Section G

"The Trick Condition"

Patented July 11, 1950 2,514,981

UNITED STATES PATENT OFFICE

2,514,981

FIRING MECHANISM FOR FIREARMS

Merle H. Walker and Philip R. Haskell, Ilion, N. Y., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware

Application February 12, 1948, Serial No. 7,778

5 Claims. (Cl. 42—~~90~~ 70)

1

This invention relates to firearms and has particular reference to means for controlling the firing thereof.

Many well-known firearms employ a breech closing bolt which has a reciprocating movement in opening and closing the breech and which may be locked in the closed position by any suitable means. Most of these firearms are provided with spring-urged bolt mounted strikers or firing pins and depend upon means relatively fixedly mounted in the receiver to engage the firing pin or an extension thereof to restrain it against forward movement and to insure trigger controlled release when such release is desired. It is to this type of firearm that our invention is particularly applicable.

A suitable fire control for a firearm of this type provides readily operable means for locking the firing pin positively in a "Safe" position as well as a trigger controlled sear to permit the instant release of the firing pin when it is desired to fire. The value of any safety is proportional to the positiveness of its action. To this end we have found it to be essential that the safety means be so arranged that an inadvertent operation of the trigger while the safety is in "Safe" position will not condition the arm to fire upon release of the safety. The value of any type of sear mechanism is proportional to the degree in which it provides for facile, clean, release free from the disturbing effects of drag, creep, or slap.

It is an object of our invention to provide a fire control having a safety which operates by positively moving the firing pin rearwardly out of contact with the sear and there releasably retaining it. In this way, should the trigger be operated while the safety is engaged, the trigger and sear springs will immediately reposition the mechanism to catch the firing pin upon release of the safety.

It is a further object of this invention to provide a sear and control therefor which operate on barely perceptible movement of the trigger, yet releases the firing pin instantly and completely

It is contemplated that these objects may be best attained by mounting on the receiver a housing containing two similarly shaped members engageable with the firing pin in such a way that the firing pin energy urges the members to move out of opposition thereto. One of these members may be conveniently identified as a safety cam and the other as a sear. A safety piece arranged to move into contact with the safety cam and a trigger assembly arranged to releasably oppose disengaging movement of the sear, provide for controlling the movement of these members, and through them the firing pin is controlled.

The exact nature of the invention as well as

2

other objects and advantages thereof will become more clearly apparent from consideration of the specification referring to the accompanying drawings in which:

Figure 1 is a vertical, longitudinal sectional view of a portion of the assembled rifle action.

Figure 2 is a rear elevational view of the receiver and trigger housing assembly.

Figure 3 is a vertical, transverse sectional view on the line 3—3 of Fig. 1, the stock and trigger guard having been removed to correspond with Fig. 2.

Figure 4 is a partial left side elevational view of the receiver and trigger housing assembly.

Fig. 5 is a right side elevational view of the fire control assembly, the right-hand side plate and elements supported directly thereon having been removed for clarity in illustrating the interior construction.

Fig. 6 is a vertical sectional view taken on the line 6—6 of Fig. 5.

Referring to the drawings by characters of reference, it may be seen that the portion of a rifle action which is illustrated comprises a receiver 1 which serves as a housing for a conventional type of upturn and pull back bolt 3 and as a mounting for a trigger housing 4. In the usual fashion the rear end of the bolt is closed with a bolt plug 5 which serves as an abutment for the main spring 6 and as a guide for the firing pin 7. Secured on the rear end of the firing pin by a cross pin 8 is a firing pin head or cocking piece 9. The cocking piece is formed with a rib 10 which is slidably received in a groove 11 in the receiver and with an angularly disposed sear engaging face 12.

A longitudinally extending mortise 13 is milled through the bottom wall of the receiver to accommodate the trigger housing 4 which is secured therein by cross pins 14 and 15 mounted in the receiver and passing through the trigger housing assembly to serve as pivots and stops for elements therein.

Between the side plates of the trigger housing which may be conveniently blanked and formed from a single piece of sheet metal, the front cross pin 14 pivotally supports the sear 16 and the safety cam 17. Each of these members occupies substantially half of the width between the side plates and in their top contour they are substantially identical. They are provided with similar striker engaging faces 18 and 19, the angular relationship between these striker engaging surfaces and the sear engaging face 12 being such that there is a tendency for sear and safety cam to swing counter-clockwise about the pivot pin 14 under the urging of the main spring 6 which acts through the firing pin 7. Such an angular relationship between the engaging faces and the radius passing through the contact point is com-

INTERIM REPORT 9/15/48

SUBJECT: FUNCTIONAL AND ENDURANCE TEST OF STANDARD FIRE CONTROL AND ALTERNATE SAFETY TYPE #1 FIRE CONTROL FOR M/721-722 RIFLES

INTRODUCTION

Firing of M/721 rifles when the Safety is moved to the "off" position is the complaint received from three customers, which resulted in an investigation of the present fire control. As a result of this investigation an alternate design incorporating a ball bearing between the Trigger and Connector and an extension on the Sear was constructed and submitted for test.

OBJECTIVE

The objective of this test was to determine if the gun will fire when the Bolt is cocked and the Safety is moved to the "off" position by submitting the standard fire control and the alternate Safety Type I Fire Control to a functional and endurance test.

CONCLUSIONS

1. Both fire controls will not fire when the Bolt is cocked and the Safety is moved to the "off" position after 20,000 dry cycles of cocking and firing, and 10,000 dry cycles of functioning of the Safety.
2. That the Trigger Stop Screw in both Fire Controls needed adjusting and cementing during the test.

COMMENTS

Correct adjustment of the M/721 Fire Control is essential in providing a clean, crisp trigger and one with enough Sear engagement to prevent accidental discharge caused by a "jar off" condition. The adjustment in the present fire control is variable and is determined by the assembler, whereas the adjustment in the alternate Safety Type I Fire Control is determined largely by dimensions of the various parts and a control of the adjustment by the limiting dimensions of a ball bearing.

AL 0031905

1 of 12

RECOMMENDATIONS

It is recommended:

1. That use of the present M/721 Fire Control be continued as results fail to indicate any need for a change.
2. That the Type I Safety (ball bearing between the Trigger and Connector) be considered in any future design change of the M/721 Fire Control as its adjustment characteristics are superior to the Fire Control now used.
3. That the present practice of cementing the Trigger Screws be supplemented with a positive locking mechanism and that this locking mechanism be sealed with a sealing compound before shipment of the gun to the customer.

TESTING DETAILS

1. One of each of the subject fire controls was tested functionally by three individuals of the Test Group. These tests were as follows:
   a. Drop Test - The gun was dropped and allowed to fall freely for a distance of 10". Repeat 10 times.
   b. Cock the gun, position the Safety to the "on" position, pull the Trigger, release the pressure exerted by the finger on the Trigger, and position the Safety to the "off" position. Repeat 25 times.
   c. Cock the Bolt and slam the Bolt forward. Repeat 25 times.
2. Both fire controls were then subjected to 10,000 functions in the dry cycle machine which cocks the Bolt and fires the Trigger. The Safety was then functioned 10,000 dry cycles. Repeat a, b, and c of Test I.
3. Both fire controls were subjected to a standard dust test after which an additional 10,000 dry cycles of Bolt, Trigger and Safety functioning were performed. Repeat a, b, and c of Test I.

RESULTS OF TEST

1. It was not possible in this test to fire either of the fire controls by moving the Safety to the "off" position when the fire controls are in adjustment.
2. Both Fire Controls would not stay in adjustment until after a second application of grease was made during the first 10,000 dry cycle period.

RD-6542-1 Rev. 2-15-61

P.I. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R # : 22775

OUTSIDE WORK: No DATE: 10-15-70

FROM: MARKLEYSBURG,

FIRED AMMO TYPE: — PA.

& CONDITION: _____ GUN # : 6262918

PROOF: R.E.P. INSP.: 9 TEST: _____ CODE: 05 = 7/69

HEADING: O.K. ~~GA./~~CAL.: 22-250

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: — APPROVED: _____

CHAMBER: — APPROVED: _____

TEST: FUNCTION ONLY APPROVED: _____

Redacted
Subject to Protective Order

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington PETERS

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

cc: W. E. Leek
A. D. Kerr

February 7, 1975

TO: R. L. Hair

RE: MOHAWK 600 SAFETY ~~MALFUNCTION~~

Subsequent to a series of complaints from the Dallas, Texas area, it was found that if the Mohawk 600 was manipulated in a certain sequence some guns could be made to fire when the safety was moved from "on" to "off". Such guns could be made to fire if the ~~safe was positioned~~ between "full safe on" and "full safe off", the trigger ~~firmly squeezed~~ and released followed by manipulation of the safe.

As a result of this determination, the warehouse and assembly was held until the condition could be corrected. It was further determined that this condition existed in original design guns as well as "Manufacturing Sample" guns.

Analysis of the problem showed that the present design of the cam portion of the Safety contacting the rear end of the Sear Safety Cam was not in contact long enough for the Safety Detent to always snap forward to the "off safe" position. Thus, a fixture was set up to slightly "swage" this cam portion of the Safety to provide longer contact with the Sear Safety Cams.

Of the 2446 Mohawk 600 guns in the warehouse, 1945 have been inspected to date. Results have shown 511 or 26% did not exhibit the malfunction and were returned to the warehouse in their present condition. 1434 more have been repaired by replacing the Safety with a swaged Safety or new fire control, and returned to the warehouse. Shipments have been resumed and it is expected that inspection and repair of the remaining 501 warehouse guns will be complete by Feb. 10, 1975.

For future production, we will continue to use swaged Safeties in Mohawk 600 guns, including a test incorporating the manipulation which would show the malfunction if present. Research and Development personnel are reviewing possible design modifications to assure freedom from the condition.

C. B. Workman
Supt. P.E. & C.

E. R. Carr
Supt. Process Engineering-
Current Products

ERC:jc

PLAINTIFF'S EXHIBIT 3327

1831

AL 0030000

DRAFT RBS:CK 4/3/75

MINUTES OF
PRODUCT SAFETY SUBCOMMITTEE
HELD APRIL 2, 1975 -
MODEL 600

Present: E. F. Barrett, E. G. Larson, E. Sparre, E. Hooton, F. E. Morgan and R. B. Sperling

E. F. Barrett reported to the Subcommittee that Remington's examination of approximately 300 Model 600s, drawn from the stock of a Texas dealer, revealed that about 80% of the sample could be "tricked" (easing the safety to the midway position, then pulling the trigger) so as to cause the gun to fire when the safety is moved to the off position. Four guns were found to fire under the following sequence of events: the trigger is pulled with the safety on and then the safety is taken off (hereinafter referred to as the "full safe condition"). These four guns have been returned to Ilion for further examination. After discussion the following action is recommended:

Request all Remington wholesalers to whom Model 600s were shipped in January, 1975, to return said inventory to Ilion for a quality audit.

It is estimated that approximately 1,000 Model 600s were shipped from Ilion in January. The return from this quantity should

PLAINTIFF'S EXHIBIT 3052

AL 0022649

1 of 1

provide an adequate sample to analyze the nature and magnitude of the problem, and to calculate the number of guns that may be out in the field in the "full safe condition". Every gun Remington examines, and every gun which is returned to Ilion for any reason, should be modified by substituting a longer safety lever if it is found to be necessary to prevent the "tricking" of the gun or to correct the "full safe condition".

RBS:CK

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY" August 27, 1975

C. E. WORDEN

M/600 SAFETY INVESTIGATION AUDIT - FINAL REPORT

During the past year the design of the M/600 Fire Control was revised because of the possibility of tricking the gun, and firing it when the Safety was released. An audit was made, in Elon, from April 14, 1975 to June 19, 1975, to determine the reliability of the Safety on M/600's currently in the field. This audit consisted of inspecting 615 total guns returned from the field. This sample represents guns that were shipped from 1970 through 1975, and to dealers scattered throughout the United States.

Results:

1. 0.3% of the returned guns (2) failed the worst test, as defined in Appendix I.

2. 55.6% of the returned guns (342) failed the trick test, as defined in Appendix I.

3. A total of 90 guns were received with the box marked OK. This represents guns shipped after revised inspection procedures, to check for proper Sear lift, were instituted. Of these, all passed both tests. See Appendix III.

J. W. Bower, Supervisor
Process Eng. - Current Products

DON'T SAY IT—WRITE IT

03582

TO GEORGE MARTIN

FROM GENE BILLIS.

SAFETY MALFUNCTIONS GALLERY

DATE 5-2-75

MODEL	MALFUNCTIONS FSR			JO			FD			FOS			SWW			TOTAL SAFETY MALFUNCTIONS BY MODEL
	1975	74	73	1975	74	73	1975	74	73	1975	74	73	1975	74	73	
40							4									4
XP 100							3									3
540																
541								2	1							3
580														1		1
581							3	2	1							6
582																
																1
600	1						10	74	55							140
700	9						7	19	10	1				1		47
788	4						3	9	3	2	9	4	14	95	53	196
'RLY MALF. TOTALS	14						30	106	70	3	9	4	14	97	53	410

TOTAL SAFETY

MALFUNCTION MEANINGS

FSR - FIRES WHEN SAFE IS RELEASED - SELF EXPL.

JO - JARS OFF (HAMMER FAILS TO STAY ENGAGED WITH SEAR AND FALLS DOWN WHEN GUN IS JARRED.)

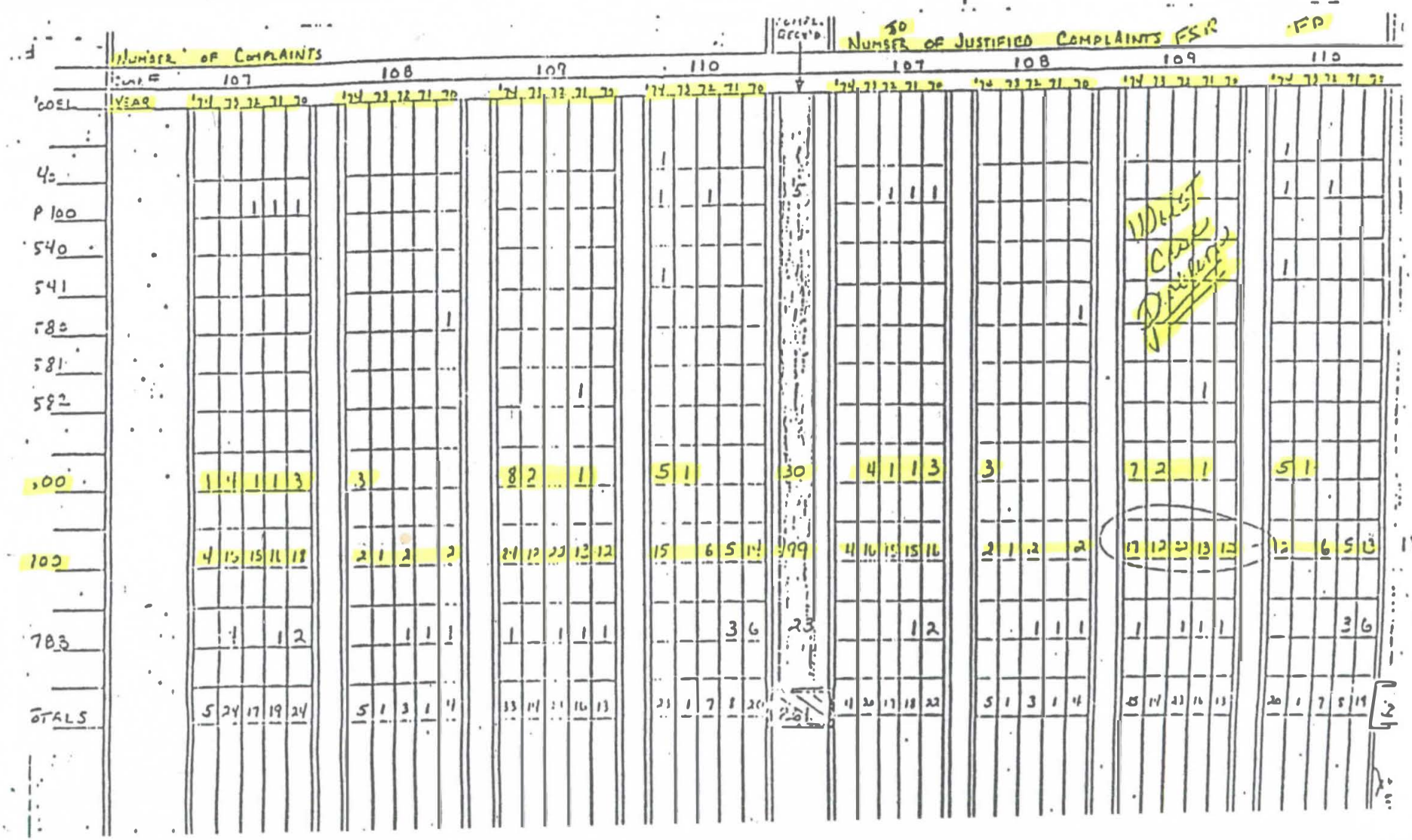
FD - FOLLOWS DOWN. (COCKING PIECE FAILS TO PROPERLY ENGAGE WITH SEAR AND FOLLOWS THE COCKING CAM SURFACE OF THE BOLT TO THE FIRED POSITION

FOS - FIRES ON SAFE (GUN FIRES WITH SAFE IN "ON" POSITION WHEN TRIGGER IS PULLED).

SWW - SAFETY WON'T WORK - SELF EXPL.

010000150

* - 1975 DATA FROM DEC. 26, 1974 TO APRIL 29TH, 1975 ONLY.



PLAINTIFF'S EXHIBIT
NTB17

NEWS RELEASE

Remington. REMINGTON ARMS COMPANY, INC. • PUBLIC RELATIONS • BRIDGEPORT, CONNECTICUT 06602

FOR RELEASE IMMEDIATELY

BRIDGEPORT, Ct., October 25, 1978 -- On October 23, 1978, a product liability case against Remington Arms Company, Inc., and one of its dealers was settled for $6,800,000 by Remington's insurance carriers. The case involved an alleged accidental discharge of a Mohawk Model 600 rifle manufactured by Remington. Injuries to the plaintiff were extremely serious, leaving him partially paralyzed. The plaintiff alleged that at the time the gun fired the trigger was not pulled. Remington's investigation indicated that this was unlikely but possible due to the fact that under certain unusual circumstances the safety selector and trigger could be manipulated in such a way that subsequently moving the selector to the fire position could result in accidental discharge. Settlement costs are substantially covered by the Company's liability insurance.

A recall program has been initiated in connection with Mohawk Model 600 rifles and Remington Model 600 and 660 rifles and XP-100 pistols manufactured prior to February 1975.

###

Group Ref: Recall 600 (See PR file)

D R A F T

LETTERS TO THE EDITOR

This is in response to Blake C. Erskine's letter in the February 23, 1979, issue. On behalf of Remington, I would like to set the record straight on several points. First of all, the 6.8 million dollar product liability settlement was negotiated by Remington's insurance companies, who have full authority to settle cases without Remington's approval, and who consider many factors in addition to the merits of the case when making their decision on settlement. Remington never believed, nor does it believe now, that the accident paralyzing the Austin, Texas, claimant was caused by a defective product. Remington believes the accident was the result of unsafe gun handling; the act of attempting to unload a gun in a vehicle, with the safety c f and the muzzle pointed in the direction of someone or something the gun handler did not intend to shoot.

It is not true that a Remington official handled the accident rifle in the same manner as the plaintiff's son said he handled it, and the gun discharged. In fact, if the son's deposition is correct on how he handled the rifle on the day of the accident, the gun could not have fired without the trigger having been pulled immediately before discharge. Remington has recalled the model rifle under discussion, primarily because the publicity given the Texas case has undercut the public's confidence in the

PLAINTIFF'S EXHIBIT 3062

AL 0022747

1 of 1

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington PETERS

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

J. S. Martin
E. J. Young
D. E. Bullis
G. D. Bailey
F. E. Martin

P. Nasypany
J. W. Brooks
D. R. Lewis

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
Ilion Research Division

REMINGTON ARMS COMPANY.
Research Department

c: J.P. McAndrews
E.G. Larson

Bridgeport, Connecticut
November 16, 1978

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

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 "trick" 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 EXHIBIT 3023

AL 0014774

1 of 2

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

(As per RAP)

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington

PLAINTIFF'S EXHIBIT

Bridgeport, Connecticut
November 6, 1978

R. R. INGHAM
FINANCE
E. I. DU PONT DE NEMOURS & CO., INC.
WILMINGTON, DELAWARE

COATES V. REMINGTON

You have inquired as to Remington's position with respect to the Mohawk 600 bolt action rifle.

Remington first became aware in 1975 that the safety selector and the trigger on the Mohawk 600 could be manipulated in such a way that subsequently moving the safety selector to the fire position could result in accidental discharge. The first complaint calling this condition to our attention was received early in 1975 from an individual in Texas who accidentally discharged his gun by putting it in the "trick" condition (safety selector is put in a mid-position between safe and fire detents of this two-position safety, trigger is pulled and subsequently the safety selector is pushed to fire position and the gun discharges).

Upon receipt of this complaint, which did not involve a personal injury, Remington conducted a quality audit on a sampling of Mohawk 600's obtained from wholesalers throughout the country, and it was determined that a significant percentage of these guns could be placed in the trick condition. Remington's Product Safety Subcommittee met several times on this matter while the audit was being conducted. At the completion of the audit, and after evaluating the results, the Product Safety Subcommittee concluded that the situation did not present a safety problem.

It was believed that the chances of a shooter putting his gun in the trick condition, intentionally or by accident, was extremely remote, let alone having the loaded gun pointing at someone while the safety selector of the gun was being taken off safe, thereby violating the most basic rule in hunting. Absence of complaints on the problem over the 12 years this gun had been on the market supported this conclusion. Remington did correct the condition

on newly manufactured guns and did test and modify, if necessary, the guns sent into Remington for repair.

The next and only other complaint of this nature received by Remington concerning the Mohawk 600 was the Coates case. John Coates alleged that he was injured when his son, in the process of unloading his Mohawk 600 in the back seat of their jeep, pushed the safety selector to the fire position (safety must be in fire position before this Model can be unloaded) and the gun discharged.

Given the intricate manuevering with the safety and the trigger that is necessary to set up the trick condition, we believe, although the Coates gun is one that can be tricked, that the accident most likely occurred because the boy inadvertently had his finger on the trigger when he took the safety off safe. Our [redacted] believed that there was a substantial risk of high compensatory and punitive damages being awarded, and consequently settled the case against Remington's recommendation.

Once the allegations of the case became public and the settlement given wide publicity, Remington had no other choice, regardless of our beliefs as to cause of the Coates accident, but to recall the Mohawk 600, and other models having the same trigger assembly (Remington Model 600 and 660 rifles and the XP-100 pistol). The day the settlement was announced, Remington was in the process of planning the recall, which was announced the following day.

It is believed that about 200,000 guns are involved. Remington issued news releases to the wire services, which contained a toll free number that could be called for recall information. A message center was set up in Atlanta, Georgia, which would refer callers to the closest recommended gunsmith capable of repairing the caller's gun. WATS lines were set up at Remington locations in Bridgeport, Connecticut, and Ilion, New York, to handle complaints connected with the recall. Remington personnel were dispatched to Texas, the origin of the majority of calls being received at the message center, in order to deliver replacement trigger assemblies and to instruct gunsmiths how to make the replacement. Remington representatives will visit other gunsmiths throughout the country reviewing gunsmith repairs.

All of our wholesalers who sold the suspect guns will be contacted for a list of the retail outlets to whom they sold the recall models. The dealers will be asked to review their records for the names and addresses of the customer to whom they sold the gun. Each such customer will then receive from Remington written notification of the recall. Similar appropriate steps are being taken in Canada and in other foreign countries where these guns were sold. It is expected that this recall campaign will take somewhere between 6 months to a year to complete.

To date, the Atlanta message unit has received about 5,000 calls. We have received responses from every state in the Union, which indicates our current releases have been given broad circulation. Remington is committed to a full, widely advertised recall, and we believe, at least from the initial public response, that it will be successful.

R. B. Sperling
Associate Counsel

RBS:hss

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington PETERS

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

File 600

November 29, 1978

J. P. LINDE

REVIEW OF M/700 RIFLES RETURNED TO ARMS SERVICE

A total of six hundred and sixty nine M/700's were checked for firing pin falls when safety was released. Of the 176 that were manufactured prior to January 1, 1975, there were three firing pin falls when the safety lever was released, one of which was by tricking (mull position). The causes of the three as follows: (1) Trigger adjusting screws tampered with so there was no tension on trigger (2) Trigger connector had excessive clearance with trigger and (3) Safety lever was binding on Stock.

Of the four hundred and ninety three that were manufactured after January 1, 1975, there were four firing pin falls when safety lever was released. The causes of the four are as follows: (1) trigger adjusting screw tampered with and connector broken at clearance hole (2) Trigger not retracting with safety lever on. Screws had been tampered with and trigger assembly dirty (3) Connector warped, excessive clearance between trigger and connector and (4) Trigger adjusting screws tampered with, trigger connector broken at clearance hole possibly caused by pierced primers.

by J. J. Burns

J. J. Burns, Supervisor
Quality Control and
Product Testing

JJB/bdm

XC: File

PLAINTIFF'S EXHIBIT 3022

AL 0014759

1 of 1

Exhibit 3

MINUTE #1 - 1979

LIMITED DISTRIBUTION

PRODUCT SAFETY SUBCOMMITTEE MEETING
JANUARY 2, 1979

PRESENT:

SUBCOMMITTEE	OTHER
E. F. BARRETT, CHAIRMAN	R. B. SPERLING, ACTING SECRETARY
J. G. WILLIAMS	
E. HOOTON, JR.	
R. A. PARTNOY	

SAFE GUN HANDLING

It was reported to the Committee that in 1975, due to what we learned from a quality audit on the Mohawk 600, Remington instituted new inspection procedures for all center fire bolt action rifles which were designed to catch a gun capable of being "tricked" into firing when the safety lever is released from the "safe" position. "Tricked" in this context means, safety lever placed in between "safe" and "fire" positions, trigger is then pulled, and the safety lever is subsequently moved to the "fire" position and the gun discharges. The inspection procedures involve the following:

(1) A visual check for adequate clearance between the sear and the connector.

(2) Measurement of this clearance by use of a .005 shim.

(3) Attempting to trick the gun--three times in assembly, three times in gallery and three times at final inspection.

In addition to the above inspection procedures, Remington also changed the trigger assembly for the Model 600 family of guns by adopting Model 700 design features. Changes to the 600 included:

1. Going from a folded housing to an assembly consisting of side plates held together by rivets and spacer block.
2. Providing more lift to the sear.

No such changes were made in the design of the Model 700 because it already had those features.

Remington is confident because of the checks instituted in 1975, that bolt action rifles made during and after 1975 will not trick. Since June 1978, 500 post-1975 Model 700's have been returned to Ilion for repair for various reasons. Starting in June, Remington conducted a quality audit on these returned guns and none could be tricked.

During this same period (June 1978 to the present), two hundred pre-1975 Model 700's were returned to Ilion for repair, and it was found that two could be tricked (one because of insufficient clearance between sear and connector, and one because of a warped connector). Based on this sample, about 1% of the pre-1975 Model 700's in the field may be subject to tricking. There are about 2,000,000 pre-1975 Remington guns in the field with the Model 700 trigger assembly. (By comparison, it is noted that the 1975 quality audit indicated about 50% of the Model 600 family of guns in the field were susceptible to

tricking.)

In addition to the above sample of 700's, 19 Model 700's have been returned to Ilion in response to the Model 600 recall with the complaint that the gun will fire when the safety lever is moved to the "fire" position. Remington found that only one of those guns could be tricked, the cause being insufficient clearance. Three other guns did fire with the safety being moved, but for reasons associated with owner alteration of the product. In one instance, an owner was about to return a gun for accidental discharge upon release of the safety; but just before sending the gun, the owner discovered that he was inadvertently pulling the trigger as he released the safety. It is suspected that this was also the case with the remaining 15 guns, since they were found to be in proper operating condition.

Remington has run quality audits on competitor bolt action rifles and has found that a large percentage of competitor models can be tricked. This includes some famous guns, such as the "Springfield" 30 caliber rifle, which was used in quantity in both World Wars.

The Subcommittee discussed the issue of tricking, as well as other causes of accidental discharge. It was decided that tricking, along with problems such as owner adjustment of the trigger engagement screw or the trigger adjustment screw, finger on the trigger when the safety is released, and trigger assembly alterations, are really problems more associated with abnormal use or misuse of the product rather than indication of a defective

product. Consequently, a notice warning or a series of warnings against abnormal use or misuse, and highlighting safe gun handling procedures, is the most direct solution to the problem of accidental discharge.

The Subcommittee considered the possibility of recalling all pre-1975 Remington center fire bolt action rifles, many of which have been in the hands of the public well over several decades.

The Subcommittee decided against a recall for the following reasons:

1. Based on Remington's sample, only 1% of the pre-1975 Model 700 family of guns out in the field which number about 2,000,000 can be tricked. That would mean the recall would have to gather 2,000,000 guns just to find 20,000 that are susceptible to this condition.
2. An attempt to recall all bolt action rifles would undercut the message we plan to communicate to the public concerning proper gun handling. It would indicate that the answer to accidental discharge can be found entirely within the gun, when in reality only proper gun handling can eliminate injuries resulting from such occurrences.

The Subcommittee decided to recommend that an informational warning concerning accidental firing and safe gun handling be prepared and effectively communicated to the gun handling public. The Marketing, Legal and Public Relations Departments were to

coordinate their efforts, with possible help from outside consultants, in preparing such a notice.

Further meetings would be held to ensure that this informational program was launched effectively and expeditiously.

(Secretary's Note: The President approved these recommendations on January 2, 1979.)

R. B. Sperling
Acting Secretary

RD-6542-1 Rev. 2-15-61

P.I. NO   **GUN EXAMINATION REPORT**   NUMBER: 50   MODEL: 700 BDL

GENERAL CONDITION: NEW -   R # : 29532

OUTSIDE WORK: SCOPE MOUNTED   DATE: 12-8-82

FROM: Gelchosp..., ...
9625 Red Arrow Hw.
Bridgman, Mi. 491

FIRED AMMO TYPE: UNKNOWN

& CONDITION: ———   GUN # : B6330831

PROOF: R.E.P.   INSP.: 115   TEST: 118   CODE: 5-81

HEADING: O.K.   GA./CAL.: .30-06 Spr

BREECH OPENING: O.K.   CHECKED BY: [signature]

RECOIL SHOULDERS: O.K.   APPROVED: [signature] 1/11/83

CHAMBER: O.K.   APPROVED: [signature] 1/11/83

TEST: ———   APPROVED: P.V. 1/11/83

COMPONENT CONDITION: (Damaged, Broken, Old Style)   APPROVED:

NEW

COMPLAINT: "... WHEN YOU PULL THE BOLT UP TO UNLOAD THE GU
THE SHELLS FIRE."

INCIDENT:

COMMENTS: Gun fails trick test, fire control appears to
full of crud impeding proper function of trigger
& other fire control parts. Front adjusting screws
have sealant removed.

Trigger pull 5½ #

Sear lift .0105 - mill .0055

RD-49 REV. 6-58

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington

cc: K. D. Green
P. H. Holmberg

Approved Copies: R. E. Fieltz
C. A. Riley
K. D. Green
J. H. Chisnall
J. A. Stekl
R. L. St. John
P. H. Holmberg
W. H. Forson, Jr.
C. B. Workman
R. L. Sassone - For inclusion in manual.

RECEIVED
SEP 15 1982
R. B. SPERLING

Bridgeport, Connecticut
September 13, 1982

Redacted
Subject to Protective Order

ELEMENT FOR TRICK TEST IN CHECKING FUNCTION OF SAFETY

1. - COCK RIFLE

2. - MOVE SAFE TO "ON" POSITION -

3. - CHECK FOR ANY BIND -
- Good, Sharp, Single Detent -

4. - PULL TRIGGER -
A. No click or catch in pull
B. Firing pin head must not fall
- RELEASE TRIGGER -
C. Trigger must move to forward position when released

5. - MOVE SAFE TO "OFF" POSITION -
- Firing pin head must not fall -

6. - PULL TRIGGER -
- Firing pin head must fall -

7. - COCK RIFLE -

8. - MOVE SAFE TO "MIDWAY" POINT FROM THE "OFF" POSITION -

9. - PULL TRIGGER WITH SAFE IN "MIDWAY" POSITION, PULL TRIGGER TO THE RIGHT AND UPWARD -
A. No click or catch in pull
B. Trigger must move to forward position when released
C. Firing pin head must not fall

10. - PUSH SAFE TO "OFF" POSITION -
- Firing pin head must not fall -
- Safety must move to "Off" position by itself when pushed from the "Midway" position -
- Safe must have an observable "spring back from the fullest forward and rearward position -

11. - PULL TRIGGER -
- Firing Pin head must fall -

12. - COCK RIFLE AND CLOSE BOLT FIRMLY -
- Firing Pin head must not fall -

AL 0014789

ELEMENTS FOR TRICK TEST IN CHECKING FUNCTION OF SAFE - cont.

13. - REPEAT STEPS 7 THRU 12 AGAIN -

14. - THIS TIME: -
MOVE SAFE TO MIDWAY POSITION
FROM "ON" POSITION
AND REPEAT STEPS 7 THRU 12