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STATE OF ILLINOIS
IN THE CIRCUIT COURT OF THE FIRST JUDICIAL CIRCUIT
JACKSON COUNTY

LARRY LANGE,)
)
Plaintiff)
)
vs.) 80-L-11
)
KIM SMITH, AND REMINGTON)
ARMS CORPORATION, a Delaware)
Corporation,)
)
Defendants)

LEWY

TRANSCRIPT OF PROCEEDINGS AND TESTIMONY OF
MR. OLIE OLSON AND MR. JOHN LINDE, HEARD ON THE 19TH
DAY OF JULY, 1982, BEFORE THE HONORABLE BILL F. GREEN,
PRESIDING JUDGE.

APPEARANCES:

MR. GARY SIBLEY AND MR.
WILLIAM SCHWARTZ,
Attorneys at Law
For the Plaintiff

MITCHELL & ARMSTRONG,
Attorneys at Law

BY: Mr Armstrong
For the Defendant, Remington
Arms.

Marie Redding, CSR
Official Court Reporter
Court House
Murphysboro, Illinois, 62966

PENGAD CO., BAYONNE, N.J. 07002 FORM 2084

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STATE OF ILLINOIS

IN THE CIRCUIT COURT OF THE FIRST JUDICIAL CIRCUIT

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LARRY LANGE,)
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 vs)
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 KIM SMITH, and REMINGTON)
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 Corporation,)
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 Defendants.)

NO: 80-L-11

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1 COURT: This is No. 80-L-11, Lange v. Remington
2 Arms Corporation. We are still on the Plaintiff's case
3 and the jury is present and the parties are present.
4 Are you ready to proceed?

5 MR. SCHWARTZ: Yes, your Honor.

6 COURT: Call your next witness.

7 MR. SIBLEY: At this time, we would call Mr.
8 John Linde for the purposes of cross examination.

9 JOHN LINDE

10 Called as a witness for the purposes of
11 cross examination, being first duly sworn,
12 was examined and testified as follows:

13 CROSS EXAMINATION

14 BY MR. SIBLEY:

15 Q State your name, please?

16 A John Linde.

17 Q Where do you live?

18 A I reside in Richfield Springs, New York.

19 Q Are you employed?

20 A Yes. I am.

21 Q Where are you employed?

22 A At the Remington Arms Company.

23 Q And what is your capacity or what is your job
24 title at Remington?

25 2.

1 A I am the superintendent of Production Engineering
2 and Control.

3 Q How long have you been the superintendent?

4 A For a little over four and one-half years.

5 Q And prior to that time you were employed where?

6 A I was in the research department. I was the
7 manager of the manual firearms design.

8 Q Is that what you were doing all of the time
9 that you were with Remington except the time that you
10 were products supervisor?

11 A I worked in various phases of design. I was
12 not the manager. I started as an engineer and worked
13 up to the various levels.

14 Q What is your educational background?

15 A I have a high school degree from the high
16 school in Custer, South Dakota, and I have a four year
17 mechanical engineering degree and a bachelor of science
18 in mechanical engineering from the University of Wyoming
19 at Laramie, Wyoming.

20 Q Are you, as products supervisor, in charge of
21 the manufacture of the Remington 700 model rifle?

22 A I don't understand exactly your question.

23 Q Are you in charge of the manufacture of
24 Remington rifles?

25

3.

1 of rifles aren't you?

2 A Yes. I am.

3 Q And you are acquainted with the model 700 Remington
4 Rifle are you not?

5 A The one in question today?

6 Q Yes, sir?

7 A The 700, yes, I am.

8 Q Isn't it true that the model 700 Remington
9 rifle is made in several different calibers?

10 A Yes. It is.

11 Q And about twelve different calibers, is that
12 right?

13 A I don't know the exact number. We add them on
14 and subtract them off and---

15 Q Would it be about a dozen of different calibers?

16 A Yes. I am sure there is.

17 Q And one of those calibers is the .243 which is
18 the caliber of the rifle in question?

19 A Yes, sir.

20 Q And in your capacity as production supervisor,
21 how many of these rifles models 700's are produced?

22 A What do you mean produced?

23 Q Distributed and sold?

24 A At what time frame?

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Q Per month, per week or per year?

LEWY

A Like this year, I would say you are talking about
80 or 90 thousand this year.

Q How about in the past years?

A Oh, 120 or 130 thousand.

Q So over a seventeen year period there would be
about a million and a half of these rifles that had
been sold, model 700's?

A It would be a good estimate.

Q As far as the trigger assembly is concerned
on this particular rifle, model 700, isn't it true that
it is the same dimensions and the same trigger as the
other calibers in that model?

A Yes. In the BDL line the trigger assembly

Q So that there would be about a million and a
half trigger assemblies on the market. Is that right?

A That is right.

Q Now isn't it true that Remington Arms Company
makes and sells more rifles than any other kind in the
country?

A No. I can't say that.

Q Who is the largest?

A It depends on the market segment that you are

1 talking about.

2 Q I am talking about the model 700 rifle?

3 A This year the Ruger 77 is selling more rifles
4 this year than we are.

LEWY

5 Q But you are one of the biggest?

6 A Yes. We are.

7 Q Have you ever had any background in safety
8 engineering?

9 A In what respect?

10 Q Have you ever taken any courses in safety
11 engineering that relates to the production of a product?

12 A I don't know of any courses that are called
13 safety engineering.

14 Q Are you familiar with that field of engineering?

15 A I am familiar with quality control, very
16 familiar with quality control. In fact, I just had a
17 course in March.

18 Q Does that involve safety engineering?

19 A Yes. Reliability and that sort of thing. Yes.

20 Q And that is one of your roles with the company?

21 A Yes. I am involved with quality.

22 Q Do you think that you probably know more about
23 this rifle and the components of the trigger assembly
24 than anybody here without any question?

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A In this court room?

Q Yes?

A Yes. I do.

Q How do you fire the Remington 700 rifle?

A What do you mean how do you fire it?

Q How do you fire it?

A Would you like me to go through the sequence, what they call the seven basic steps in operating the firearm?

Q Well, what I am really interested in is what it is that causes the bullet to get out of the end of the barrel?

A The bullet goes out of the end of the barrel and the bullet is seated in the end of a cartridge and the cartridge is in a chamber and the chamber supports the high pressure and the cartridge is backed up by a movable piece called the bolt. This bolt supports the backward thrust with pressure from the cartridge and when the firing pin comes up and hits or strikes the primer, the powder ignites. It is ignited by this primer and the gases rapidly expand to a high pressure around fifty thousand pounds per square inch and this propels the bullet out and rapidly down the barrel. The whole thing happens in about 1.4 of a millisecond.

1 Q Mr. Linde, what is it that causes the firing
2 of the rifle, just in layman's terms?

3 A The ignition of the powder.

4 Q Does pulling the trigger have anything to do with
5 it? **LEWY**

6 A Just a minute now. Guide me which way you want
7 and I will answer your question.

8 Q I just want to know what it is that initiates
9 this firing initially?

10 A Well, you put a cartridge in the chamber. You
11 lock it so that it is securely locked and you have the gun
12 in the fire position and you pull the trigger. The
13 trigger releases the firing pin. The firing pin goes ahead
14 and pinges on the primer discharging.

15 Q What is it that is the first step in the firing
16 process?

17 A Loading the gun.

18 Q Isn't it the first step in the firing process
19 of pulling the trigger?

20 A Yes. After the gun is loaded you go through
21 the steps, yes.

22 Q Mr. Linde, I would like for you to step
23 forward if you would from this diagram as simply as you
24 can what happens when the trigger is pulled? Let me ask
25

9.

1 you before we get into that the --I would like to ask
2 you if the diagram there is a blowup of the diagram
3 that was present in the owner's manual when ~~it was dis-~~
4 tributed at the time this gun was manufactured?

LEWY

5 A Yes.

6 Q And that is the same diagram that was in this
7 manual when the gun was sold isn't it?

8 A I don't know if the scale is right but it is
9 basically the same.

10 Q Could you show these people how the trigger
11 operates?

12 A This assembly here is assembled to the bottom
13 of the receiver. It is the same assembly that the barrel
14 was attached to and that the bolt goes in and locks in.
15 This is assembled to the main component of the firearm.
16 That is called the receiver. The stock is also assembled
17 to the receiver and it is held on with a couple of
18 screws. This is the assembly and what happens is this
19 part right here that is called the sear safety and
20 the firing pin abuts up against that surface right there
21 and that surface right there supports --this surface
22 right here supports the forward thrust of the firing pin.

23 Q As you go through this, I am going to try and
24 understand. The firing pin, this notch on the upper

25 10.

1 part of the sear safety pin is what holds or prevents
2 by whatever means the primer from coming forward to
3 prime the firing pin. Is that right?

4 A This right here the sear safety cam, the
5 firing pin is pushing up against that which is approximately
6 24 pounds. This surface here or this part here is
7 prevented from rotation. This diagram is not right.
8 This part comes back actually underneath that surface.

9 Q Let me stop you there. This diagram shows
10 the way that this gun would appear in this millisecond
11 that you are talking about before the sear and safety
12 pin falls releasing the firing pin?

13 A Actually it doesn't.

14 Q What does this diagram show?

15 A This diagram shows that the trigger is in the
16 condition that it would be in, yes. It is in the
17 condition that it would be in as it is setting there and
18 the connector is not back under the sear.

19 Q And before the gun is fired, the trigger
20 connector would be underneath the sear, is that correct?

21 A That's right.

22 Q And the trigger when it is pulled, pulls the
23 trigger connector out from underneath the bottom of the
24 sear. The sear falls and the firing pin comes forward

25

11.

LEWY

1 and the bullet is discharged. Is that right?

2 A Yes.

3 Q This is a side view. Is that correct?

4 A This would be a side view.

5 Q And this diagram also shows the trigger adjusting
6 screws, the three screws that are on this particular
7 rifle. Is that right?

8 A Yes.

9 Q And this is the adjusting screw that can be
10 adjusted outward and what does that do when it is adjusted
11 outward?

12 A Okay. This screw right here--

13 Q Go through the adjusting screw, please?

14 A The adjusting screw, so-called adjusting screw
15 right here, it goes ahead and backs up a spring. This
16 spring's function is to always return the trigger back
17 underneath the sear to support the sear. The trigger
18 stop screw is the screw that stops the trigger in its
19 forward track so that if you pull the trigger, that
20 screw limits the forward travel of that trigger.

21 Q Now when we are looking at this diagram Mr.
22 Linde right now, we are looking at the side view of the
23 trigger?

24 A Yes.

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Q The trigger assembly, is that right?

A Well, let's back up a second.

Q Mr. Armstrong will have a chance to go through--

A I just wanted---

COURT: Sir, this is cross examination. He has a right to control the questions so just answer his questions and if Mr. Armstrong wants you to explain, I am sure he will put you back on.

LEWY

Q There are also plates are there not, side plates that fit on this assembly such as this on either side? In other words, this right here shows the parts exposed? Is that right?

A Yes.

Q And the gun when it is manufactured, the trigger assembly is not exposed. Is that right?

A That's right.

Q And that is to prevent dirt and foreign materials from getting in there isn't it?

A Not necessarily. It is to support the parts.

Q These side plates fit right up against these all of these parts on either side. Is that right?

A Yes. It is a housing.

Q That is the trigger housing isn't it?

A That's the trigger housing.

PENNSAID CO., BAYONNE, N.J. 07002 FORM 2094

1 Q And the trigger, of course, sticks out of the
2 bottom?

3 A Yes.

4 Q And this diagram also shows the front and rear
5 spacers does it not? **LEWY**

6 A It represents them. Yes.

7 Q And this is which spacer?

8 A Well, that would be the front spacer.

9 Q And this is the rear spacer, is that right?

10 A Yes.

11 Q Those spacers are what separates the two plates
12 on either side of the trigger assembly isn't it?

13 A That's right.

14 Q Now those spacers are the same dimensions
15 exactly as the width in the trigger housing?

16 A I don't understand your question.

17 Q The width of the spacers separating the plate
18 is the same as the distance between the plates?

19 A It determines the width of the plates. Yes.

20 Q And the width of the plates if the same as
21 the dimension of the spacer?

22 A The width of the plates?

23 Q The width between the plates is the same as
24 what the spacers are?

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A That's right.

Q This diagram shows a condition where the trigger connector is out from underneath the sear and this would be a diagram showing an instant before the sear falls and the primer goes forward and the bullet is discharged. Is that right?

LEWY

A No. It is not.

Q Is this trigger in a position for the sear to fall?

A Yes. The sear would fall.

Q And what would happen with the primer when the sear would fall?

A Well, if the sear would fall the striker of the firing pin would come forward.

Q And the bullet would be discharged?

A If there was a cartridge in the chamber.

Q So this diagram does show the instant---

A No. It does not.

Q Before the sear falls?

A No. It does not.

Q In a normal position with the trigger forward, this trigger connector would be underneath this sear supporting it wouldn't it?

A If that connector is drawn out in form, the

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connector comes all of the way back to the trigger.
See the back of your trigger. That surface should come
right back to there.

Q Underneath the sear?

A Underneath the sear and safety pin and your
engagement screw, the engagement screw is what stops the
back rotation of the trigger. So what you have is you
have the engagement screw up against the back of the trigger
and the trigger is not pulled in any way in this. I
don't know if I am clear or not.

LEWY

Q When the trigger is pulled, it causes the
connector to come out from underneath the sear doesn't
it?

A That's right.

Q And that is when the gun is fired?

A That's right.

Q And before this gun is fired, it would be up
underneath this ledge?

A That's right.

Q Now are you familiar with the term jar-off?

A Yes. I am.

Q What is jar-off?

A Jar-off in our terminology is when you close
the bolt smartly and you bring it all of the way down

1 and the rifle discharges and the firing pin falls.

2 Q And when this trigger connector is not far
3 enough back underneath this ledge, that is when the
4 slamming of the bolt or hitting the rifle can cause that
5 to come out from underneath and the sear falls and the
6 gun accidentally discharges. Isn't that correct?

7 A No. It is not.

8 Q Well, go ahead and explain it?

9 A What would you like for me to explain?

10 Q I would like for you to explain or I would like
11 for you to answer the question whether or not there is
12 a jar-off if the trigger connector comes out from under-
13 neath the sear and the primer goes forth and the bullet
14 is discharged, is that a jar-off? Yes or No?

15 A You are not clear. What is your first
16 condition?

17 Q That the trigger connector be just underneath
18 the sear?

19 A If the trigger connector is just under the
20 sear---

21 Q And not far enough back but say just barely
22 under it that is what can cause jar-off isn't it?

23 A That could.

24 Q And that jar-off can occur by two different ways.

25 17.

1 One is if there is a binding of any kind with the side
2 plates in the rifle. Isn't that correct?

3 A No. It is not.

4 Q And when the plates bind against this holding
5 this in such a way that the trigger connector is just
6 barely underneath the sear, that would not cause a jar-off?

LEWY

7 Is that your testimony?

8 A I didn't say that.

9 Q Well, is that a correct statement? If the
10 plates were binding the trigger itself---

11 A Rephrase your question the way that you want
12 it.

13 Q If this binding on these plates held the
14 trigger in a position where it was just barely under
15 this sear, that would be a condition where a jar-off could
16 occur. Isn't that correct?

17 A It could occur.

18 Q Let me show you Plaintiff's Exhibit No. 10 and
19 I will ask you to examine that please?

20 A Yes.

21 Q Have you had a chance to look at it?

22 A Yes.

23 Q And that is a copy of the owner's manual that
24 came with this firearm when it was manufactured. Is that

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right?

A It appears to be. Yes.

Q And does that document have a date near the back to show when that owner's manual came out?

A Yes. It does.

Q Do you have a pen or pencil or anything that you could circle that date?

A Yes.

Q Could you do that please?

A Yes.

Q That is the copy of the owner's manual that came with this model 700 Remington rifle?

A Yes. There is.

Q And is there a thing that tells what month and year that manual is?

A Yes. It is. It is 12-72.

Q And you have had a chance to examine this particular rifle at your factory with your people present. Is that true?

A Yes.

Q And you have determined from the serial number of the gun that this gun was manufactured by your company?

A Yes.

LEWY

REYNOLD CO., BAYONNE, N.J. 07002 JOHN 2094

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Q And you have determined that that gun was manufactured in February of 1973?

A I believe so. Yes.

Q Do you know what the dimensions of this trigger from your own specs was at the time that this particular rifle was sold?

LEWY

A What dimensions are you referring to?

Q The trigger, the width of the trigger.

A Do I know what the actual dimensions was?

Q Yes?

A No. I don't know what it was.

Q Let me show you what has been marked as Plaintiff's Exhibit No. 11 and ask you to identify that item?

A This is a drawing of the trigger in the model 700.

Q And that is a drawing that you have in your plant in New York I take it or a copy of it?

A That's right.

Q And does that relate in any way to the model 700 rifle?

A Yes. It is a drawing of a trigger used on the 40 XB, the 700 80L and 700 BDL.

Q Which includes this rifle involved in this case?

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A Yes. It is a 700 BDL.

Q And that shows the width of this trigger this way?

A Yes. It does.

Q And what is the dimensions of that?

A It says on the drawing it is 170 thousandths to 172 thousandths of an inch.

LEWY

Q And the maximum width under that specification for the trigger is 172 thousandths or .172 thousandths of an inch?

A That is what the dimension says. That is not a specification by-the-way. That is a dimension.

Q If that is the dimension of the triggers that were being put on the market in February of 1973 in this particular rifle isn't it?

A That's right.

Q And that is a business record that you have at the plant and that is an accurate copy, isn't it?

A Yes, sir. That is a tool that we use to manufacture firearms. We have a drawing that we use as a reference as to what the parts should be so that we can get the maximum utilization of our men and our material.

Q And what the part should be is a maximum of .172 isn't that correct and that is what this drawing is?

PENGAD CO., DAYTON, N.J. 07002 FORM 2094

1 A No. The drawing is that this is the way that
2 we like to make the stuff and put it together to get the
3 best utilization of our men and equipment. It is a
4 tool just like a machinist tool.

5 Q Let me show you what has been marked as
6 Plaintiff's Exhibit No. 12 and ask you to identify that,
7 please?

LEWY

8 A This is a design change request.

9 Q Let me ask you with regard to that design
10 change request, does that design change request--please
11 just answer the question. Does that design change
12 request relate to this particular model 700 rifle?

13 A No. I guess it doesn't because this is '77
14 and that was what, '73.

15 Q Does that design change request relate to a
16 trigger?

17 A Yes. It does.

18 Q And that is as to the model 700 Remington
19 rifle?

20 A Yes. It is.

21 Q And the date of that design change request is
22 before the time that this accident occurred. Is that
23 right?

24 A It is 11-18-77.

25 Q And that is before the time of this?

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A Yes.

Q Let me ask you if that list, the document that you have before you, a Remington trigger on the model 700 as a reason listed for a change. Does it indicate that?

LEWY

MR. ARMSTRONG: Your Honor, I would object to this and---

COURT: Now when you get all through with your speech what is the reason for your objection? I don't need any argument. Are you talking about relevancy?

MR. ARMSTRONG: At this time, it is not relevant.

COURT: I will sustain it.

Q Let me ask you to indicate what the document that you have before you says regarding the reason for the change?

COURT: Now that has been objected to and it has been sustained and it is not at this time relevant Mr. Sibley and neither is this big sign that you have got in front of you.

Q Mr. Linde, that is a copy of a document that you have at your plant in New York, a copy of the design change request regarding the model 700 trigger?

A Yes. It is.

Q Let me ask you to identify Plaintiff's Exhibit

PENGAG CO., BAYONNE, N.J. 07002 FORM 2094

1 No. 13?

2 A This is a drawing of the front spacer for the
3 model 700 trigger housing assembly.

4 Q Again, is that a part of your business records
5 at Remington and is that a true and accurate copy of
6 the drawing on a front spacer for a Remington Model 700
7 rifle?

8 A Yes. It is.

9 Q Does that document indicate the dimensions for
10 the front spacer?

11 MR. ARMSTRONG: I want to object at this time. It
12 is not relevant.

13 COURT: At this time your objection is overruled.
14 He wants to know what it indicates. Does it indicate
15 the dimensions, period.

16 A It indicates the dimensions.

17 Q Let me ask you to identify Plaintiff's Exhibit
18 No.14 and again I will ask you if that is a true and accurate
19 copy of your business records on the drawing on the
20 rear spacer?

21 A Yes.

22 Q And that is a true and accurate copy of the
23 spacer that is involved in the 700 rifle, isn't it?

24 A It is a 700 spacer.

25

24.

LEWY

1 Q With regard to that front and rear spacer, let
2 me ask you before I get into that. Those spacers as
3 you have indicated before are the same dimensions and
4 they are what provide the width of these plates over the
5 trigger assembly. Is that right?

6 A That's right.

7 Q And those spacers, the dimension on those
8 spacers is what gives the dimension between the plates
9 that go around this trigger, the trigger housing. Isn't
10 that right?

11 A Those dimensions contribute to it, but no, they
12 don't give you the absolute dimensions.

13 Q And these documents indicate that these rear
14 and front spacers dimensions are .173?

15 MR. ARMSTRONG: Your Honor, I want to object to
16 the relevancy. The document has not been admitted.

17 COURT: Sustained.

18 MR. SIBLEY: At this time, I would ask the court
19 for admission of these documents as records kept in the
20 ordinary course of business, which relate to the Model
21 700 Remington rifle.

22 COURT: We will start with Plaintiff's Exhibit
23 No. 10. Have you seen that Mr. Armstrong?

24 MR. ARMSTRONG: I have no objection to using the
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part of this one that says how to adjust trigger and the other warnings in it that relate to the---

COURT: Don't make me a speech. Do you object or not?

MR. ARMSTRONG: I do object, your Honor

LEWY

COURT: What is your objection?

MR. ARMSTRONG: My objection is that most of the content is not relevant in this proceeding.

COURT: That is overruled and it will be admitted.

MR. ARMSTRONG: Plaintiff's exhibits 11, 13 and 14, your Honor, the defendant objects to on the basis that the documents themselves are not relevant upon the foundation laid in the proceeding.

COURT: I am going to overrule those objections. It has been identified and these are drawings of the particular assembly involved. I am going to admit them for the purpose of showing the widths and so forth of what the drawings are. I think that is the only relevancy at this time.

MR. ARMSTRONG: I will object to Exhibit No. 12 as to relevancy, your Honor.

COURT: Plaintiff's No. 12, I am going to sustain the objection at this time. I don't think they have

1 shown any relevancy on that. Now No. 13 that is just
2 the drawing of the spacer, is that correct?

3 MR. SIBLEY: Yes.

4 MR. ARMSTRONG: No. 13 I object to as to relevancy.

5 COURT: I am going to admit No. 13 at this time
6 as having some bearing on what we are talking about.

7 I am going to admit 14 at this time. These go as to the
8 size and shape of what we are talking about in this case.

9 Q Now I will show you Mr. Linde what has been
10 admitted as Plaintiff's Exhibit No. 15 and again ask you
11 the same question. What is that?

12 COURT: First of all, identify the thing? What
13 is it?

14 A This is a drawing of the trigger housing
15 assembly.

16 Q Again, is that a true and correct copy of the
17 drawing of the trigger assembly in the model 700 rifle
18 that you are talking about?

19 A Yes. It is.

20 MR. SIBLEY: At this time, your Honor, I would
21 move to admit Plaintiff's Exhibit No.15.

22 MR. ARMSTRONG: The same objection as to relevancy.

23 COURT: It is admitted.

24 Q With respect to Plaintiff's Exhibit No. 15,

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what part are we talking about there? Is that the trigger housing?

A That is the trigger housing.

Q The trigger housing is the plates on each side of this trigger that fit over right here?

LEWY

A No. It is not. It is the assembly that the parts ride in.

Q Isn't it true that the housing there is indicated on that drawing as being .175 to .173? The distance between the trigger housing, the width of the trigger housing?

A It says 175, 173 reference.

Q It indicates a minimum and maximum?

A No. It does not.

Q I will show you what has been marked as Plaintiff's Exhibit No. 16 and ask you if you can identify that item?

A It is a design change request.

Q What is the date on the request?

A It is 8-16-76.

Q And again, that is a true and accurate copy of the documents you would have in New York?

A Yes. It is.

Q And the date of that design change request is

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what?

A It says 8-16-76.

Q And that was after the manufacture of this gun and before this accident. Is that right?

A Yes.

Q Now on Plaintiff's Exhibit No. 16, the design change request---

LEWY

MR. ARMSTRONG: Your Honor, I object to the relevancy of this.

COURT: It hasn't been admitted Mr. Sibley.

MR. SIBLEY: Your Honor, at this time I move to admit Plaintiff's Exhibit No. 16.

MR. ARMSTRONG: I object to the relevancy.

MR. SIBLEY: The relevancy is, your Honor, that the design change request form referred to the increasing of the dimension in this housing, the dimensions of the front spacer and the rear spacer.

COURT: It is not relevant at this time. Denied.

Q Mr. Linde, with regard to Plaintiff's Exhibit No. 17, let me ask you to identify that, please?

A It is a design change request.

Q And what is the date on that request?

A Transmittal dates 11-18-77.

COURT: Involving what, sir?

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A Change to the---

COURT: What part are we talking about?

A Sear Safety cam.

Q And the sear safety cam is this part right here
isn't it?

A It is the one that you have labeled "sear."

Q This is what was in the manual?

A No.

MR. SIBLEY: I will offer at this time Plaintiff's
Exhibit No. 17, which is the design change request since
the time of this manufacture before the accident on the
sear safety cam.

MR. ARMSTRONG: Again, your Honor, I would object
on relevance.

COURT: Sustained on relevancy at this time.

Q Let me show you Mr. Linde Plaintiff's Exhibit
No. 18. Again I want to ask you to identify that, please?

A This is the owner's manual for the model 700
rifle.

Q Is that a true and correct copy of the owner's
manual at the time indicated?

A It appears to be.

Q What is the date?

A The date on it is 4-73.

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Q April of '73?

A Yes.

Q That would be after the manufacture of this gun,
is that right?

A Yes, sir.

MR. SIBLEY: I would ask at this time to admit
Plaintiff's Exhibit No. 18 as being a manual that was
distributed with the Model 700 rifle after the manufacture
of this gun.

LEWIS

COURT: Denied. You haven't established any relevancy
as yet. You can always call this witness back.

Q Does this manual and the manual that we have
referred to earlier refer to the adjustment of the
trigger?

A Let me check it.

Q You don't know whether the owner's manual refers
to the adjustment of the trigger or not?

A Let me check it.

Q Does it contain a diagram and instructions on
how to adjust the trigger as the manual that had that
drawing?

MR. ARMSTRONG: Your Honor, I object to the
relevancy of this.

COURT: Sustained.

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Q I will ask you to identify Plaintiff's Exhibit No. 19 Mr. Linde?

A This is a design change request.

Q And is that again a true and accurate copy of what document you would have back in New York relating to the owner's manual on the Remington 700 rifle?

A Yes.

Q Now you have indicated Mr. Linde that a binding can cause a jar-off to occur? Is that correct?

A You indicated it.

Q You said "yes" did you not?

A Yes. Under the conditions that you described.

Q That is a dangerous condition isn't it?

A It depends.

Q Are you saying that a jar-off condition in a rifle where a sear and a bullet can fire whether that is dangerous or not?

A No. I didn't say that.

Q Is that a dangerous condition, the jar-off condition that you described?

A There are people who tolerate that. For example, the target shooters, they adjust triggers down and they have hair triggers and they load one shell at a time and keep their barrel aimed at a down range, no,

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in that case it is not.

Q You don't consider a jar-off condition to be a dangerous condition?

A Under certain circumstances, I consider it to be very dangerous.

Q And that can be caused by the binding of the trigger?

LEWY

A That is not normally ever the reason for a jar-off.

Q When you had a chance to look at this particular rifle, let me ask you with regard to this if this you can tell whether this is the rifle that you examined at your plant in New York last winter?

A I would think so. I don't know the serial number.

Q Can I give you just a minute to review your documents so that you can identify it from the serial number?

A I will say it is.

Q At the time of the examination of that rifle, you had how many people from your plant present?

A There was a photographer--I would say if my memory serves me right there were about three people present.

Q From your company?

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A Yes.

Q And you spent about six or seven hours looking at this rifle didn't you?

A No. We never.

Q How long did you spend?

A As I recall, Oleo Olson brought the rifle up to us. I don't think we actually started looking at it until about 9:00. He drove up the night before and he was tired and he wanted to get out of there. We tried to get him out by noon.

Q How long did you spend examining the rifle?

A Me personally?

It was in the presence of the Remington people from about 9:00 until about 12:15.

Q That was at your plant and you had all kinds of instruments to measure it?

A No, sir.

Q Let me show you what has been marked as Plaintiff's Exhibit No. 20 and ask you --first of all, would you identify that?

A This is a letter to you in regard to this case and it is from Mr. Olson.

Q And you had seen a copy of that before the time that you examined this gun had you not?

LEWY

1 A No. I had not. I personally had not seen it
2 at that time.

3 Q Or a copy of that letter?

4 A I had never seen a copy of this ~~at that time.~~

5 Q You never saw a copy of that report?

6 A Not until after the examination,

7 Q After or during?

8 A After.

9 Q Did anyone else see copies of that report
10 before the examination?

11 A They sure could have. I don't know.

12 Q Have you ever been advised by your counsel at
13 any time to --or furnished a copy in any way or any of
14 the other people as far as you know?

15 A I know that I have a copy now.

16 Q When is the first time you saw that exhibit?

17 A About 9:00 on the morning that they brought it
18 up. They asked me if I would come down and take a look at
19 this rifle.

20 Q So you did see it before you began your
21 examination of the rifle?

22 A See what?

23 Q The report?

24 A Oh, sir, the report--it wasn't when I saw the
25

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LEWY

1 rifle. The time that I knew the rifle was coming up
2 there to Remington Arms was the morning that it arrived.

3 Q Didn't you say that the examination took
4 place between 9:00 A. M. in the morning and 10:30?

5 A That is exactly what I said. I saw the rifle
6 at 9:00 when they brought it in.

7 Q You saw the report of the rifle?

8 A No. I never saw that report until after the
9 examination.

10 Q Now this firearm, you never measured any of
11 the dimensions of the interior portion of this trigger
12 did you?

13 MR. ARMSTRONG: At this time, I object to the
14 relevancy.

15 COURT: Overruled.

16 A No. We never. We were told not to.

17 Q Did you find at the time of your examination
18 a binding in this trigger?

19 A There was a slight drag in the trigger, yes.

20 Q When you manufacture model 700 Remington
21 rifles, do you manufacture them to have a binding in
22 the trigger?

23 A No. We do not.

24 Q And when Mr. Armstrong in his opening statement
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36.

1 said that the trigger doesn't bind, he was incorrect
2 wasn't he?

3 A He didn't say that the trigger didn't bind
4 He said based on your dimensions that there was not an
5 interference.

6 Q Mr. Linde, would you say that the owner's manual
7 that accompanies this 700 rifle is an important part of
8 the manufacturing process and the distribution of this
9 gun?

10 A Are you asking for an opinion?

11 Q Yes. Is the Owner's manual an important part
12 in your opinion?

13 A If it read.

14 Q If I went out and bought a gun for the first
15 time do you think that I would read the owner's manual?

16 A I don't know.

17 Q Do you advise people or do you think it is
18 important for people to read the manual?

19 A Yes.

20 Q Would you say it is an important part of the
21 manufacture of this rifle?

22 A Not of the manufacturer but for the knowledge
23 of the customer.

24 Q What was the trigger pull of this particular
25

37.

1 rifle at the time it was manufactured in February of
2 1973?

3 A It would be between three to five pounds.

4 Q Does it vary?

5 A What do you mean does it vary?

6 Q Does it vary between 3 and 5?

7 A We check every rifle that we manufacture for
8 trigger pull safety and the other functions and they have
9 to be in the range of between three to five pounds.

10 Q Is there any reason it is manufactured in that
11 way rather than have exactly four or exactly three or
12 exactly five?

13 A The same thing as here. Is everybody exactly
14 a blond or brunette. You have variations.

15 Q You have variations in the way that you measure
16 a trigger for a trigger pull?

17 A We don't. We measure them the same.

18 Q But there are some that go out at three pounds
19 and some that go out at five pounds?

20 A No. That is our range, but that doesn't
21 necessarily where they actually cluster the parts that
22 are manufactured. Our 700 cluster right around four
23 and a half. They would run like four to five pounds in
24 that range.

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Q Do you think it is a dangerous condition to adjust a trigger below three pounds?

A Yes. I think it is not advisable.

Q Do you think that it is dangerous?

A Again, it depends upon the conditions.

Q In this particular manual that you have identified that accompanied this particular model 700, you recommend that it not be adjustable to three pounds. Is that right?

A Yes. This is a field rifle intended for hunting and we recommend hunting rifles adjustable --not adjusted below three pounds.

Q And when you tested it at the factory you found that a lighter trigger pull then three pounds, you considered that to be a dangerous condition didn't you?

A The rifle as we received it--

Q Sir, I am sorry but could you answer that question?

MR. ARMSTRONG: Your Honor, I would like to show my objection as not relevant to---

COURT: You don't need to go any further. At this time, I will sustain the objection.

Q I heard this mentioned a couple of times and I want to make sure that I am right on this. This manual

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that accompanied this particular rifle recommended that the trigger pull not be below three pounds. Is that right?

A That is what it says. Yes.

LEWY

Q Mr. Linde, is there any way to make these adjusting screws such that they cannot be adjusted below the three pounds?

A From an engineering standpoint, there is always a way to do whatever you want.

Q And it is fairly simple is it not to make the adjusting screws so that they cannot be adjusted below the three pounds?

A I don't know that.

Q Are you familiar with other companies that have that kind of trigger adjustment that won't allow you to adjust them below three?

A I have seen it done. Yes. I don't know if it was exactly three pounds but some minimum.

Q Do you think that would be a desirable feature in this particular rifle?

A I don't know why.

Q Did you know prior to the manufacturing of this particular gun in February of '73, that jar-off had occurred when the bolt was placed down and forward?

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MR. ARMSTRONG: I am going to object to that.

COURT: The objection is overruled. The question is did he know?

A Would you restate it, please.

(reporter reads back question.

A I would like to answer it but can't answer in my own way?

LEWY

COURT: No. You can't. You answer that question or none at all and if you can't answer it then you can't answer it.

A I can't answer it.

COURT: I can see why.

Q Did you ever receive any complaints at Remington Arms of a gun going off when the bolt was slid forward and down?

A Yes.

Q Have you had complaints that related to Model 700 rifles of the happening?

A Yes. We have.

Q And you were aware long before this gun was manufactured of this jar-off condition?

A No. Not of this jar-off condition that you have set up here. No.

Q But you were aware of Remington 700 rifles

PENCILD CO., BAYONNE, N.J. 07002 FORM 2004

1 going off when the bolt was slid down, forward and down?

2 A Yes. It is common with all bolt action
3 rifles.

4 Q Did you have knowledge of this firearm that it
5 was dangerous for any owner to adjust their own rifle
6 pull to three pounds?

7 A That is common knowledge in the industry.

8 Q And you have known that as long as you have
9 been at Remington haven't you?

10 A A field gun---

11 Q Have you had that knowledge since you have been
12 at Remington?

13 A It is common knowledge that NRA or anything
14 on safe gun handling that you don't adjust an up hill
15 gun under three pounds.

16 Q And that is because of the danger of jar-off
17 isn't it?

18 A Not necessarily, no.

19 Q That is one of the reasons?

20 A That is one of the reasons, yes.

21 Q And your guns use to be more difficult to adjust
22 before this gun was manufactured, isn't that correct?

23 A I can't answer that.

24 Q Did you advertise in the late sixties in
25

1 sporting magazines that this rifle was fully adjustable?

2 A Yes. We have.

3 Q Are you familiar Mr. Linde with a three position
4 or an automatic safety?

5 A I am familiar with the three position and I
6 am familiar with some automatic safeties.

7 Q And you, in fact, use those kind of safeties
8 on other models of your rifles?

9 A We have used the three position and we have
10 used the automatic.

11 Q And you have noticed before 1973 that a three
12 position or an automatic safety was much safer then the
13 two position safety on this gun?

14 A No.

15 Q Isn't it true that the rifle that is here on
16 this table cannot be, the bolt action cannot be pulled
17 backward with the safety on?

18 A What do you mean?

19 Q Can you eject a shell and load another shell
20 and push the bolt down with the safety on in this
21 particular rifle?

22 A Yes. You can.

23 Q Not with the bolt?

24 A Not with the bolt.

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Q You cannot go through with that entire motion with the safety on on this rifle?

A No. You cannot.

Q And with a three position safety you can put the safety in the intermediate position and you can lift the bolt and pull it back and forward can you not?

LEWIS

A No. You can't. Not in all cases, no.

Q Are you aware that a two position safety can be put on this rifle where you can lift the bolt up and pull it back and forward and lock it with the safety on with a two position safety?

A Am I aware of that?

Q Yes?

A That it could be done?

Q Yes?

A Sure. It could be done.

Q Isn't it true that you actually have done that with regard to the model 700?

A We have done that.

Q You have gone to that kind of safety haven't you?

A Yes. We have.

Q And that is because of safety isn't it?

A Not necessarily, no.

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Q And with the two position safety that you now have you can put the safety on after firing the gun and then eject a cartridge and load a shell into the chamber can't you?

A No. You can't.

Q But you can with a three position or an automatic safety?

A No. You can't.

MR. SIBLEY: That will be all, your Honor.

COURT: Call your next witness.

OLIE OLSON

Called as a witness, being first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. SIBLEY:

Q State your name?

A Olie W. Olson.

Q What is your age?

A I am forty two years old.

Q Where do you reside?

A I reside in a small town outside of Pittsburgh, Pennsylvania.

Q And are you employed?

A Yes, sir.

LEWY

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No. 23, is there any area of that document which refers to what you would were to do in regard to examining your rifles under the warranty program?

A Yes, sir.

MR. ARMSTRONG: I object to this as to relevance.

LEWY

COURT: I don't know if it is relevant or not.

It should be on the cross.

MR. ARMSTRONG: I object because it is beyond any bounds of re-direct examination.

COURT: It is and I will sustain the objection on that basis. Mr. Sibley, you have gone off on a new tangent entirely.

MR. SIBLEY: I have no further questions.

COURT: You are excused.

(witness excused)

JOHN LINDE.

Called as a witness, being first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. ARMSTRONG:

Q State your name, please?

A John Linde.

Q Where do you reside?

A I live in Richfield Springs, New York.

PENGAD CO., BATONNE, N.J. 07002 FORM 2094

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Q What is your occupation?

A I work for Remington Arms Company in Ilion, New York.

Q And how long have you been employed by the Remington Arms Company?

A Seventeen years.

Q What is your present position with Remington?

A I am superintendent of Product Engineering and Control.

Q Could you tell us what your educational background is, please?

A Yes. As I stated before, I have a high school degree from Custer, South Dakota. I have a four year mechanical engineering degree and a bachelor's of science from the University of Wyoming and since I have been employed at Remington Arms Company, I have taken extra courses at Syracuse University and at Mohawk Valley Community College and at Utica College. I have also taken courses and the last course that I took was a quality control engineering course and this is a one week course and I took that last spring. With my employment, they encourage education like this and I have taken courses since I started with the company.

Q When was it that you originally graduated from
250.

LEWY

PENGAD CO., BAYONNE, N.J. 01002 FORM 1094

1 college?

2 A In June of 1965.

3 Q And what was your history after that to this
4 particular point?

5 A I started with Remington Arms Company in what
6 they call the test lab area where you test firearms and
7 where a designer will make a design change. They will
8 take this firearm. They will take it down there and they
9 will test it like dry cycle, thousandths of cycles, fire
10 test it and go through all of the tests. Freeze it and put
11 dust on it and put dirt on it and this kind of environmental
12 testing. We have some where we take and put it up on the
13 roof and let it freeze and then heat it up. It is a
14 testing area where you are testing new designs and new
15 concepts. From there, I moved to the design area and I
16 started in basic design, elements where you work under
17 the leadership of a a qualified deisgner. You start by
18 designing small mechanisms, small parts, under direct
19 supervision and as you develop an awareness of what it
20 takes to have a good design, then you gradually get more
21 and more complicated assignments. Myself, I started as
22 a design engineer and I moved up to a research engineer.
23 I was given more and more complicated assignments and
24 in 1969, I was given the assignment to develop with the

25 251.

1 design team, a new over and under shotgun, which we
2 developed and tooled and introduced in 1973, the model
3 3200 over and under shotgun. We brought up a number of
4 variations off of that shotgun, trap guns, skeet
5 guns, field guns. We did other developments on it that
6 we have never introduced, the twenty guages, the single
7 barrel trap guns. Then when Mr. Mike Walker retired he
8 had the manual firearms design and I picked up the bolt
9 action rifles. I moved into bolt action rifle design,
10 Rem Fire rifle design. From there I worked on like the
11 Model 700 classic rifle. I have worked on a number of
12 cartridges that we have introduced such as the 7 millimeter
13 08 and just the design activities as you keep expanding
14 your lines and bringing out new models to satisfy the
15 market.

16 Q Are you the owner or inventor under any patents
17 with these two design related firearms?

18 A Yes. I have four or five patents. I have a
19 patent on the model 3200. I have a patent on the model
20 3200 that has a unique trigger assembly. I have a patent
21 on an intricate sighting device on a shotgun. I have a
22 patent on a choke device and I believe that I even have a
23 patent on a trap, that you shoot with either trap or skeet.
24 It is a manual trap.

25 252.

1 I am responsible for these auditors and quality functions.
2 I am responsible for the process engineers who continually
3 work on the processes to keep them working correctly.
4 Maybe a few words would help me explain a little better.
5 We manufacture a broad range of Rim fire and centerfires
6 and shotguns. I think we have something like 3500 parts
7 that we handle in that plant. WE do operations on 2700
8 of them. So we do operations and we buy the others so
9 that we are not doing operation on all. A given firearm
10 has a little over one hundred parts and at Remington
11 we make the majority of the parts to give you some kind
12 of idea of the number of operations that are going on.

13 Q Approximately when was the 700 rifle introduced?

14 A The 700 was introduced in 1962.

15 Q Where is it manufactured at the present time?

16 A Pardon?

17 Q Where is the rifle manufactured at the present
18 time?

19 A It is manufactured at Ilion, New York.

20 Q Has that been true back before February of
21 1973?

22 A Yes, sir.

23 Q Do you manufacture and assemble the various
24 component parts of the trigger assembly?

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A Yes. We do.

Q Are you familiar with the trigger assembly of the 700?

A Yes. I am.

Q Are you familiar with the design of it?

A Yes. I am.

Q About how many 700's have been sold over the years?

A About a million and three quarters.

Q How many basic models or types does it cover?

A We make the 700 in a left hand model. We make it in two action lengths. We make it in the ADL model and the BDL model, the classic and we also offer a magnum model.

Q What kind of variety of uses have been made of the Remington 700 model in using it over the years?

A The 700 is used for everything from our smallest, which would be the .222, which you might be shooting at wood chucks or the .222 is used a lot in target work, accuracy work, all of the way up to a .458, but presently we make a 300 and a 375 so that the 375 is the biggest that we make.

Q Now when you talk about those numbers you are indicating caliber?

LEWIS

PENGAD CO., DAYTON, N.J. 07001 FORM 2094

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A Yes. Like a .375 would be something if you were going to shoot a buffalo or something like that.

Q And does the caliber have anything to do with the trigger mechanism or connecting parts that discharge the gun?

A No. It does not.

Q What is the distinction between the ADL and the BDL?

LEWY

A The BDL is a fancier version. At present we have a cut checkered stock, pistol grip, a foreign tip and it has a trigger guard four plate and the four plate will open up where you can readily load or unload the rifle. It also has swing swivel studs.

Q Sir, approximately how many engineers do you have on your staff at Remington?

A All of the different departments, we have about ninety five different engineers.

Q And are they at various times engaged in the design of firearms and weapons?

A No. It would be the engineers and researchers that are involved in the design of the firearms. There is about thirty-five people in that area involved with the design.

Q Would the trigger assembly be the same used

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1 in the various types and models in various calibers that
2 you have described here?

3 A Yes.

4 Q So that virtually every one of the one and three
5 quarter millionths of firearms that have been built
6 regardless of use or function, by the consumer would have
7 this same type of trigger?

8 A Yes, sir.

9 Q Could you describe to me very briefly the
10 inspection and testing methods used on the trigger assembly
11 at the Ilio plant that would be in effect in February
12 of 1973?

13 A Yes. I can. I will just limit this strictly
14 to the trigger and nothing else other than pertaining to
15 what we are talking about here. The part, the trigger
16 parts are brought to the area. At the Ilion plant we do
17 not have an assembly line. What we have is either sub-
18 assemblers or assemblers and they sit at benches and work
19 at these benches and they have all of these parts right
20 ahead of them, so like on the trigger assembly you have
21 an individual and he will be sitting at a bench and in
22 this case we have a number of women working on the sub-
23 assembly, so she will be sitting and working at the bench
24 and she will take the various parts. Now the various parts

25 257.

1 have already gone through a various number of quality
2 checks. They come to her and she takes the trigger
3 assemblies and she will take a housing out of one bin
4 and then she will take the trigger and she takes and puts
5 the basic components in this trigger assembly. What
6 she does on the trigger is she takes and she puts the
7 trigger in and when she slides it in she can see how it
8 is going to fit. She slides it in and she puts the pin
9 in and then she checks it to make sure that it is not
10 going to bind, because when you put the pin in you have
11 got to make sure that after you have put the pin in that
12 you have not distorted that housing in any way. She
13 puts the sear in. That is this part right here. She
14 puts the sear safety pin in. She checks that for binding,
15 and then she just goes through and she operates. She
16 checks the safety to make sure that it operates
17 correctly. She goes through and operates it. Now she
18 hasn't made any adjustments to this point. All she had
19 or has done is assemble all of the parts. Now all of
20 the parts are assembled in there and there is no adjustment.
21 Now she takes this after she gets a tray. She normally
22 has thirty or forty of them. She has all of these
23 assemblies sitting in this tray and she goes over to what
24 we calla comparative. Now a comparator is something that
25

LEWY

1 you take and it is something like a big TV screen. You
2 take a part and you put it in the light path and this
3 projects this part out on that screen. We use them a lot
4 in firearms manufacturing and you have intricate shapes
5 or if you want to make fits. Let me explain. I take
6 a block and I put it in a stream of light and it is .100"
7 of an inch. That block it will project it out on the
8 screen to be ten times as big or it will be an inch. So
9 what she does she takes this tray assembly and
10 she knots it in a fixture that supports it and right
11 through this hole here you can see through it and she shines
12 this beam of light and the beam of light picks up the
13 critical surfaces of the sear safety cam and the trigger.
14 Now she has got that projected right ahead of her and she
15 has got the adjustments and she runs in with this and it
16 is mounted in the fixture so that the screw driver comes
17 up and winds it perfectly with the hole and she sets the
18 engagement. You can see that part or she can see that
19 part moving ten to one on that comparator screen. Now
20 the comparator screen has a piece of clear plastic over
21 it and it has got like headlines or lines on it, so she
22 has got her parts lined up with the lines to where she
23 knows it is supposed to come and then she just sets the
24 engagement and she brings that engagement until she get s
25

LEWY

1 eighteen to twenty thousandths and she knows that she has
2 it because she has got it between the two lines and she
3 has it projected right ahead of her on that screen. She
4 doesn't have to look into that and as you can see it is
5 difficult to see what kind of measurement that you are
6 actually getting. With this you can get a very accurate
7 measurement by adjusting that screw. Now she has got
8 eighteen to twenty thousandths on the engagement and then
9 she goes forward and she adjusts, and what we are talking
10 about here is the trigger adjustment screw, and that sets
11 the amount of tension or what is going to determine the
12 trigger pull. What she does there she cranks that trigger
13 adjustment screw right in so that it has got a lot of
14 tension on it. Then this is still on the comparator now
15 and she hooks a dead weight with a cable right up to here
16 so what she does is hook a little hook around that trigger
17 and that is hooked to a cable that goes down over a pulley
18 and it has got a four and one-half pound weight hanging
19 on it so that I have got four and one-half pounds pulling
20 on that trigger. Then she turns, and she turns that ad-
21 justment screw back until the mechanism drops. Now she
22 knows that she has a four and one-half pound trigger pull.
23 So that is what she does and to make sure she does this
24 three times. She hooks it up and makes sure it trips and
25

LEWY

260.

1 makes sure that there is nothing hooking or binding
 2 and that actually everything is working right. Now she
 3 takes it and she takes it again and she backs the over-travel
 4 and now this is the one that determines how far the
 5 trigger goes past, and turns that all of the way in until
 6 the trigger won't move and she just keeps pulling it onto
 7 the trigger with a four pound weight and she backs that
 8 off until the thing just fires and then she goes a little
 9 past. Now that tells her that she has got eighteen to
 10 twenty thousandths engagement, which is exactly what
 11 we want. She has got a four and one-half pound trigger
 12 pull right there in that range and she has got the thing
 13 with a minimal amount of over travel. Now when she gets
 14 done with that then she takes it back to her bench---

LEWY

15 Q Excuse me, would it assist you to use this blown
 16 up model to point out and show them what screw and so
 17 on that it is?

18 A Sure.

19 Q Is this in general a large size version of what
 20 you are holding there in your hand?

21 A Yes.

22 Q Do you take this to be an accurate ten to one
 23 blowup ?

24 A We made this a number of years ago to train our
 25

1 sub-assemblers, the person that I am talking about right
2 now and our assemblers because when you look at this
3 this really does look like a glass box but it isn't
4 because you really can't see what is going on and getting
5 to know how these different screws work is very simple.
6 This mechanism right here we took the parts and blew
7 them up ten to one and made this mechanism ~~so that we~~ **LEWY**
8 could show people how it works. Let's just go through
9 the basic parts. Here is the trigger and here is what
10 we have been calling the sear and safety cam and here
11 is the housing. This part here, of course, in gray that
12 is just to hold it up so that it doesn't fall through.
13 Here are the plates that we have been talking about.
14 Here is the spacer that separates the plates and here
15 is the front spacer. What did I say she did first.
16 She adjusted the engagement and that is this and we
17 push the safety off so you can see right through the
18 hole. Can you see through the hole there? That is
19 the amount of the engagement from the front surface to
20 the back surface. That is what you adjust first by
21 turning this screw right here. Now let's back up a
22 second and I will show you how the thing works. I am
23 sure you are curious by this time because this really
24 shows it. What does the individual do that wants to fire

1 a firearm. First, he pulls the trigger and the trigger
2 comes forward, right. The sear and safety cam drops
3 and this surface right here is the abutment that we have
4 heard about and the striker goes forward and fires the
5 gun so that is all there is. You pull the trigger
6 and this drops down and the firing pin goes forward and
7 fires the primer. The amount of surface or I always
8 refer or think of it as a kind of a ledge. How close
9 you are standing to the ledge right here really
10 determines how sensitive the trigger is so that first
11 we set this screw right here which determines the
12 engagement and then we pull this with a cable with a
13 dead weight and adjusts the spring and she has that
14 spring turned, that screw turned in, and she is backing
15 it off until the gun fires and then she adjusts the
16 overtravel. Now the sub-assembler gets the parts and
17 she takes the parts and takes them back to her bench
18 and now she has got it all together and she just goes
19 through it briefly and she checks the trigger to make
20 sure it is free. She checks the sear to make sure
21 it is free. She checks the safety to make sure that
22 it works and then she takes and she takes this cement
23 that we have and the cements the rear screw, engagement
24 screw and the front two screws. The sub-assemblies
25 are then taken to what we call a final assembler.

LEWY

1 The final assembler again works at a bench. He has his
2 own bench and he has all of the parts of the gun coming
3 to him so our final assembler takes the parts like this
4 is one of the component assemblies now that goes into
5 the gun, and he completely builds the complete rifle.
6 So in this case what he would do he would ~~take this~~ **LEWY**
7 part and put it up into the receiver. He drives the
8 pins in it and puts the other parts on it and gets it
9 all together and then what does he do. He goes through
10 because when you drive the pin in there and we use
11 a slate pin and when he drives the pins in there and
12 you put this assembly in there you have got to make
13 sure that this part goes up into the receiver correctly
14 because when you drive that pin in there because if
15 you drive that pin in here too far back you can see
16 what you are going to be doing. You are going to run
17 the pin right into the siding. Even though the pins
18 have a lead in them you have to be careful to get
19 this housing in that receiver so what he does he drives
20 this pin and this pin in to support a part down here
21 and just like here is the housing so when you drive that
22 pin in there and you are off of it you could distort
23 the housing. What he does when he gets the rifle
24 together he goes through and he checks the safety.

25 264.

1 When he checks the safety and puts the safety on he
2 has lifted the sear safety cam up. Now there is no
3 load on the trigger so when he checks the safety he
4 pulls the trigger. Also when he pulls the trigger he checks
5 to make sure that the trigger is moving freely and not
6 binding in any way. Then he takes the safety off,
7 pulls the trigger and he has the bolt of it. He takes
8 the bolt out of it and he pushes this up and down with
9 a screwdriver to make sure that is not binding. On
10 the safety itself, he goes through and on these hundred
11 percent checks from this point on like the assembler
12 and the next two people tell you about they do this three
13 times. That is the only way that you can assure you
14 are going to get it. So he goes through and he checks
15 the safety three times to make sure that the safety
16 works correctly. Once the gun is assembled and he goes
17 through all of these checks and I am talking about now
18 checks on the assemblies. He does a lot of other
19 things, but once he gets the gun assembled he takes
20 his stamp which is essentially his name and he stamps
21 the barrel. He is the assembler. He takes that rifle
22 and he puts it on a truck and then they push it into
23 what we call a gallery, when they get a truck of twenty.
24 Now in the plant in the gallery we handle both firearms
25

LEWY

1 and ammunition so when that gun goes in we have a door
2 and we don't allow anybody in the gallery, who is not
3 authorized to be in there. We don't want people going
4 in and out. We keep our ammunition confined strictly
5 to the gallery. The plant is very, very concerned
6 about safety. Right now we have worked over ~~nine million~~
7 exposure hours without a lost work day injury and that **LEWY**
8 is the kind of emphasis they put on it, but the gun
9 goes into the gallery. The first booth is a proof
10 booth where each one of the rifles is proven. Before
11 that individual checks it, he puts it on safety to
12 make sure that the safety works and he tries the trigger
13 to make sure that the trigger works. He puts a proof round
14 in it and puts it in the booth and completely covers it
15 up and he proofs the rifle. He checks it. He pulls it
16 out and he inspects it to make sure that everything is
17 okay and then he stamps with a proof mark so that we
18 know it has been proofed. He checks it for live
19 ammunition and he puts it back on the truck and then
20 it goes to where we test it in target. So we take every
21 rifle, the tester pulls the rifle and he checks the
22 safety. He checks the function to make sure that it
23 works correctly and he puts it in his test device where
24 we test them at 100 yards and he shoots like five or

25

266.

1 six shells in the 700 depending upon the accuracy
2 requirement of that rifle. Obviously, we have different
3 requirements for different calibers. He shoots it and
4 after he gets all through shooting it, he checks it and
5 he checks the safety to make sure the safety works and
6 to make sure that the thing functions correctly and
7 then he stamps it. From there the rifle goes out to
8 our final inspector. The final inspector goes through
9 everything. He checks the visual and functional head
10 space and this sort of thing but the biggest thing is
11 when he is all done the last thing that he has done
12 is he checks the safety. He checks the safety and he
13 pulls the safety on and he pulls the trigger, releases
14 the trigger to make sure the safety works, the trigger
15 works and the sear works and he does this three times.
16 It is the last check. Then he stamps his final inspection
17 stamp. It is boxed and it goes the the warehouse. Now
18 we audit about one percent of our products. We go in
19 on one percent and we pull one percent of the product
20 out of the warehouse every day. The guns are taken
21 up to our final assembly area and this is where we have
22 our quality control technicians. They take the guns
23 and take them out of the box and they give them a visual
24 to make sure that they pass the visual. Then they take
25

LEWY

1 them to the gallery and I believe they shoot them
2 four times in the test in the gallery to make sure that
3 the function is okay and then they take it back and
4 they tear it apart to make sure that all of the parts
5 are working correctly.

6 Q I take it after that process is completed
7 it is placed in a box along with a manual and
8 shipped out?

9 A That's right.

10 Q In respect to that, you sell directly to
11 individuals as a rule?

12 A No. Our normal we sell from Remington to
13 wholesalers and wholesalers to dealers.

14 Q So you would have no record of Kay's Bait Shop
15 if it was still in existence?

16 A Of what?

17 Q Of Kay's Bait Shop if it was still in existence,
18 where this rifle came from?

19 A No.

20 Q That is apparently where this particular rifle
21 was purchase?

22 A No.

23 Q What would be the trigger pull that had a
24 range factory set for this particular rifle with this

25 268.

LEWY

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particular caliber in question here?

A It would be in the three to five pounds.

Q Sir, yesterday you heard the testimony of a gentleman concerning how he made certain measurements on the particular trigger assembly some two years or so after this accident did you not?

LEWY

A Yes, sir.

Q Did you have any reason to believe that those measurements might not be accurate?

A Well, normally the plant, at the plant we do not use micrometers for measuring parts. The problem that we have with micrometers is that when you have a micrometer so much of it is up to the feel of the individual. Now what we were talking about here is the measurements in question and we were talking about them in tenths. The micrometer has a tenth scale on it, but the problem is if you get three or four different people they all have a little different feel. The micrometer is like a sea clam and just tells you the dimension that is in the sea clam really, so if you turn the micrometer if you put on more tension like you can on a sea clam by less tension you can get a little different reading and so our problem with using micrometers at the plant is if we have two or three

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1 people running an operation, we are afraid that we are
2 going to get different readings so if we want a real
3 exact measurement, we will not use a microm eter.

4 Q Now, sir, in using a micrometer, how would
5 different people get different readings?

6 A Just by the amount of pressure that you apply.

7 Some micrometers have slip mechanisms, they have like
8 clutch mechanisms on them so that you can come up to a
9 certain point and that is how much I control how much
10 I squeeze down. The problem that we found with the
11 clutch mechanisms is that about what you have to do
12 you about have to get what we call jolt block or a
13 block that is perfectly ground to dimension like a one
14 inch dimension and take the micrometer that you are
15 using and use it on the jolt block to make sure that
16 with the clutch measurement that you actually get the
17 one inch because some of the clutch things they will
18 change from day to day or from week to week and we
19 found as you continually use them you can't rely on
20 them.

21 Q What is this tha t we are trying to measure
22 this .173 or .173? Can you give us idea of the size
23 as what it is in thousandths?

24 A Yes. Just the same as what Mr. Olson said.

25

270.

LEWY

1 A piece of paper is about two and one-half to three
2 thousandths depending on the piece of paper so if
3 you are measuring a tenth, and what I am talking about
4 is a tenth of a thousandths, so what part of a piece
5 of paper. I am just trying to think of something
6 that would be a tenth of a thousandths which is very
7 difficult but if a piece of paper is three thousandths
8 you can imagine what a tenth of a thousandths would
9 be or is.

10 Q In other words, it would be hard to tell if
11 I have got a tenth of a thousandth between my two
12 fingers?

13 A No way. It is a real fine measurement.

14 Q And there are several plans up there that
15 you were asked about, about the general dimensions
16 shown on there of .170 and .172 and with respect to
17 those particular plans, sir, I notice that you
18 referred to what you called the other day as dimensions?

19 A Yes.

20 Q And since you have referred to as specifications.
21 Can you give me an idea what your specifications is in
22 this particular trigger and what these particular plans
23 and shop drawing are that you are using?

24 A The drawings are used to manufacture the parts.

25 271.

1 The drawings are used for the basis for setting up
2 your manufacturing process and the closer you can come
3 to matching the drawings with the parts, the more
4 interchangeability you have and thus the cheaper you
5 can manufacture the part. With any operation when
6 you are making the part you have always got to continually
7 have changes on your equipment. You are always trying
8 to shoot for the center of tolerance because this gives
9 you the max utilization. Our manufacturing process,
10 we shoot for that and minimize our loss and minimize
11 the number of parts that we have to scrap, but when we
12 get this stuff and it starts coming up and we start
13 building to assemble it, because of the nature of our
14 product we can't just rely on the tolerances and
15 dimensions on the parts. YOU have got to rely on what
16 is actually the part supposed to do. Like in the case
17 of the trigger the part is supposed to work freely
18 in the trigger assembly, but yet you want to keep that
19 fit and as tight as you can so as to eliminate this
20 lockage. Really our specification is that we want the
21 trigger to work freely in the assembly and it is up
22 to us to get that that is what we are aiming for so
23 to speak, but as far as the actual dimensions on the
24 part per se, that is our tool that we use to achieve the
25 272.

LEWY

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end result.

Q Let's assume that the measurement we were given were correct that it was a .173 and .173 in the trigger housing and trigger and .171 and .171 in the sear as described to you, would you be upset with those kinds of dimensions and would you consider those in any way to cause a bind or condition that would cause difficulty in the function of this particular--

LEWY

A No. What you are doing there to get a fit, to get a fit you have to make the inside part smaller and the outside part has to be bigger so when you are tolerancing it and you are designing it, you have to have a band of tolerances to make the one part two and a band of tolerances to make the other part two and and if you want them they can't be the same so what you do is you bring them close together so that you overlap is minimized. What these dimensions show shows the things coming together and the two points are actually matching and this is the point where if you went any farther you would have an interference because you are right up to the point where the line is between the clearance and interference. That is to the point that those parts are to where it still works and doesn't have an interference and any farther

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then that you would have an interference.

Q On other words, that is the ideal which you would like to achieve, assuming the measurements are correct, that is the ideal you would like to achieve every time in assembling and making the trigger?

A YES. I guess that is what you can say when you hear about these people taking a compound and what have you and taking it apart and making it a little bigger and honing it in so that it just fits that is really the kind of depth that they are obtaining.

LEWY

Q You don't really want in this trigger any kind of additional space in here if you can avoid it do you?

A No. You don't want it to be sloppy.

Q Why is that that you don't want that kind of slop in one of these triggers?

A Because of the nature of the trigger, it is bind mechanism and you just can't tolerate the sloppiness back and forth. If the person is pulling the trigger you don't it starting to move sideways. I will tell you another thing when it comes to a trigger mechanism or when it comes to a firearm. What the customer perceives is also very important. If you pick up something that is precision and you put your hand on that trigger and it would slide back and forward,

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1 you sure would not anticipate that that had much of
2 a quality. Yes. You want it to be a good fit. You
3 want it to be a good fit and in good function once the
4 customer receives it.

5 Q I assume then if you had the trigger bigger
6 then the housing and you put the housing on then you
7 would have a situation where the trigger would be hard
8 to move and you would have a binding?

9 A Yes.

10 Q As a practical matter the manufacturing process
11 of this type, is there a reason to have plans and
12 specifications and try to leave a slight tolerance
13 between the two in making the individual parts?

14 A Yes. There is.

15 Q Why is that?

16 A That is where the economics come in. You
17 are trying to achieve a good fit but you have to
18 manufacture both parts and like on the trigger that
19 we are talking about, the trigger is .170 to .172
20 thousandths. That is what we try to make it to and
21 that is a total of two thousandths, so the variation
22 in our triggers we are saying is less than this piece
23 of paper. Now it is interesting to note that on our
24 triggers to take this a little farther, the trigger was

25 275.

1 changed in 1965. It use to be actually thinner. It
2 was .168 to .172. We changed from .170 to .172 and we
3 actually made the trigger fatter and cut down some of the
4 clearance. That is by-the-way on the drawing that we
5 supplied you as Number 6.

6 Q There has been testimony that the blocks have
7 been changed or in some way that the trigger housing
8 has been widened, one of these change orders that is
9 up here?

10 A The questions were directed toward these
11 spacer blocks.

12 Q Can you tell me what was changed and why you
13 changed it?

14 A The question is on the spacer blocks right
15 here. How we put that together is that we take the
16 two plates and we put the spacer blocks in and
17 we put rivets, four rivets, and we put that in the
18 press and we come down and we rivet that, rivet the
19 two plates together. In our riveting operation and I
20 can check the date I guess, the change was made in
21 August of 1976, and we started noticing that when the
22 gal was putting the trigger into the housing, we
23 started getting triggers that would not go where we
24 would have a certain percent. I can't remember what

25 276.

1 the percent was but it was not anything that scared
2 us. You can tell how serious of a problem and it
3 wasn't really costing us much but anyway we noticed
4 this problem and the engineer said it was easy and
5 why do we have this right now and he looked in to it
6 and I am not exactly sure of all of the reasoning that
7 went through it, but I think it was caused by the change
8 in our powder supplies. We make those parts in our
9 powder metal division and at that time we were buying
10 powder from the Huskey-Varnun, and don't ask me how
11 to spell it and anyway they made the powder for it and
12 with the pollution control devices going in they stopped
13 making powder. They had to go out of business so that
14 we had to start getting our powder operation from a
15 different source, and when we started punching powder
16 out of different sources, we started getting different
17 characteristics not only in these parts but in a number
18 of our parts and so we had to make changes. Now this
19 we found when we started putting the pressure to the
20 rivet, we found that the housing was actually going
21 smaller and that was contributed to how the powder and
22 metal was reacting to the forces of the rivet. What I
23 am saying is I am not clear. I am not clear whether
24 the rivets are actually putting the blocks into

25 277.

1 compression and making the whole thing smaller and
2 also inducing somewhat of a warpage in it, but at any
3 rate the net effect was that the inside due to the
4 changes in these plates was not as big as it was
5 any more. This is not uncommon in manufacturing as
6 things continually change so the decision was made just
7 to allow another thousandths on those block and so another
8 thousandths was allowed on the block, which allowed a
9 little greater space. As far as the housing per se, the
10 housing drawing, the blocks are .174 minimum and .176,
11 but the housing the dimension on that was left a .173
12 and .175.

LEWY

13 Q All right, sir, in your judgment was any
14 additional danger created by widening that one thousandths
15 of an inch?

16 A No. In my judgment it was just that it was
17 a change made in response to the change in the blocks.

18 Q Now I take it if you riveted that corner too
19 hard that when you tried to check it you would have
20 to throw it away?

21 A When you have something as critical as that,
22 you have to have that person come in there and check
23 them all like we do. If the thing doesn't fit then you
24 just don't use it or if it binds. The nice thing about

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1 this is it that it is not a question. It either binds
2 or don't bind.

3 Q I take it that it would be impractical to try
4 tear apart and put back together a trigger assembly?

5 A The girl if she took a trigger and she put
6 it in there and the assembly is too small ~~she knows it~~
7 right before she gets the trigger in it. What she does
8 then she throws that housing away.

9 Q Okay, but once you got it riveted in there,
10 you have to throw the whole--

11 A No. Just the housing.

12 Q This is what you are talking about when you
13 say the economy of it?

14 A That's right.

15 Q You don't have that when you have to throw
16 something away?

17 A You bet. That costs you. That is one of
18 the things that Japanese I think when you read in the
19 paper that they are better at that then we are. We are
20 using everything.

21 Q When you say that you did do that and say
22 you riveted one too tight, do I assume correctly that
23 what would happen would be the screw mechanism, the
24 trigger mechanism would bind toward the rivet when you

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279.

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try to use?

A I don't know. You don't actually want to put it together.

Q You would know immediately in trying to get it together?

A Yes. You would.

Q Let's stop for just a moment. I would ask you to examine Plaintiff's Exhibit 12 and 17 which were admitted for a limited purpose, sir and ask you to tell us what the reasons were and why those changes were made in the product of whatever they show on or at least made on there?

A These changes were made while I was in research. It says requested by research and somebody has put my name in beside there. It says Model 700 trigger and it lists the drawing number and it has the change revision to the drawing 14, 15, 16 and 17 and there are four changes. On the trigger, the first change says we added a section DB and by a section on the drawing that means that you can see that right there sectional, that section was added. So that we added a sectional view. We changed the material. It was a powdered metal and we have a material plus down here. We added 90 degree and that was this change on the

280.

LEWY

1 corner this 90 degrees and the corner is supposed to
2 be 90 degrees and everybody knew it was supposed to
3 be 90 degrees but it never said it on the drawing and
4 I thought it should say it on the drawing and the
5 reason I thought that is because every so often you
6 have to have powder metal tools made and you want the
7 vendor to know the engineer to know if he doesn't have
8 anybody to call that it is supposed to be 90 degrees.
9 We added a note and this is the note right here. No
10 burrs wider than part thickness permitted, the part must
11 work freely at .172 5 wide slot. Now the basic change
12 in this is, I don't know if you can see it but you see
13 there is like a double line around this part, can you
14 see the double line around that part and that is shown
15 in this added section right there. It says nine thous-
16 andths, plus or minus one, and this is also a powdered
17 metal part and in our powdered metal division they
18 make the part for us and what they do is it is a punch
19 and dye powdered metal and what they do is they take
20 this blended powder and what this powder is it is a
21 nickel steel powder, and they take the powder and they
22 fill the dye cavity up and they have got a punch that
23 comes down and this punch just fits that dye. The
24 punch comes down and presses the part. Now when it

LEWY

1 presses the part because there is so much pressure
2 on it, they dye cavity having opened up a little bit
3 and when the dye cavity opens up just a little bit, it
4 forms a little burr around this part and it comes down
5 and compresses it and it presses it so much it expands
6 that dye cavity a little bit and when it does it forms
7 a little burr. And you take the part out and you
8 have got a little burr around the edge so what they were
9 doing in the powder metal division, they were taking
10 this part and they were putting it in a tumbler to
11 improve the finish and to remove the burr. Now because
12 this nickel steel is tough, sometimes the burrs would
13 not break off. They would just lay over so when the
14 gal would get it over to put the thing together, every
15 so often she would get this little burr and she would
16 have to take this little fine file and file that burr
17 off and every time you walked by her she would tell you
18 how many parts. You know I had three today or two today
19 because this irritated her that she had to file that
20 burr off. So it is kind of ironic in this case because
21 we make parts also for competitors and we told them
22 in the powder and metal division and they said in
23 a couple of their parts they put a relief on it so I
24 said why put the relief and they said so that they don't

LEWY

PENGAD CO., BAYONNE, N.J. 07002 FORM 2294

1 have burrs knock off so we added a relief on our part
2 so when you run it through the tumbler it knocks the
3 burr off, eliminate the problem of the burr. The
4 problem is the powdered metal which acts as a separate
5 factor, and you are not a factor, so when they tumble
6 it we wanted to know exactly what we needed on that and
7 we added no burrs wider then part thickness permitted,
8 and part must work freely in a .1725 wide bottom so
9 that they know what our requirements and so when they
10 tumble it that they get the right median. You do this
11 so really these drawings are for our convenience so that
12 when the guy that sets the job up retires or leaves
13 that you can go back and you have got control of it.
14 Now on the sear, we do the same thing. I will not go
15 into everything in detail on this but what we did there
16 is also we added the section, we called it out and not
17 only did we add the section about the part but we also
18 didn't want a burr on the hole and we added a section
19 to the hole. We put the thing all of the way the
20 --of this part and we added no burrs wider then part
21 thickness permitted. Part to work freely in a .1725
22 slot and this is also a powdered metal part and it
23 is also made by our powdered metal division and obviously
24 you have the same problems so we made the same changes

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in it.

Q Now, sir, were any of those changes made because of any unreasonably dangerous condition to the trigger or trigger mechanism that was made and manufactured in February of 1973?

A No. The changes were not in response to any problem.

Q In your judgment is there anything dangerous about the design of the trigger that was used in February of 1973 as manufactured?

A Not that I am aware of.

Q In your judgment could the trigger assembly leave the plant with any kind of bind in it?

A No. I really don't see how it could. If you said could the front site be off and if you said could the rear site be off, you know where it goes through one inspector I would agree with you, but when you see something like this that goes through such a number of people, I just don't see how it could happen.

Q Now sir, did you have an occasion to examine the particular serial number rifle involved in this occurrence at any time?

A Yes. I did.

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Q And approximately when was that that you examined it?

A Oh, it was before Christmas of last year when Mr. Olson brought it up to our plant.

Q All right, sir, other than that occasion has Remington ever had possession or control of this particular rifle?

LEWY

A No. We have not.

Q At any time before the accident that you were aware of?

A No. We have not.

Q At the time or at any time between the accident and when Mr. Burks examined?

A No.

Q At any time between the time that Mr. Burks examined it and Mr. Olson examined it?

A At any time between Mr. Olson examining it and when it was brought to you?

A No.

Q Now during all of the time that you were there was Mr. Olson present?

A Yes. He was.

Q At that particular time that you examined the weapon in that condition did you come to any conclusions

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1 about what, if anything, was wrong with that particular
2 rifle at that time?

3 A Yes. The rifle was definitely unsafe for
4 use. There was no question about it. You could
5 cycle it and the thing would jar-off. You could tell
6 right away that the trigger adjustment screw had been
7 backed out. You could take the rifle and you could
8 take it and put the gun on safe and you could take it
9 and you could run that trigger back and forth and if
10 you were real careful you could feel a little drag in
11 it. When they started to take the thing apart, I could
12 look at it and it looked to me like definitely the
13 trigger assembly had been out of the gun, The pin had
14 been removed and the trigger had been removed. The
15 assembly had been completely taken apart. I attributed
16 the little bind that I felt in somebody deforming the
17 side plate on the trigger assembly.

18 Q You felt that there was some deformation in
19 the trigger assembly housing at that time?

20 A Yes.

21 Q How did you arrive at that?

22 A Well, I thought there was a slight bind in
23 there either from something stuck in there or from
24 the deformation in the plates and I could look at the

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286.

1 pins and what have you and I could see the thing had
2 been dry cycled and I can't imagine how many times
3 that thing had been cycled and worked on that I just
4 assumed in some way it had been distorted. Yes. I
5 could take it and I could feel a tiny bit of drag on
6 the trigger. It definitely had some draw in it. I
7 could also take the gun and I by power rotated it and
8 how I would rotate it the trigger would move.

9 Q With respect to the particular distortion
10 that you found in the housing itself, could that be done
11 in taking it apart and putting it together?

12 A Very definitely it could be.

13 Q Could you distort the measurements say, the
14 outside housing that used a 2000 PSI press that fits
15 in there now?

16 A Well, depending on how you backed it up,
17 yes, you could, or if you come down and have a trigger
18 in it and depending on how the press was and the press
19 came down and actually pressed the side plates against
20 the trigger, it would almost give you a dimension of
21 whatever the trigger was.

22 Q Is there any significance to you in the
23 numbers of the measurements assuming they were correct
24 that Mr. Olson took .171 and the area around where the

25 287.

1 pin was pulled out in the .173 and the area where
2 the trigger was pulled out or whatever?

3 A On the top measurement that the top two
4 measurements that the top two surfaces, the measurements
5 this area right here in this area were smaller and
6 the only thing that I can contribute that to is that
7 somebody had the trigger assembly out and when the assembly
8 was put back in this assembly wasn't lined up right
9 and hit one of the side plates.

10 Q And when you examined the rifle in the
11 condition was it was and as it was brought to you, is
12 there some reason you didn't tear the trigger housing
13 apart and do that kind of thing with it?

14 A Yes. Definitely, we--if we have a rifle, a
15 plaintiff's rifle like this, our policy is never to
16 disturb the evidence.

17 Q You don't want somebody accusing you?

18 A That is the easiest thing to do is to come
19 back and say it is not in the condition as we presented
20 it to you. There has been a number of times that we
21 would just love to either cut something or to alter
22 something and disassemble something but we don't. Now
23 also in this case they wanted Mr. Olson present for
24 every minute, and we performed the examination in a

25 288.

1 conference room and we just brought those tools with us that
2 we could use in this conference room. We did not take
3 him into the factory where we have, for example,
4 electronic guages so we set it up in the conference room.

5 Q So every time you took the bolt and closed it
6 down physically would the rifle go off in cycling it?

7 A You could make it go off. You could take the
8 rifle and by however you rotated it, you could rotate
9 it such as the natural way of the trigger would return
10 the trigger underneath the sear and if you cycled it
11 slowly it would work fine. If you rotated it in
12 another direction and you could almost rotate to the way
13 that you could get the trigger to work or not work
14 and this is why to me when the question of binding, how
15 bad is the bind, if the thing will move under own weight
16 then the bind is not really significant.

17 Q All right, sir, but assuming you had to back
18 a pin out adjusting the tension to such a point that this
19 one was at when you examined it, would it be something
20 that you could use off and on for two and one-half years
21 without having, after you had made the adjustment,
22 without having some type of difficulty or problem of
23 discharge?

24 A It was just unfit for use.

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289.

1 Q But if the pin was set in that position you
2 would know it the first time you discharged it?

3 A Oh, yes.

4 Q You could not use it several times over a
5 period of a couple of years and not know about that
6 condition?

7 A No. Nobody would have used that rifle.

8 Q In your judgment would that be something
9 that would be immediate obvious and noticeable to an
10 expert when he picked it up and looked at it, such as
11 Mr. Olson? Also Mr. Burks?

12 A Very much so.

13 Q Do you think this is the type of thing
14 that Mr. Burks could have possibly overlooked in his
15 examination?

16 A No. He couldn't have.

17 Q Now if you would explain to me what the
18 adjustment screw on it is that was backed way out at
19 the time that you looked at it?

20 A This is the adjustment screw right here,
21 the one that we are referring to. Right here is the
22 spring. Here is the spring and this screw had been
23 backed out to a point where that spring was
24 backed away from the trigger and was no tension to turn

25 290.

1 that trigger back to its back stock so that screw had
2 been turned out to a point where there was no spring.

3 Q Sir, what is the purpose of that particular
4 screw? What does it do?

5 A It determines the amount of tension on the
6 trigger.

7 Q Why do you want tension on the trigger?

8 A To return it back to its initial position
9 so that you have the correct amount of engagement.

10 Q What other screws are there and what do they
11 do?

12 A Okay, you have your engagement screw. As
13 I said previously, you have an engagement screw right
14 here, which determines the amount of engagement with
15 the sear and you have your overtravel which determines
16 how much travel you have on your trigger and, of course,
17 you have the adjustment screw with the spring, which
18 determines your trigger pull.

19 Q Can you explain to us from that what changes
20 has been made by backing this screw all of the way out
21 where there is no tension on the spring?

22 A The way that rifle was, the trigger would come
23 forward and have less engagement and there was not any
24 spring on that to hold that trigger under that sear.

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Q In this particular instance suppose that the trigger doesn't come back at all and re-engages with this sear, can you tell me what happens when somebody cranks up and starts to load and unloaded an unspent shell and loaded it again?

LEWY

A If the trigger was pulled forward to the back up point where the trigger was pulled forward then when you operate your bolt the sear would come down and stays down and all the firing pin would do is just follow that cam down so that the rifle would not fire. What happens when you fire it is you have got cam on the back of the bolt and you open the bolt and withdraw the striker that is going up against the spring and when this is up in normal conditions, your holding that and you rotate the bolt all of the say down and you pull the trigger and the thing just drops. The cam is out of the way and if the firing pin follows the cam down and you can't get down fast enough to set the primer off. There is a difference between just dropping and following right down .

Q In a follow down or fall down, you have a situation where is never any reengagement of the sear and the trigger?

A Yes.

1 Q And if that particular condition should occur
2 in the trigger will a rifle of this nature go off or
3 fire?

4 A No. It will not.

5 Q You can't make it fire on a fall down situation?
6

7 A No.

8 Q And Remington has conducted different tests
9 and attempted to make rifles do that and in a fall down
10 situation it will not?

11 A That's right.

12 Q Now, sir, you were asked when you were put
13 on the witness stand the first time around about can
14 it be possible somehow instead of getting a proper
15 engagement on this to get alipid engagement of some
16 sort. Do you recall the question?

17 A Yes.

18 Q Would it be necessary to get such a condition
19 to back this digit screw all of the way out as we have
20 been discussing it where there is no tension on the
21 spring?

22 A Well, you could get that a number of different
23 ways. You could get it from somebody taking it apart
24 and putting it back on and you could get it from
25 somebody screwing this screw, the engagement screw and

293.

1 can cut your engagement by turning this screw here
2 or you could do that in this case where you back out
3 the trigger adjustment screw so far that there was no
4 spring tension.

LEWY

5 Q Assuming there were no other modifications
6 in these things that people have done to trigger
7 assemblies and we have a situation where the tension
8 screw has been adjusted, I take it to get this condition
9 from what you are telling us, you would have to break
10 that all of the way out so that the tension screw is
11 rendered useless without tension on it?

12 A The first part of the travel would have no
13 spring tension on it.

14 Q Would you have that condition if you had a
15 two and one half pound pull on the trigger?

16 A Oh, no. The two and one-half pound would put
17 that trigger right back up against the trigger spring.

18 Q Back at one time Remington made an explanation
19 in the manual about adjusting this particular tension
20 screw did they not?

21 A Yes.

22 Q And subsequent thereto about the time that
23 this was manufactured, the manual put in it that the
24 manufacturer did not recommend that you adjust these down
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below three pounds?

A Yes.

Q Meaning this particular trigger adjustment?

LEWY

A That's right.

Q There have been other questions asked of you and documents raised about adjusting triggers, are we talking about something different when we say adjust triggers and say adjust the tension screw?

A Yes. We are. A trigger adjustment normally is all three. Three adjustments. That is a trigger assembly adjustment. The screw adjustment or pardon me, the trigger pull adjustment is the adjustment screw that we are talking about here now or has been the talk of the whole case.

Q Now there is a memorandum up there that has been admitted for a limited purpose and it mentions in it something about changing the manual because of the designers concern about the sear or sear cam and, sir, would that have to do in your opinion with the tension screw or would it have to do with some other adjustments in the general adjustment screw?

A I think that memorandum has to do with the engagement screw. The majority of the problems that we have got into on this trigger assembly is the customer

1 and even in some cases the gunsmith know more about the
2 thing then we do or they think they do. They get in
3 there and they start adjusting all sorts of different
4 screws. The engagement screw particularly. If they
5 adjust that engagement screw you can get into all sorts
6 of problems in a big hurry. Like this screw right
7 here. You can adjust the engagement screw and take out
8 what they call crepe, the crepe out of it, and they
9 will put that engagement screw right down to the point
10 where you are almost on the edge and regardless if
11 you are on the edge how crank up the tension screw,
12 you really get a jar-off condition and a condition that
13 will set that rifle off right away.

14 Q That is caused by tampering with the engage-
15 ment screw?

16 A Yes.

17 Q And I assume you have seen people with all
18 kinds of things with trigger adjustment filed down to
19 the trigger top and so forth?

20 A Yes, sir. They make all sorts of changes.

21 Q In that respect is it because of that kind
22 of thing that you had to change the manuals to say
23 three pounds?

24 A With this kind trigger assembly, you are
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296.

1 always having people who are making changes and when we
2 started saying what can we do to make it clear, we
3 went from the no explanation to adjustable to an
4 explanation and actually put a picture in our owner's
5 manual so that the customers could understand just
6 exactly how you adjust it. This is the way that we
7 thought we would get ourselves out of problems and if
8 they knew what the thing looked like and how it worked
9 then we wouldn't have a problem with them adjusting it.
10 Then we still would get complaints . Now by complaints
11 you get somebody that calls you up and said I have got
12 a problem with my trigger assembly or somebody will
13 write and say you know I was doing this or this or
14 in the gunsmith conference as we were talking about
15 here, the gunsmiths will feed it back to you and so
16 then the manual is changed to put a three pound limit.
17 And we had people still that would come in and
18 particularly they would adjust and mess with that
19 engagement screw and so from that the decision was
20 finally made let's pull it out all together. It is
21 question a question of which is better, telling them
22 how to do it telling them don't do it. Now we have
23 reversed it and we are saying don't touch anything.
24 Send it back to us if you want it adjusted.

LEWY

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297.

1 Q So that your basic recommendation now is to
2 send it back to the factory or send it to a qualified
3 Remington approved gunsmith?

4 A That's right.

5 Q The ingenuity of man could overcome the
6 instruction you could give them?

7 A Very much so.

8 Q You have told us that there was some kind of
9 bind or drag at the time that you examined this particular
10 gun, if you were to re-engage that adjustment screw
11 properly so that you had tension on it, would it be
12 usable or properly servicable now?

13 A Yes. I don't know what else has been done to
14 it since we looked at it, but at that time I am sure
15 if you just cranked the adjustment screw in to where
16 it should be that it would have worked fine.

17 Q And it that kind of bind of any appreciable
18 consequence or in any way a drag that would prevent it
19 from working properly if a person would handle it
20 properly and safely in hunting or discharging it?

21 A When you pull a trigger on a rifle even if
22 it has no spring as Mr. Olson testified yesterday, there
23 is a certain inherent load that you have to overcome
24 and that is the load induced by the heavy spring on the

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LEWY

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firing pin. YOU have to overcome that load and that is reflected in the trigger pull even if you don't have a trigger return spring. So what I am saying just through the mechanics of the system there is a load on that trigger or just by the trigger pull turned by just the firing pin itself and overcoming that load to release the gun. Now as Mr. Olson said yesterday he estimates that on this it would be a little over a pound and I am not going to question that. He also said that he got a trigger pull on it and that is not fully engaged but where it rested at the time he measured it with nine to thirteen ounces. Now there is an inherent load in that gun to overcome the firing pin spring so if he had a pull of thirteen ounces and there is that inherent load plus the load on the spring, the bind to me could not be much over three to four ounces and that is giving it a lot so if you say that I cranked it up to two and one-half pounds would it work I would have to say that.

LEWY

Q If you cranked it up to two pounds would it work?

A Yes. It would.

Q All you have got to do is overcome that 9 to 13 ounces?

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A Not, 9 to 13 ounces accumulative of the main spring or the firing pin spring and so it would be less than that.

Q Now this position right here--

A This position right here that forward position, if I pull it all of the way over that is where I could feel the bind.

LEWY

Q Now if that condition existed as you have described it, in your opinion in adjusting the tension screw so that it is again functioning, this particular trigger mechanically is working properly?

A Yes, sir.

Q Also by adjusting the tension screw take care of any situation about hanging because of the jar-off situation?

A Yes. At the point that I tried this rifle all you have to do to check that is you put the rifle, but the bullet in the rifle, close the bolt and put the gun on safety. Infact you don't even have to have the bolt in. You just put the gun on safety and pull the trigger back and forth.

Q In your opinion did it come from the factory with a drag on it?

A No. It did not.

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Q At the time it left the hands of Remington
it would not have had that kind of trigger?

A No..

LEWY

Q That would have been found and not put out
that way?

A Yes.

Q This particular trigger adjustment screw, is
there something magical about the three pounds, the
manual saying we don't recommend adjust below three
pounds?

A The only thing about it it is consistent with
the other parts of the industry. It is consistent with
all of your shooting manuals. Normally for a hunting
type of rifle and I guess you might call it a part of
our heritage, you don't hunt with a rifle under three
pound pull and that is where the three pounds comes
from. That is where your specifications originally
originate from of what is expected of a certain product
by the customer.

Q Now, sir, is there any safety factor involved
between the useful functioning of this trigger and
the three pound statement that was contained in the
materials?

A Yes. YOU make your assembly so that you can

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1 adjust it somewhat under three pounds and still be
2 safe.

3 Q Can you tell me approximately what kind of
4 pull this particular 700 trigger is designed to be
5 cut down to before ---

6 A I can tell you experience just like Mr. Olson
7 said on these trigger assemblies that determines by all
8 of the finishes that you have on your parts. The
9 finishes that you have on your parts and the little
10 characteristics that they have and normally on a 700
11 though I seen them where you can adjust them like from
12 one and one-half to two pounds.

13 Q And certainly it would function properly this
14 trigger and would do what you want it to do if it were
15 set at two and one-half pounds?

16 A Yes. It would.

17 Q And it would function properly in your judgment
18 at two pounds?

19 A I believe that it would.

20 Q So the fact that someone got slightly under
21 three pounds would not be of significance in whether
22 or not this trigger works properly in the manner that
23 it is designed to work to do the job that it is supposed
24 to do?

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A That's right.

Q Would you explain to us the relationship between the trigger pull tension on the trigger and the amount of outside force or jar or whatever you want to call it to cause the assembly to discharge? To cause the rifle to discharge?

LEWY

A Well, it is a relative thing. Are you talking about the jar-off that you are referring to?

Q Yes?

A It is a relative thing because it has a spring. What is holding it in that position is a spring and whenever the force on this trigger exceeds that spring force, the rifle is going to fire so that with any spring if you drop the rifle from a high enough position and it is in a firing position, it is going to fire.

Q So in other words, the object is whether we move the trigger or whether we create some tremendous force to move the rifle, the remaining part of the rifle, this trigger mechanism will and can be made to discharge?

A Yes.

Q So that dropping it from a three story building even if you put a nine pound trigger pull on it could discharge?

A Yes. It could.

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Q The parts must work the other way too?

A That's right.

Q This is what we are talking about when we are talking about a jar-off?

A That's right. The finer that you adjust it the more sensitive it is.

Q But it is relative? It is not some magical line in this thing of three pounds?

LEWY

A Oh, no.

Q And two pounds and fifteen ounces would be virtually the same as three pounds?

A That's right.

Q So there is nothing in the mechanism that says at some definitive line at three pounds that all of a sudden it will not work properly if it is adjusted a little below that?

A No. There is nothing.

Q Now this particular adjustment screw when it leaves the factory is the screw head open on the tension adjustment screw?

A No. It is not. It is sealed.

Q What do you seal it with?

A Dupont cement.

A Pardon me?

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A We seal it with a DuPont cement.

Q And what is the purpose of putting the sealant there?

A We seal it and we know if anybody has tampered with it.

Q In other words, they have got to dig through that before they can get to the screw head to make the adjustment?

LEWIS

A Just exactly. If Mr. Smith would have sealed it, the rifle in question, he would have known and we would have known if anybody had tampered with that rifle from his setting forward.

Q When you examined this particular rifle, the sealant had been removed?

A That's right.

Q So that you knew somebody had removed the sealant and probably done some adjusting to the trigger?

A Yes.

Q As we have heard here?

A YES, sir.

Q So if Mr. Smith adjusted it before the accident, he would have to take that sealant out wouldn't he?

A Yes. He would.

1 Q There has been all kinds of testimony about
2 vibration, assuming the adjustment screw is in enough
3 to create tension on the adjustment spring, not the fact
4 that it had no tension on it as it is in, assuming we
5 had tension on it, would that particular screw back out
6 of there even though there is no nuts, washers, bolts
7 or other screws or sealants put in it to vibrate it out?

8 A No. As long as it has spring tension on it,
9 it will not come out.

10 Q It seems like you have just got a screw and
11 a screw slot and by a very motion you could turn it
12 back?

13 A You don't have that. What you have got is you
14 have got a screw and a screw slot. You also have a
15 high rate spring, a very high rate spring behind that
16 screw.

17 Q And what spring is that that you are talking
18 about?

19 A It is the trigger adjustment spring.

20 Q What does that trigger adjustment spring do
21 as long as you have got it in far enough to have some
22 tension?

23 A What it is there for is to adjust the trigger.

24 Q What does that spring do and what relationship
25

306.

1 does it have to do keeping that particular screw from
2 moving?

3 A What it does, it does it pulls it into position.
4 You get your contact but you have got a resistance on
5 the thread.

6 Q Has Remington conducted various tests on
7 this particular screw in this 700 model using this kind
8 of trigger to determine if you can by excessive
9 repeated use in some way cause that screw to back out?

10 A Yes. We have.

11 Q Could you in resulting tests make it back
12 out?

13 A No. The tests that I am aware of we never had
14 it back out.

15 Q Are you aware of any situation in which it vibrated
16 out on its own?

17 A Only when you don't have any tension on it,
18 sure because that is just sitting there free.

19 Q In other words if I would walk over there with
20 no spring tension, I could with the bolt sticking out
21 turn it?

22 A Very easily.

23 Q But once there is some tension on it through
24 this process, I am not going to be able to make that

25

307.

LEWIS

1 that thing vibrate back and forth?

2 A No. It would be difficult.

3 Q Because it is the spring load behind it that
4 you get an extra force besides the screw threads holding
5 it in?

6 A That's right.

7 Q So that there is a device on there that is used
8 to hold that particular screw in?

9 A That is right.

10 Q In the absence of some kind of condition and
11 use and operation that would cause vibration, there
12 isn't much reason to do something else is there with
13 respect to sticking lock nuts on the ends of the trigger
14 assembly?

15 A There is no need and there is no use.

16 Q What is your judgment opinion of whether or
17 not you had vibration with a lock nut on it whether it
18 would be that useful?

19 A You would be adding another element.

20 Q Something else that couldn't vibrate?

21 Yes.

22 Q You certainly would not want to lock that up
23 and take the spring tension off?

24 A No. You would not.

25 308.

LEWY

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Q Are you familiar with the operation of the safety on that particular 700 that was manufactured?

A Yes. I am.

Q In February of 1973?

A Yes. I am.

Q Is it the same as the safety used on all other 700's?

A Yes. It is. It is the same basic design?

A No. It is a little different today.

Q But the basic design on it is what one would call a two phase safety?

A Yes. A two position.

Q A two position safety?

A Yes.

Q Can you explain to us just very briefly what it is and how you put it on and off and show us what part it is that you are activating on the outside of the rifle to do that?

A A two position safety is like a light switch. It is either on or it is off. Here we have the trigger back under the sear and put the safety on and there is a cam about this pivot, puts the safety on and lifts up this sear safety cam and that lifts it up and pushes back on the striker. The striker is blocked against

LEWY

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1 this surface right here. This surface is blocked against
2 this cam here, and I lift it up and what I have done
3 is that I have disconnected the trigger from the firing
4 pin. I pull the trigger and the gun stays locked.

5 Q Are you familiar with the mechanical operation
6 of and the design of two position safeties and three
7 position safeties as manufactured and put out in the
8 United States by other companies on bolt action rifles?

9 A Yes. I am.

10 Q Are the three position safeties that have been
11 described or rather discussed here all to your knowledge
12 of similar design and functioning?

13 A Pretty much, yes.

14 Q Can you tell me basically how those work and
15 what they do?

16 A A three position safety is a safety where you
17 have an off safe where the gun will fire in one position.
18 You have another position such as this where the gun is
19 in the guarded position or in a safe position and
20 also this lever right here locks the bolt so that we have
21 a position just like this where the bolt is locked and
22 the mechanism is blocked. The bolt is locked and the
23 mechanism is locked so when you push the trigger nothing
24 happens. In the three position safety they have an

25 310.

1 intermediate position and in that position, you put the
2 rifle in that position and you open the bolt or close the
3 bolt or operate the bolt with the rifle in a guarded
4 position under certain circumstances. **LEWY**

5 Q What was the purpose in putting the safety on
6 the Remington 700?

7 A The 700 safety really has two positions.
8 The safety mechanism locks the firing mechanism against
9 the adverse firing of the rifle either by the owner
10 himself or some foreign obstacle so that if you are
11 walking through a wood and through the timber and you
12 have a cartridge in the chamber and you should slip or
13 fall and hit the trigger, the rifle will not go off.
14 You walk into the woods again and you have the safety in
15 on safe position and another feature is that it locks
16 the bolt down so that if the rifle should brush up
17 against a twig or some other obstacle, it will not
18 partially lift the bolt and make the rifle inoperative
19 if you want to use it.

20 Q With respect to the three position safety,
21 assuming you had discharged a cartridge whether it be
22 a Winchester 70 or the others and you have now shot
23 at your crow or whatever and you want to take that
24 particular bolt action rifle and reload it, do you

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put the intermediate safety on after you made the discharge of the shell?

A No. You do not.

LEWY

Q When you open the bolt housing or bring the bolt up, can you in any way put the safety on?

A No. You cannot.

Q When you pull the bolt back can you put the safety on on a three position safety?

A No.

Q When you push the bolt forward and put the head of that bolt down against that cartridge can you put it on?

A No.

Q Where is it that you could first after it expended the shell that you could first put the safety on in a three position safety?

A It has to be completely cocked . It has to be all of the way forward and all of the way down and then you can put the three position safety either in intermediate or the full on safe position.

Q Now am I correct in a two position safety like this, if you had the rifle loaded at the end of the day and you wanted to let that load out, you had a live round in there and you wanted to take it out instead

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1 of shooting it and with a two position safety, how
2 would you have to go about taking that particular
3 cartridge out?

4 A Two position safety with a bolt lock, you
5 have to put the rifle in the fire position to open the
6 bolt to get the live round out of the chamber. LEWY

7 Q All right, sir, with a three position safety?

8 A Three position safety with a live round in
9 the chamber you can put the safety in the intermediate
10 or half safe position and open the bolt and extract the
11 live round.

12 Q And the facts that you heard in this court
13 room was there any live round in the chamber that somebody
14 was trying to extract?

15 A No. There was not.

16 Q So that the three position safety that had been
17 put on there could not be used in the operation of
18 unloading or loading?

19 A After it has been fired it cannot.

20 Q That intermediate position in there has to
21 do with taking a loaded cartridge or shell out?

22 A It can be used for that. Yes.

23 Q That intermediate is not something that keeps
24 one where he can keep it on safe in a three position

25 313.

1 safety and run it open and closed all that he wants
2 to?

3 A No.

4 Q In your judgment was there anything particularly
5 dangerous about the two position safety that was placed
6 on this rifle, this particular 700?

7 A No. There is not.

8 Q Have you ever seen on a bolt action rifle in
9 commercial use or sales a two position safety of some
10 sort that you wouldn't have to put it on fire to lift
11 the bolt up before you put the safety on again?

12 A If you would shoot the rifle, pull the trigger
13 and the firing pin drops, there is no two position safety
14 that I know or three position that you can put the gun
15 safe before you start raising it up.

16 Q Most three position safeties have been around
17 for a long time have they not?

18 A They sure have.

19 Q And this is something that is well known and
20 studied at Remington before February of 1973?

21 A Yes. We made the Model 725 that had the
22 three position safety.

23 Q And for various reasons you felt that this
24 was more satisfactory on this rifle and many other rifles

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that you put out?

A That's right.

Q It is a judgment choice in compensating one characteristic for another?

A That's right. That is for sure.

MR. ARMSTRONG: That is all of the questions that I have. Thank you very much.

LEWY

CROSS EXAMINATION

BY MR. SC HWARTZ:

Q Is this a scale model of the trigger mechanism in the 700?

A Yes. It is.

Q Is it in correct diameter as to the parts which would be in the model 700?

A You could not say it is the exact scale, but it is fairly close to being to scale, yes.

Q And it functions in every way as the trigger mechanism in the 700 in every respect?

A No. Because it could make the mechanism so that you could see through it. Some of the items as you can see are plexiglass and some of them are aluminum and you can't get the spring themselves to exact scale as it would be in a fire control so that in that respect it is not.

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1 Q The movement of the springs themselves would
2 vary somewhat wouldn't they?

3 A Well--

4 Q Not the location or function but the tension
5 that it has on here these would be somewhat different
6 would it not?

7 A Oh, yes.

8 Q Now when you were testifying this morning,
9 and testimony has been heard over many days now, and you
10 said the bolt sits up here, is that correct?

11 Q The firing pin is in this position and it
12 catches this area?

13 A That's right.

14 Q And when there is some force placed upon the
15 sear by the firing pin, is that correct?

16 A That is correct.

17 Q Because the firing pin is under tension, is
18 that correct when it is in a cocked position?

19 A Yes. The spring is under compression but the
20 pin would have tension on it.

21 Q And the spring that we are talking about is
22 a spring which is in the bolt?

23 A The bolt assembly, yes.

24 A And that creates a certain amount of pressure

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316.

LEWY

1 in this area of the sear which in effect when the trigger
2 is pulled forces the sear downward, in a downward position.
3 Is that correct?

4 A That's right.

5 Q Now the safety is on at the current time is
6 it not? **LEWY**

7 A Yes. It is.

8 Q When firing the gun it would the safety in a
9 forward position?

10 A Yes.

11 Q And in a properly operating Remington 700, I notice
12 there is a slight drop of the sear to the trigger
13 connector. Would that occur in a model 700?

14 A Yes. It would.

15 Q So it drops to come in contact with the trigger
16 connector?

17 A That's right.

18 Q And with that force pushing on this area of
19 the sear, you pull the trigger and that clunking sound
20 is what is the operation of the trigger, but in effect
21 that would be when the firing pin would go forward?

22 A Yes. It would.

23 Q Now I notice Mr. Linde that the sear has now
24 returned to an upward position and the trigger connector

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cannot move underneath the sear?

A That's right.

Q The spring tension that you were talking about earlier is not being accurate in this particular--

A That's right. Of course, you don't have the other parts on there too so from that point forward it is not an accurate representation.

Q So that what you are testifying is that a properly functioning 700 that should return up like that?

A Oh, no. It can't come back up until you lift the bolt.

Q And when you lifted the bolt up that is what happens?

A That's right. Then it can come up.

Q It comes up and the trigger slides back under the sear and holds the sear until the trigger is either again moved and the safety is put on?

A Actually it comes up like it does right there.

Q The pin pushes the sear above the trigger connector?

A Right.

Q Now the design drawings which are the various blue documents that we have been referring to all morning,

LEWY

1 are they the items which make up the dimensions and
2 pieces which go together to make the trigger
3 assembly?

4 A Yes. That is what the parts are made from.

5 Q So that if I wanted to create a trigger from
6 whatever, I would take what has been marked and entered
7 into evidence as Plaintiff's Exhibit No. 11 and follow
8 those specifications in making a trigger?

9 A Yes. You would.

10 Q That gives the dimensions so that the trigger
11 fits together in proper form?

12 A That gives the dimensions with our process
13 so that the trigger fits into the proper form. If the
14 parts are dimensioned to be manufactured in a certain way
15 so if you took that drawing and you give it to like a
16 tool maker, he could not necessarily reproduce the part
17 you know the way that we would.

18 Q It would give him the basics, however, to do
19 that would it not?

20 A Oh, yes.

21 Q You mentioned this morning and went through
22 all of the various quality checks in assembling,
23 constructing not only the trigger mechanism but the entire
24 Remington 700 did you not?

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A Oh, no.

Q Okay. Now this morning you testified that a number of small parts which make up the trigger mechanism were taken to a bus-assembly point or an assembly point?

A Sub-assembly, yes.

LEWY

Q And that would be really all of the parts that you see here. Is that true?

A Right.

Q And a woman in the case of the 700 would put these parts together and test them in the manner that you testified to this morning?

A That's right.

Q What would you tell me what quality check is used to determine the size of those parts before they get to the sub-assembly point?

A Yes. Do you know which part?

Q I would make reference to the trigger itself?

A Okay. The trigger is made by our powdered metal division and it is a powdered metal part and what they do they have what is called a dye set made and it is made out of carbide so their supplied the drawing from the research department which comes to the process issuing department, which in turns ends up with them.

320.

1 They send this drawing out and they have the tooling
2 made. Now the tooling on these dye sets is made by
3 an outside vendor. He makes that dye set to that
4 drawing. How he does that--

5 Q Just a moment. The drawing that you are
6 referring to would be the same drawing as Plaintiff's
7 Exhibit 11?

8 A Yes and no.

9 Q Would you tell me what you mean by yes and
10 no, sir?

11 A That is the basis of the finished part, but
12 some times like in that case you have what you call
13 processing, processing the records which in turn tell
14 the vendor what those extra specific items you might
15 need. For example, in that part it is struck twice.
16 It is struck once to get the basic form and it is struck
17 again to get that narrowing on the trigger.

18 Q So that when the part is finally completed from
19 that particular vendor it should meet the specifications?

20 A All the vendor is making he is making the
21 tooling for us in turn to make the part.

22 Q I understand. Then in turn you make the part
23 from the tooling?

24 A Right. From the quality standpoint, he makes

25 321.

1 tooling and the tooling is checked and made very
2 precise because the punch and dye in this particular
3 case, they have to match and if you break one or break
4 the other you want to be able to duplicate it without
5 replacing the whole set.

LEWY

6 Q I understand that. Now in that dye and in that
7 fitting the material that makes up the actual trigger
8 is placed for the formation of the part itself?

9 A That is right.

10 Q And when a part leaves that fitting, what
11 quality controls occur before it gets to the assembly
12 table or the assemblers table?

13 A Okay on the powdered metal first the powder
14 is blended. They blend the powder and they check the
15 powder to make sure---

16 Q Excuse me Mr. Linde. You are not answering
17 my question. After the part leaves the mold. It has
18 already been formed?

19 A Okay, the part is formed and then in this
20 case there are a couple of other steps --

21 Q Just go from the part where it has been
22 formed and the time it gets to the assemblers table?

23 A Off of the press the operator checks. Like
24 in this case, I don't exactly know what the check is

1 but I think it is one and fifteen so that every fifteenth
2 part they would check the part for size.

3 Q At that stage?

4 A At that stage.

5 Q So there are fourteen parts that are not checked
6 at that particular point? **LEWY**

7 A That's right.

8 Q And then what is the next step, sir?

9 A The next step is that the part is placed in
10 racks and it is centered.

11 Q What does that mean?

12 A Well, you pressed it out of powder and it is
13 called a green part. You put in the trays and you run
14 it through a furnace and I think it is like at two
15 and one-half hours at 2250 degrees and I might not be
16 quite right on that but anyway but a length of time at
17 a high temperature and that fuses the powder particles
18 together and gives you the properties --

19 Q The curing process?

20 A It is called centering is the term.

21 Q After it leaves the centering process?

22 A Then they check it for density and it a sampling
23 again and they sample density and they sample for part
24 size and they have a comparator and they throw it off and

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1 project it to --

2 Q Now you say that they don't do that to every
3 part, is that right?

4 A Again, the sample.

5 Q And what is the sample? Do you know?

6 A No. I don't.

7 Q So that a certain number of parts are checked
8 and a certain number of parts are not checked?

9 A Yes.

10 Q Where does it go from there?

11 A Then the part would --well this part before
12 it gets there it was centered, tumbled, polished, in-
13 spected and it is impregnated. It goes through a number
14 of steps but after it goes through the powdered metal
15 division, okay, it comes to the plant and we have the
16 trigger and then we run it through our black outside
17 coloring process.

18 Q And that puts a coating on the part, on the
19 trigger?

20 A That's right.

21 Q After the coating is placed on the trigger,
22 are they sized?

23 A What do you mean by that?

24 Q Is there an inspection made to determine is the
25

324.

LEWY

1 part is a correct size at that point?

2 A No. The size is not going to change from
3 the time it was pressed and centered.

4 Q So the only occurred after it had been pressed
5 and centered and that is a sampling?

6 A That's right.

7 Q And there is no more sizing other than that
8 sampling after it has been centered until the time it is
9 placed on the assembler's work table?

10 A That's right.

11 Q So the assembler, the triggers that are on the
12 assembler's table, everyone of those triggers has not
13 been sized. Is that a correct statement?

14 A Yes. They have not been quaged.

15 Q And quaged means that the dimension of that
16 trigger have not been determined by a process?

17 A They have been determined by a process.

18 Q What process would that be?

19 A The process that you made it on determines
20 its size.

21 Q I understand but each individual trigger is
22 not specifically inspected to make that determination?

23 A No. It is not.

24 Q Rifles with problems get through this quality

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LEWY

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control process don't they?

A It depends on what the problems are.

Q A problem?

A Sure, we have stocks that are marred.

Q So rifles with problems do get out to the public on rare occasions do they not?

A It depends upon what the problems are.

Q But there is an occasion where a rifle gets out with a problem?

A Sure. There sure is.

Q Is--that is the reason for your warrant repair men is it not?

A It sure is.

Q Now you once mentioned that you would not use a micrometer to make a determination as to the ---to make a small measurement of a given part didn't you this morning?

A Not down to a tenth of a thousandths, I wouldn't.

Q Does the federal government use a micrometer as a means of certifying?

A They certify micrometers.

Q Do they accept the micrometer as a certification tool?

A Sure.

LEWY

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Q On your earlier testimony this morning, you stated there was a band of tolerance for the given parts. Is that a correct statement?

A Yes.

A Again, I refer you to Plaintiff's Exhibit No. 11 and point out the width of the upper trigger stem, would the .172 and .170 be the upper and lower ~~triggers~~ of the band of tolerance that you are talking about?

LEWY

A That's right.

Q And the tolerance for the two interconnecting parts, one part fitting into another part, cannot be the same can it?

A Yes. It can.

Q This morning you stated it can't be the same for those intermeshing or interconnecting parts?

A I stated that they come up together. At one point you can have what they call the same tolerance. It is not uncommon at all in engineering drawings to have like .325 to .330 and .335 to .340.

Q If a part was designed to move in between two other parts then the tolerance would be somewhat less for the part that had moved would it not? If the part was fitting in between two other parts such as the size of a trigger assembly, then the part that would

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have to move in there would have a lesser dimension then
the size of the trigger assembly would it not?

A. You could do it that way to insure that you
have more parts going together.

Q Also to prevent any binding if they were both
the same size could it not?

A Yes.

Q You also stated this morning that it binds
you don't use it?

LEWY

A That's right.

Q And that binding is found by moving the
triggers during the inspection process that you testified
to this morning?

A That's right.

Q Now Mr. Olson's measurements for the width
of the trigger assembly was .173 and that was within
the specs for this rifle when it was manufactured was
it not?

A I think I said .173 to .175.

Q I will direct your attention to Plaintiff's
Exhibit No. 15 and specifically the side drawing here?

A Yes. It is .173 - .175

Q Again, that is the band of tolerance isn't it?

A Yes. It is.

PENGAD CO., BAYONNE, N.J. 07002 FORM 2094

1 Q And the wall around that band of tolerance
2 would be .173?

3 A It is. Yes.

4 Q So the dimension measured by Mr. Olson,
5 the trigger assembly of the rifle in question would fit
6 within the tolerance given in Plaintiff's Exhibit No. 15
7 would they not?

8 A No. He also said he---

9 Q No. I am asking you with regards specifically,
10 sir, to the side of the trigger assembly. The side of
11 the trigger assembly in Plaintiff's Exhibit No. 15,
12 the lower range or the lower number of the width of that
13 trigger assembly is .173 is it not?

14 A Yes. I understood Mr. Olson to say that
15 he measured .173 at the bottom of the trigger assembly
16 and .171 I think it was at the top.

17 Q All right. If the .173 reading would fit --
18 the .173 reading would fit within the tolerance as I said?

19 A Yes. It does.

20 Q Now the specifications were subsequently
21 changed for that dimension of the width of the trigger
22 assembly were they not, sir?

23 A No. That dimension has not been changed.

24 Q That dimension has not been changed. How is

25 329.

1 dimension determined, what part in this trigger assembly
2 determines the width of the two side plates?

3 A The side plates, the trigger spacers and the
4 rivets.

5 Q Those are the items appearing in an orange
6 color on this?

7 A Yes. They are.

8 Q Now were the trigger spacers changed to
9 increase their width?

10 A Yes. Just like I said this morning. They sure
11 were.

12 Q And they were initially .173 as a minimum
13 width?

14 A No. That is the maximum. Let me check.
15 Your right, .173-.175.

16 Q And was at the time of the manufacture of
17 this rifle. Is that correct?

18 A Yes. They were.

19 Q And is that both the front spacer, which is
20 Plaintiff's Exhibit No. 13 and the rear spacer, which
21 is Plaintiff's Exhibit No. 14?

22 A Yes. It is.

23 Q Now that change was accomplished through a
24 design change request which appears in this case as

25 330.

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Plaintiff's Exhibit No. 16 is it not?

A Yes. It does.

Q And what effect is happening there is that the design change request is adding one ten thousandths of an inch to the spacer?

A No. One thousandths.

Q One one thousandths to the width of the spacer?

A Right.

Q What is the reason given on that design request form for that change?

LEWY

A It says allow more clearance for trigger, slide bolt of plate when rivet swaging can cause trigger to bind when spacer to .173 dimension.

Q What does swaging mean?

A As I explained this morning when the trigger assembly is set under a press and they put the rivets that go through the side plates, this part is let down in press, the rivets go through these plates and right through the spacers. The operator puts it in there and put the rivets and puts the hydraulic press down and presses the rivets and heads them right out and puts this blocks in compression and the rivets goes in the dimension.

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Q Is that the swaging process?

A Yes. It is.

Q The forcing of those rivets together?

A Yes. Heading the rivet.

Q And that caused some problem in your manufacturing processes, is that right?

A Yes. It did.

Q It caused a binding which this change would take care of?

A Yes. The thing would size under .173.

Q Mr. Linde, when did that change take place?

A It says the transmittal date was 8-16-76.

Q So in the vicinity of 8-16-76, that change would have been effecutated in your manufacturing process?

A Yes. The originating date was 5-4-76 and the transmittal date was 8-16-76, and then it was some time after 8-16-76 to get the parts to that.

Q I am going to show you agin Plaintiff's Exhibit No. 11. What is that called? A design drawing?

A No. This is called just a print. A print of the model drawing.

Q Now that print shows the trigger does it not?

A Yes. It does.

LEWY

PENGAD CO., BAYONNE, N.J. 07002 FORM 2094

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Q Now the design print for the trigger specifies a .172 maximum width of the trigger does it not?

A Yes. It does.

Q As a matter of fact th at dimension is so important that that note was subsequently added to that design was it not?

A No. The note had nothing to do with that of any importance.

Q Let me show you what has been marked as Plaintiff's Exhibit No. 12. What does Plaintiff's Exhibit No. 12 deal with?

LEWY

A Design change request for the Model 700 trigger.

Q And is one of the changes numbered 17 on there?

A Added note.

Q And what note was added to Plaintiff's Exhibit No. 11 by that design change request?

A Excuse me. Do you mean 17?

Q Did No. 17 add a note to Plaintiff's No. 11, the print?

A Oh, yes. It did.

Q And what was the note that was added, sir?

A The same as I read this morning.

Q What was that?

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1 A No burrs wider then the part thickness
2 permitted. Part must work freely at point .175 wide
3 slot.

4 Q That is the trigger had to work in a slot
5 that is .1725?

6 A That is in manufacturing and what you do you
7 just use --

8 Q Sir, just answer my question. Is that correct?

9 A Yes.

10 Q What is the reason given in the design request
11 form? The reason for that change?

12 A The reason for change, to improve the function
13 of the trigger assembly by eliminating interference
14 between trigger and housing.

15 Q Thank you. Mr. Olson found that the trigger
16 did not fall within the tolerances set for the upper
17 trigger arm did he not?

18 A He found that it was not to the .172
19 dimension.

20 Q That is the upper dimension of that trigger
21 arm isn't it?

22 A Yes, sir.

23 Q As a matter of fact his measurements if correct
24 fall outside of the warning which was added by that

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334.

LEWY

1 note do they not?

2 A That is not a warning.

3 Q They fall outside of the dimensions which are
4 specified in that note do they not?

5 A Yes. They do.

6 Q The note specifies that a trigger must work
7 freely at a .1725 slot. Is that correct?

8 A That's correct.

9 Q The measurements of the upper trigger arm of
10 the rifle in question were .1728 to a .173 were they
11 not?

12 A That's right.

13 Q Would weather conditions have an effect upon
14 the working of the trigger assembly?

15 A Yes. They would.

16 Q And would the cold weather condition change
17 the parts where they would not contract under extremely
18 cold weather?

19 A Let's put it in the context of this case. Do
20 you want it at 30 degree or 50 degrees?

21 Q Say 30 degrees?

22 A There wouldn't be much appreciable difference.

23 Q There would be some contraction, however?

24 A Oh, sure.

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335.

LEWY

1 Q And the amount of the contraction would determine
2 and be based upon the composition of the individual metal
3 and the individual part would it not?

4 A Yes, sir.

5 Q Do you know what automatic safety is Mr.
6 Linde?

7 A Yes. I know the terminology.

8 Q What is an automatic safety?

9 A It is a safety that if you function the action
10 the safety will go on to the on safe position.

11 Q When will it go on to the on safe position?

12 A At what part?

13 Q At what point in the operation of the rifle?

14 A The automatic safeties that I am familiar
15 with is determined by the mechanism.

16 Q As a matter of fact doesn't an automatic
17 safety function as soon as the firing pin is in a
18 cocked position and automatically take effect at that
19 point?

20 A It would be happening in that cycle. Yes.

21 Q And an automatic safety by its very name occurs
22 automatically without anybody doing anything to it.
23 Is that correct?

24 A No. You have to do something. Everything in
25

336.

1 a firearm is manually operated. It is tied in with
2 something else.

3 Q Would it be tied in with the working of a
4 bolt, for instance?

5 A It could be.

6 Q Does Remington Arms have any automatic safety
7 that it applies to its firearms?

8 A We have had.

9 Q What models was it applied to?

10 A I think the 510 and the Nylon 10.

11 Q Are those bolt action rifles?

12 A They are single shots, Rem fire rifle.

13 Q And the firing pin with an automatic safety
14 engaged will not be released until there is a manual
15 release of the automatic safety. Is that a correct
16 statement?

17 A Could you read it again please?

18 Q The firing pin when it is in a cocked position
19 with an automatic safety would not be released until
20 someone manually released the automatic safety. Is
21 that a correct statement?

22 A No. It would not be a correct statement.

23 Q It would not be a correct statement?

24 A No.

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LEWIS

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Q What is incorrect about that statement?

A Well, you would have to release the safety and pull the trigger to release the firing pin.

LEWY

Q You would have to release the automatic safety?

A Yes. And pull the trigger.

Q And pull the trigger?

A Yes.

Q But until you released the safety it would remain engaged holding the firing pin in a cocked position?

A That's right.

Q And you have sat here and listened to the evidence in this particular case and would an automatic safety have prevented the accident in this particular case?

A I can't say because an automatic safety, the only automatic safeties that I have ever seen are used on beginner's rifles, .22 Rem Fire and on shotguns normally break action. I have never seen an automatic safety on a center fire bolt action rifle and I have no idea if it would work.

Q The principle of holding a firing pin in a cocked position until the automatic safety is released was known

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prior to 1973 by Remington was it not?

A Yes. It was.

Q And that principle as applied to the 700 would have prevented the 700 in this particular case from discharging until that safety would have been released would it not?

LEWIS

A I cannot say that. I don't think that anybody could say that. If you could put an automatic safety--

Q Just a moment Mr. Linde. I am going to show you what has been marked Plaintiff's Exhibit No. 10 and that is an Owner's Guide which is distributed with the Remington 700 is it not?

A Yes. It is.

Q And that specific owner's manual refers to trigger adjustment does it not?

A It has the diagram for adjusting the trigger.

Q And it has instructions concerning on how to adjust the trigger does it not?

A Yes.

Q Is there any mention in that manual any where about placing any sealant on the adjustment screw?

A I don't believe there is. If you would like for me to go through and read it and verify it then I can.

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Q Can you verify it without reading it through, sir?

A I do not believe it does.

Q You do not believe it does?

A I do not believe it does.

Q Thank you. I am going to show you what has been marked as Plaintiff's Exhibit No. 21/that also is an instruction manual for a Remington 700 is it not?

LEWIS

A Yes. It is.

Q Does it also refer to adjustment of the trigger adjustment, adjustment of the trigger adjustment screw?

A Yes. It does.

Q And is there any reference there to replacing a sealant on the adjustment screw after it has been adjusted?

A No. It does not.

Q Now Mr. Linde, as a general principle, the dimensions of a hole as compared to the size of the screw determines how tight that screw fits in the hole doesn't it?

A No.

Q What determines how tight that screw fits in the hole, sir?

A On a screw you have two diameters. You have

1 the pitch diameter of the thread at the hole and the
2 thread in the hole and the pitch diameter on the screw.

3 Q And the method in which that screw thread comes
4 in contact with the screw thread of the hole determines
5 the tightness of fit between the screw and the hole?
LEWY

6 A The relationship between the pitch diameters
7 on the thread determines the fit.

8 Q And if the hole was slightly bigger than the
9 diameter of the screw on the pitch thread there, it
10 would be a loose fit would it not?

11 A We are not tracking together.

12 Q Probably we are not, sir. You are an engineer
13 and I am not. What I am trying to say is the basic
14 principle is that if you are putting a screw in a hole
15 and the size is right it fits tightly and if it is a
16 little too big it fits loosely?

17 A No. Threads come in different categories.
18 There is three common ones that we use. Three what they
19 call thread fits.

20 Q How does the thread fit relate to the fitting
21 in the hole?

22 A By the clearance allowed.

23 Q I am talking not about the movement back and
24 forth but the movement up and down?

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A I recognize that.

Q With more screw turns on a screw, would that make a determination as to how tightly it would fit in a hole?

A In this lateral motion, the more engagement you have the less sideways motion you would have.

LEWY

Q And would it have any effect on the up and down motion within the hole?

A No. I don't think it should if the spiral was right.

Q Now if the hole itself and I want to say a little bit too big and that is a non-technical term, but the screw would fit more loosely in the hole would it not?

A If the pitch diameter on your hole was bigger then the pitch diameter on the thread.

Q Would wear on the surface of the screw and on the internal surface of the hole, together with the wear on the facings of the turns of the screw and the thread, would that also affect how tightly the screw fit into the hole? In other words, if you move a screw in and out does it loosen up over a period of time just out of wear between those two parts?

A I am sure it is a mechanical surface and you

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1 experience some wear after a period of time.

2 A Do we know how tightly the trigger adjustment
3 screw fit into the hole before the trigger adjustment
4 on the particular Remington 700 that is in question
5 here?

6 A No.

7 Q In addition to the relationship that we have been
8 talking about between hole and screw size and the turn
9 of the screw and those factors, the other factor with
10 regard to Remington 700 that would determine the screw
11 fit and the tightness in there is the spring tension.
12 Is that correct?

13 A Would determine the tightness of the screw
14 thread?

15 Q Yes?

16 A Yes.

17 Q Your testimony this morning was was that spring
18 tension would keep that screw from moving in one
19 direction or another direction?

20 A That's right.

21 Q If all of the spring tension were removed,
22 the only two factors would be the factors that we have
23 been discussing?

24 A That's right.

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Q Mr. Linde, would you step down here. I think it would be easier for the jury to see. Now the tension that we are talking about ~~Mr. Linde~~ is the tension between this trigger adjustment screw here which and the trigger/is here, is that correct?

LEWY

A What tension are you talking about?

Q I am talking about the tension that would remain on the tension adjustment screw to keep it from moving in or out?

A Yes.

Q And the maximum tension on that screw had a given setting when the trigger was in a forward position, is that correct?

A That's right.

Q And the tension releases as the trigger releases to a rearward position, would it not?

A No.

Q The amount of trigger tension would remain the same as before it was in the rearward position?

A No. It would not.

Q My questions in the rearward position, the amount ^{of} tension would be somewhat different then the forward position?

A That's right.

1 Q Mr. Linde, if you took the trigger adjustment
2 screw--

3 A I can't let you touch that.

4 Q You can't let me touch the trigger adjustment
5 screw?

6 A No.

7 Q Why not, sir?

8 A It is not factory authorized.

9 Q If I were to loosen the tension adjustment
10 screw, I would have tension in the forward and if
11 I went to the rearward position depending upon where
12 that screw was, you could release all tensions could
13 you not?

14 A Yes.

15 Q And there would be no tension on that trigger
16 by that trigger adjustment screw. Is that correct?

17 A That is right.

18 Q Is that basically the situation we have there?

19 A What?

20 Q The situation where we have no tension on
21 the trigger adjustment screw with the trigger?

22 A Yes. That is right.

23 Q Mr. Linde, the trigger seems to be returning
24 to a vertical position?

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A That is right on this model.

Q Why is it returning in this manner, sir?

A Because of what you have got it made out of
and it is not to scale.

Q By the same token this is just a larger version
of the smaller one which appeared in that rifle
not?

LEWY

A NO. It is not. The parts are to dimension
but the masks in the parts do not duplicate the masks
in this other trigger assembly.

Q The only thing that^{re} turns the trigger to the
rearward position is the trigger tension?

A The only thing that returns the trigger to that
position is the tension, is the trigger tension, but it
will return it depending upon which way you are holding
the rifle. Now I don't know if the regular one would
do that or not. I am not going to say that but I do
know if you rotate it yes, the trigger will go ---

Q That is enough. Mr. Linde, let us take the
next step. We were talking this morning about the
manufacture of these particular trigger magazines?

A Yes.

Q If I understood you correctly when they were
being manufactured there was a device which had a four

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1 and one-half pound weight?

2 A That is right.

3 Q And that was connected to the trigger?

4 A Right.

5 Q And it was adjusted in such a way as to put
6 enough force on that trigger adjustment screw to move
7 the trigger to counteract the four and one-half pound
8 weight?

9 A That's right. That's correct.

10 Q Now that is without any contact between the
11 firing pin and the sear pin?

12 A No. No.

13 Q Okay, is there a firing pin on the sear when that
14 adjustment is made at the factory?

15 A No. There is not.

16 Q Now earlier you told me that there is pressure
17 exerted upon the sear and depending upon--

18 A It is already forward.

19 Q Fine. I see. Now based on a whole lot of
20 other factors that would determine the amount of
21 pressure which would be required to pull that trigger?

22 A Yes. Would you like to know how we do it?

23 Q No. I would not. You just answer my questions,
24 sir. But some of those factors would be the condition of

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PERGAD CO., BAYONNE, N.J. 07002 FJRM 2094

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the surface of the sear and the condition of the surface of the trigger connector?

A That's right.

Q The trigger tension?

A Right.

Q And other physical manifestations within the trigger such as the weight of the particular objects. Is that right?

LEWY

A Yes.

Q With the firing pin on top of the sear in a cocked position, it would alter the force placed on the trigger as a result of the contact between the trigger and the sear?

A Oh, yes.

Q If it was adjusted to four and one-half pounds without any pressure up here, would the added pressure increase the amount of weight necessary to pull the trigger?

A Oh, yes. It would.

Q Mr. Linde you stated that when they left the factory, the trigger pull was between three and five pounds?

A That's right.

Q How did it get to be less than four and one-half

1 pounds when it leaves the factory, if it was tested at
2 four and one-half pounds, when it leaves the factory
3 when you have the addition of the firing pin coming in
4 contact with the sear?

5 A We went through and we calculated what the
6 force was on the firing pin. When she loads that into
7 the fixture, she brings it down to a device and in that
8 device it has got a spring loaded plunger and that spring
9 loaded plunger is brought down and it is clamped and it
10 loads the top of the sear, so she loads that to some-
11 thing that is fairly equivalent to what the firing pin
12 load will be on the device. Now you cannot duplicate a
13 bolt assembly perfectly, so that even though she sets
14 it at four and one-half pounds and you put your bolt in
15 it, it might be a little under because the bolt might
16 have a little less tension or it might be over that
17 because the bolt might be back and forth off of that
18 and then you tend to get a variation.

19 Q Now Mr. Linde, if the trigger tension is set
20 at three pounds or above, you mentioned that you added
21 to the owner's manual, which is Plaintiff's Exhibit No.
22 10, a kind of safety factor by putting in three pounds.
23 It could be something less than that and still be a
24 safe amount of trigger pull. Is that a correct statement
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349.

1 of yours?

2 A That's right.

3 Q So anything in the neighborhood of three pounds,
4 such as two and three-quarter pounds to three pounds
5 would be a safe trigger pull would it not?

6 A Yes.

7 Q Now when you examined this rifle again,
8 wasn't the trigger pull in excess of two pounds?

9 A No. I did not take the trigger pull on that
10 rifle.

11 Q Do you remember what the trigger pull was?

12 A No. I don't know. I know that there was some
13 inconsistency in the trigger pull.

14 Q Did you determine what the cause of that
15 inconsistency was?

16 A Yes.

17 Q What was the cause of that inconsistency, sir?

18 A The inconsistency is that when you take the
19 trigger pull and when you take it when it is on its
20 edge, you are going to get a different measurement than
21 you do when you take and push that trigger all of the
22 way back underneath the sear where it is supposed to
23 be.

24 Q Mr. Linde, do you remember when I took your
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1 deposition in Ilion, New York, on December 18, 1981?

2 A Yes.

3 Q Do you remember the questions that I asked you
4 during that deposition?

5 A No. I don't.

6 Q Do you remember the question that I asked you,
7 "Q Do you know what the trigger pull was at the time
8 that you examined the rifle?" Your answer was, "Yes."?

9 A I don't remember but go ahead.

10 Q And I asked you, "Q. How did you determine
11 that?" Your answer was, "They were adjusting those or
12 setting it, not setting it but checking with the spring
13 tension trigger pull guage. And I said, well that is
14 the trigger pull running and they said a little over two
15 pounds." Do you remember that answer?

16 A If you say so. No. I don't remember it.

17 Q And you were making reference to the rifle that
18 we have here today?

19 A That's right.

20 Q Mr. Linde, if vibration has no bearing on the
21 trigger adjustment screw and its ability to remain in
22 a set position, why do other manufacturers put lock nuts
23 on their trigger adjustment screws?

24 A Because they have a different system then we
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have.

Q The trigger adjustment screw doesn't adjust the tension on the trigger adjustment spring?

A It depends upon your mechanism, on how you are going to contain it. Also, the loads on it.

Q Mr. Linde, your manual for the model 700 was revised in 1972 was it not? I will refer you to Plaintiff's Exhibit No. 10?

A What do you mean "revised?"

Q Is that a revision of the owner's manual for the Remington 700?

LEWNY

A We are revising them all of the time. This is a Remington Owner's Manual. Yes. 12-72 is the revision.

Q In February of 1973 about two months after that, a sufficient number of complaints had arisen concerning owners attempting to adjust their triggers hadn't they?

A That is what that letter says, yes.

Q And the letter that you are referring to is Plaintiff's Exhibit No. 33?

A Yes.

Q Does that engender a change in the owner's manual?

A Yes. It did.

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1 Q Is that Plaintiff's Exhibit No. 18, sir, does
2 the change that it engendered appear in Plaintiff's
3 Exhibit No. 18?

4 A The change appears there. Yes.

5 Q And the change was that you went from the
6 adjustment of the trigger to a specification in
7 Plaintiff's Exhibit No. 18 that no adjustment of the
8 trigger by the owner is recommended?

9 A That's right.

10 Q And that was a change occurring in about a
11 four month period of time was it not?

12 A If that is what you say.

13 Q That is not what I am saying? Is that the
14 revision date of Plaintiff's Exhibit No. 18?

15 A It is 4-73. Yes. It is.

16 Q Now you stated during your direct examination
17 this morning Mr. Linde that you can tell how big a
18 problem is at Remington by how fast we react. Is that
19 a statement you made this morning?

20 A Yes. Correct.

21 Q Now the revision of the manual told the
22 change in the instructions in the adjustment of the
23 trigger adjustment of the trigger in a four month
24 period of time if the rifle had been on the market for

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LEWY

1 eleven years was evidence of an enormous problem wasn't
2 it?

3 A No.

4 MR. SCHWARTZ: I have no further questions.

5 COURT: Do you have any re-direct?

6 RE-DIRECT EXAMINATION

7 BY MR. ARMSTRONG:

8 Q Sir, I think you were asked about a new line
9 of safeties. Did you testify anything about that earlier?

10 A No. I have not.

11 Q One of the disadvantages to an automatic
12 safety bolt (strike that) What are the disadvantages
13 to an automatic safety on a bolt action repeating rifle
14 at this time?

15 A What is the use of having a repeater when
16 you load your shells in. You see something that you want
17 to shoot. You shoot and you open up and close and you
18 are going to shoot again and the rifle won't discharge.
19 What would be the advantage of that? Why would you want
20 that on a rifle. If your safety came on and you did your
21 shooting and then you cycle it and you have got to take
22 the gun off safety. We had when we were working on trap
23 guns where you shoot out in the field, some of these trap
24 guns, not trap guns, but break action guns that have

25 354.

1 / automatic safeties and the people would shoot, break
2 the gun and go to shoot again and the bird would go
3 and they pulled the trigger and nothing would happen
4 because they forgot to take the safety off. They are
5 good for single shot where you are trying to teach a
6 beginner gun safety because what it does, it forces him
7 to reconcile the safety of every shot but for a repeater
8 it would be worthless.

9 Q In other words, if you had some device like
10 that, you could not fire rapidly again?

11 A No. You could not.

12 Q Do you know anyone in the United States that
13 manufactures a repeating bolt action rifle that has
14 that kind of system?

15 A I personally do not know of any. ✓

16 Q If you tried to put some kind of --I assume
17 anything could be done if someone wanted to do it, if
18 you put some kind of automatic safety in could you see or
19 tell if it was accurately functioning or out of function
20 if you were operating it?

21 A No, because it is something that is mechanically
22 happening for you and the problem there is that it is
23 like an invisible arm running a mechanism for you.

24 Q You don't have anything like you have on a
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two position or three position safety where you could see it and have some kind of mechanism running down in there so that you see the basic parts moving?

A No. You could not.

Q There wouldn't be any way that you could tell externally unless you went around and stuck your eye up into one of those slots?

LEWY

A Function it mechanically to make sure.

Q Mr. Line, you started to make some explanation of your some of your findings. Do you recall that? If you do, is there something that you want to add to that particular question?

A I don't remember it.

MR. ARMSTRONG: I have nothing further. Thank you very much.

COURT: You are excused, sir. Thank you very much.

+++++