Dec. 1980 Design follow-up - 1981
Sub Total	2.2	\$255M	2.5	\$ 335M		
COMMITMENTS						
174MM-76MM DEVELOPMENT	2.0	200M + 4360M	1.5	.1 6 150M	\$1.7MM increased 5 year earnings 240 R.O.I.	Dec. 1980. Design follow up and addition of new caliber Dec. 1981
200. SIG MOVEMENT	5.0	700M	4.0	5.5 8 700M	Salon earnings 700	Four prototypes Sept. 1980 Design verification testing complete Nov. 1980 Project Dec. 1981
2100 CAL DEVELOPMENT BRISAC PROJECT	3.2	210M	.5	.5 8 60M	Required to support sales of B young ammunition	August 1980 Design follow- up program. December 1980 - 1981
2100 CAL COMPETITION TRAP CAL	1.2	260M + 62M	.5	0 8 64M	Increase Earnings \$625M Earnings for 5 years	December 1980 1981 for design follow-up program
BUILT ACTION CANNING STYLING	1.5	125M	1.0	0 7.8 6 85M	Increased sales earnings	December 1981

1295002308

OPERATIONS COMMITTEE
ILION DIVISION

JULY 17, 1980

MINUTE #14

From Page 26

"Chart XXXVI shows Category I projects, intended to put us in a more secure position with respect to product liability:

1. The Model 700 bolt lock has been redesigned to operate independently of the safety and to allow the shooter to reload his gun with the safety in the "ON" position. Production costs are being developed by Industrial Engineering and the final version is now in test.
2. Three different designs of the M700 Fire Control are being considered. Two are ready for release to the Test Lab and one is still on the drawing board. Upon successful completion of the Model 700, work will continue to develop similar mechanisms for all of our bolt action rifles.

FIREARMS RESEARCH DIVISION
C A T E G O R Y I
N E C E S S I T Y

	<u>Eng.</u> <u>Manpower</u>	<u>Budget</u> <u>1980</u>	<u>Eng.</u> <u>Manpower</u>	<u>Budget</u> <u>1981</u>
M700 Bolt Lock	.7	115M	.5	75M
M700 Fire Control	1.2	120M	1.5	200M
M788 Safety	.3	20M	.5	60M
	2.2	255M	2.5	335M

Chart XXXVI

PLAINTIFF'S
EXHIBIT

195

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE



Xc: C. B. Workman
T. L. Capeletti
S. A. Fanelli

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY" _____

June 23, 1981

TO: J. S. Martin
FROM: F. E. Martin
RE: M-700 Trigger Assembly Estimate

Estimate figures \$.32 additional cost per gun. For this amount we have the:

- Bolt lock removed.
- Ability to unload the gun in the safe position.
- Insurance that the trigger won't be moved with the safety "on safe".
- Trigger becoming inoperative when adjusted out of spec.

I feel we should not pass-up this opportunity to improve our fire control.

FEM:ws

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington

PETERS

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

XC: L. R. Blackhurst R. L. Joy
L. E. Mosquet H. C. Munson
H. K. Boyle C. O. Pardee
J. W. Brooks D. I. Roark
J. J. Burns D. J. Senita
G. D. Campbell J. R. Snedeker
J. H. Carter W. C. VanSickle
W. W. Cook W. A. Warren
G. E. Fletcher L. G. Wilke
W. L. Ganey C. B. Workman
M. C. Hardy

March 5, 1982

J. P. LINDE

M/700 BOLT LOCK CHANGE
BOLT WILL OPEN WITH SAFE ON

Production change over has started as of February 26, 1982.
Guns are being marked as follows:

- All guns stamped with Final Inspection code AC or later.
- Approximate Serial Number changeover of guns was:
 - In Final Assembly - B6349XXX
 - Custom Shop - B630XXXX

by

G. J. Hill, Supervisor
Process Engineering
Current Products

GJH/cac

PLAINTIFF'S
EXHIBIT

3158

AL (X) 31404

MODEL 700 SAFETY NEW DESIGN TEST



CURRENT



NEW DESIGN

10/15/91

PLEASE!

READ NEW
INSTRUCTION-FOLDER

BOLT WILL NOW
OPEN WITH SAFETY
IN THE ON-OR-OFF POSITION

MINUTE #16 - September 22, 1982

FROM PAGE NO. 24

SUBJECT. NEW BOLT ACTION RIFLE
1983-1987 Firearms Research Strategy

New Bolt Action Rifle

In July, a four-page list of design specifications for a bolt action rifle that is being considered as a replacement for the 700 was reviewed. Three contingency designs are being considered. Today, I will review what we feel are the key

PLAINTIFF'S
EXHIBIT

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IREM 0020707 1

MINUTE #16 4 September 22, 1982

FROM PAGE NO. 25

SUBJECT: NEW BOLT ACTION RIFLE

1983-1987 Firearms Research Strategy

Chart XLIX and design elements (Chart L) of this rifle: the receiver will be redesigned to provide the features that seem to be preferred by gunsmiths, gun writers, and customers; flat bottom and integral recoil lug. The external appearance will be similar to the sample Model Seven that was passed around.

It is desirable that the safety block the trigger as well as the firing pin, for the added margin of safety against accidental discharge. We feel that a bolt lock is a good selling feature and continue to feel that it should be independent of the safety switch for maximum protection.

sear block
above below

A fully adjustable fire control is also a good selling feature and we will try to provide one. We would like to go the extra step of providing this feature without removing the action from the stock.

The combination of a high gloss, lightweight contour with a hammer marked barrel may prove incompatible with the process, but this will have to be investigated. It does offer unique styling opportunities.

The rotary magazine feed system offers three advantages:

1. Smooth operation;
2. Better feeding characteristics since you feed from a single location;
3. A more rigid receiver since the shell opening cut is not as large. This feature can contribute to improved accuracy.

In spite of the fact that our present extractor is stronger than most competitors, it is perceived by shooters as being a cheap, weak, unreliable stamping. We will try to correct that problem without compromising the superior strength of the 700.

Reduced lock time is a key factor in the recognized accuracy of the 788. We will try to duplicate that feature in this new rifle and at the same time provide our Marketing Department with laboratory measured effects of improved lock time at the target, to be used in sales promotions and advertising.

Finally, the stock will be walnut, designed in conjunction with leading stock makers, with features found only in custom-made stocks. The butt will be cast off and toed out to fit the natural contour of the human shoulder and enable the shooter to sight quickly with a more natural head position. Current methods of stock manufacturing should enable us to make three versions if necessary: cast off or on, toed in or out, or straight. We believe this touch of custom work is a good

1000-000000-01

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REMINGTON ARMS CO.
RECEIVED

MAR 16 1982

225 E. Edgewood Dr. Apt. 98
Lakeland, Florida 33803
Mar. 12, 1982

Mr. Clark Workman FIREARMS RESEARCH DIVISION
Remington Arms Co.
Illion, N.Y.

Dear Clark:

Jim was here today and we went over the bolt actions from A to Z.

These are some of the things I propose:

1. Please don't bring out a new bolt action, without a fool proof safety which is capable of locking the bolt. Make it at least as good as the present M70, better if possible.

2. Suggest you push for a complete line of bolt action rifles that cover the price gamut from lowest to highest. I feel the Carbine should be as simple and plain as you can make it with a price to match.

3. Forget pressed checkering!

4. I feel the idea of a hex cross section for a new receiver will increase cost. I also feel that indexing barrels and receivers will also increase cost. Since I feel that present volume is low because of price structure, increasing cost is a no no!

5. I didn't mention this to Jim, but we should make a large effort to capitalize on the fact that the bench rest shooters think our present 700 - 600 - XP100 - 40X actions are the most accurate production actions available and use them when they can get them for bench rest competition.

6. I am personally not in favor of the "as hammered" finish on barrels.

7. I do not think that Ruger is making more than 500000's per year. Anyone who says he is, is trying to mislead you.

8. The .243 has cost Win. and Sav. some fairly costly low suits due to its tendency to wear barrels quickly and cause high pressures due to excessive fouling. We have not had this problem because we use 6 MM barrel interiors for the .243, plus the fact that 700s do not come apart due to high pressure. To let the 6 MM die by taking it out of production in 700 is asinine. It's a better cartridge all the way than the .243 and we should make an effort to tell the customers. Letting the customers tell us in this instance, could get us into trouble.

PLAINTIFF'S
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AL 0029957

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9. We obviously have some production or design problems with M/700 magazine feed. We need to get busy on this. Magazines too narrow or receiver openings too wide can cause the problem you are experiencing.

10. Jim mentioned that some one is pushing for a Mauser type extractor. Do they understand that the rifle will come apart same as the present competition with excessive pressure if we go to any extractor which breaks the bolt shroud?

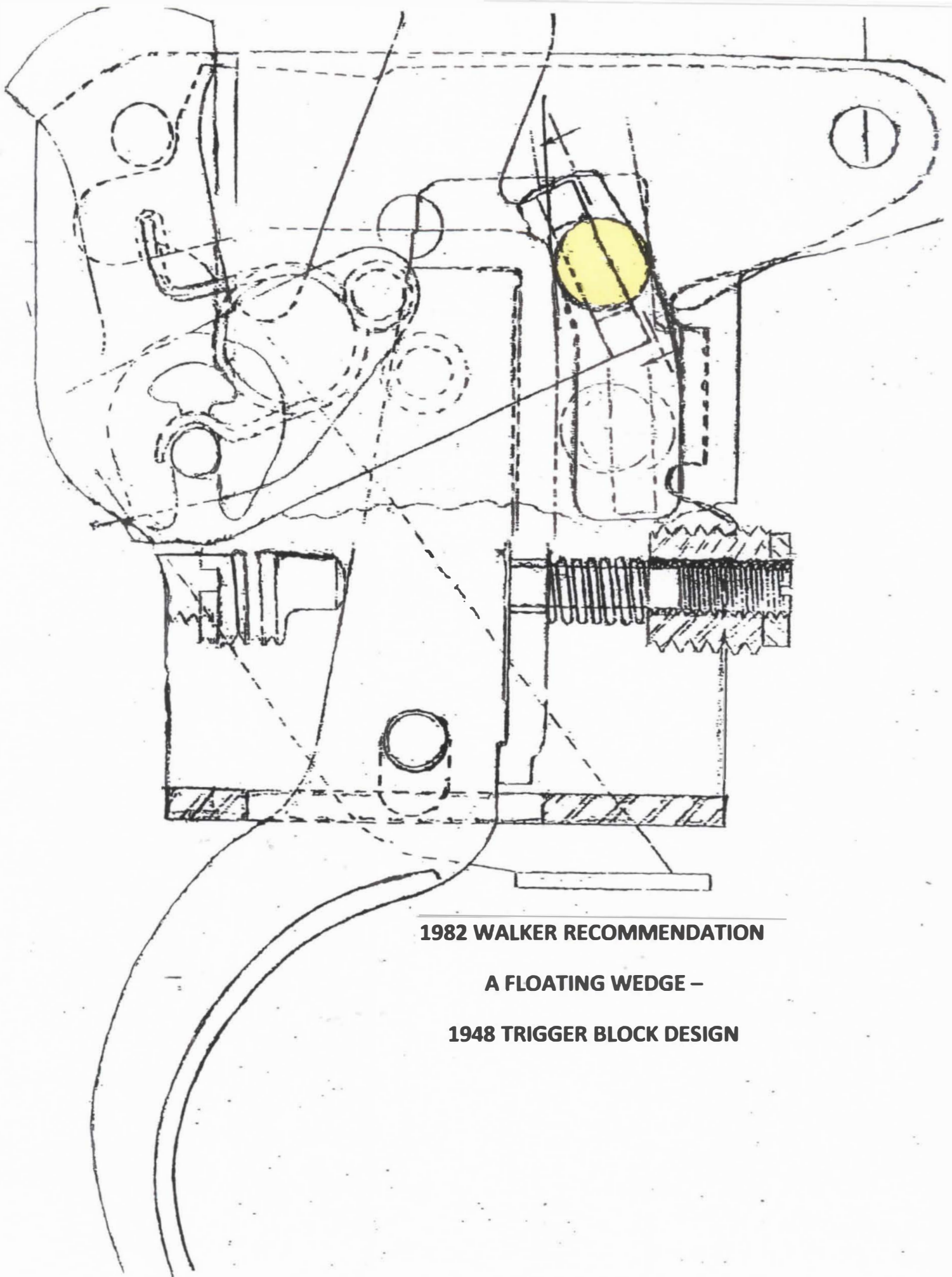
11. Has anyone tried a floating wedge in the front of the present 700 trigger as an additional element to the safety? It would be operated and governed in position by a relatively long slot in the present safety arm on the exterior of the housing. The wedging action would hold it in position until the very last movement of the safety to the "off" position. It might be pushed to the "on" position by a light spring or by the final movement of the safety arm to the "on" position.

If I think of anything more I will call.

K
Sincerely,

M. H. Walker
M. H. Walker

S
I
C
H
272
AL 0029958



1982 WALKER RECOMMENDATION

A FLOATING WEDGE –

1948 TRIGGER BLOCK DESIGN

FIREARMS BUSINESS TEAM MEETING
MAY 31, 1985

FILE: BOLT ACTION RIFLE
(REPLACEMENT FOR THE MODEL 700)
J. W. BOWER'S LETTER TO W. H. COLEMAN, II

9. NEW BOLT ACTION RIFLE

THIS RIFLE HAS BEEN DESIGNED AS A REPLACEMENT FOR THE MODEL 700. TECHNICAL IMPROVEMENTS INCLUDE:

O AN IMPROVED FIRE CONTROL CONTAINING:

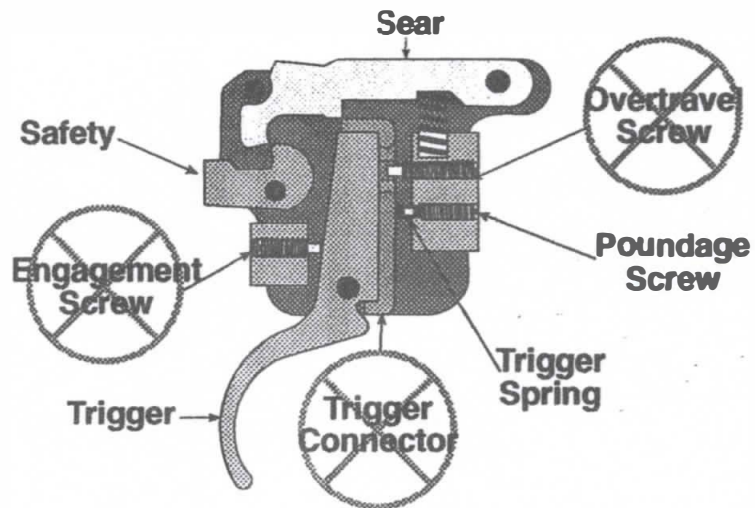
- PRESET ENGAGEMENT AND OVERTRAVEL
- CUSTOMER ADJUSTABLE TRIGGER PULL TO A SAFE LOWER LIMIT
- STEEL TRIGGER AND SEAR

O A SAFETY THAT BLOCKS BOTH THE TRIGGER AND SEAR

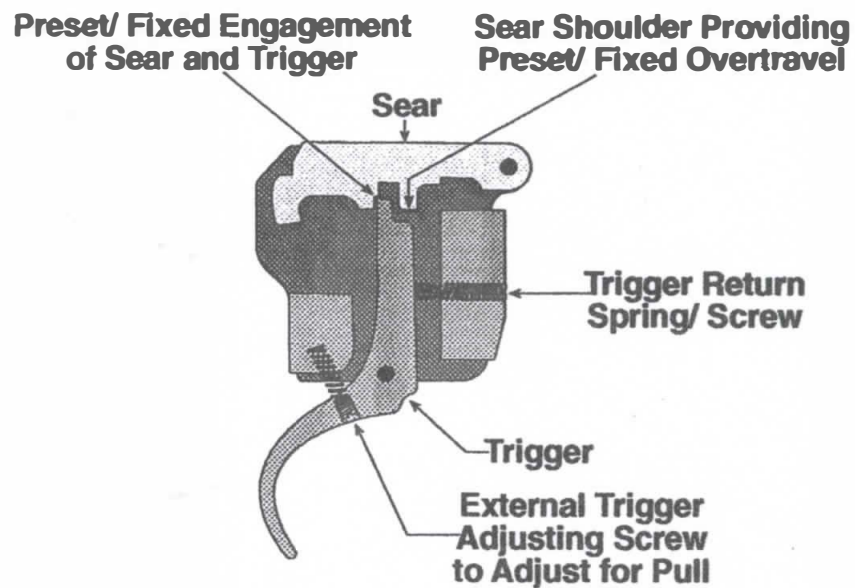
O A BOLT LOCK WHICH ALLOWS THE CUSTOMER TO UNLOAD THE GUN WITH THE SAFETY ON

MARKETING HAS COMPLETED INITIAL FOCUS PANELS TO GUIDE THE DESIGN EVOLUTION.

REVISIONS TO THE FIRE CONTROL ARE IN THE FINAL DESIGN STAGE. ADDITIONAL PROTOTYPES WILL BE READY FOR DEVELOPMENT TESTING THIS SUMMER.



REMINGTON MODEL 700 TRIGGER ASSEMBLY



ONE PIECE TRIGGER FEATURING PRESET ENGAGEMENT AND OVERTRAVEL

FROM:
Ext. 48348

ROBERT A. DARBY
Finishes and Fabricated Products Dept.
Research and Development Division
S-3334-S
Wilmington, Delaware

Date: December 30, 1985

TO: 1) ~~E. E. Woodacre~~
2) J. E. Preiser 16

In reviewing the attached strategic summary on Firearms, one product feature which we stress internally, but to my knowledge we do not stress very extensively in the marketplace, is safety. (For example, our barrels will "bird-cage" rather than shatter like some competitive offerings.) The world is surely increasingly safety-conscious - I don't know whether macho hunters are concerned, but they should be. R & D is working on improved safety and security features which should have marketable value. (If they don't, we ought to stop the work.)

I'd be glad to discuss further with you and share views.

Thanks.

R.A. Darby

1295003804

Design Review

Fire Control

Fire Control Requirements

- ☐ Solve FSR
- ☐ Forced engagement
- ☐ Retrofitability
- ☐ Tamper evident design
- ☐ Trigger pull 3.0 - 5.0 lbs.
- ☐ Must pass functional tests and SAAMI drop and jar off tests
- ☐ Manufacturability
- ☐ Feel and performance commensurate with current M700 trigger

High Plunger Design

☐ **Strenghts**

- ✓ **Prevents FSR**
- ✓ **Balanced trigger**
- ✓ **Less tolerance sensitive**

☐ **Weaknesses**

- ✓ **Not retrofitable to Model 7**
- ✓ **Approximately 100,000 Model 7 sold**

REM. 700 & MODEL SEVEN X-MARK PRO TRIGGER

Stock Numbers Specifications

Mfr. REMINGTON**Factory Set For A 40% Lighter Trigger Pull**

Remington factory trigger is pre-adjusted to be 40% lighter than previous model 700 triggers; provides an easy, economical way to increase accuracy from your hunting or target rifle. Precision machined and electroless nickel plated to prevent corrosion and wear, then mirror polished to produce a trigger pull that's crisp, and clean-breaking with virtually no creep. Allen screw adjustment for trigger pull weight only. **Thumb safety, when engaged, prevents discharge by physically blocking sear and trigger.** Available in blued steel or stainless steel. Fits Remington 700 and Model Seven. Gunsmith installation recommended.

SPECS: Steel, blue, matte finish or stainless steel, natural finish. Fits Remington 700 and Model Seven.

Catalog page 112