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Wednesday, July 1, 1936

10:30 o'clock a. m.

Court convened pursuant to adjournment.

PRESENT: Messrs. Threedy
Parker

C A L L A R D L I V I N G S T O N

resumed the stand for further direct-examination by Mr. Threedy:

MR. THREEDY: Has the Court the book of prior art patents?

THE COURT: Yes.

MR. THREEDY: Q Mr. Livingston, yesterday on direct-examination you explained to the Court the construction and operation of the device of each of the Doucet, Hoxie and McCullough patents. Advise the Court whether or not you have an opinion that a mechanic skilled in the art and having knowledge of the disclosures of the three patents named could produce a device which would include all the instrumentalities of the device of the patent in suit, particularly the device of claims 1, 2, 10 and 11, and if so, explain to the Court what that opinion is.

A Yes, I have such an opinion. The Doucet, Hoxie and McCullough disclosures could be readily combined to produce

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a device which would have the elements of claims 1, 2, 10 and 11 of the patent in suit. For the purpose of explaining that opinion I have had prepared Defendants' Exhibit G, which shows Figure 1 of the Doucet patent, and the single figure of the Hoxie patent, and Figure 1 of the McCullough patent, in combination. In effecting this combination it is not necessary to alter either or any of these disclosures.

The Doucet light gun was simply connected by these two leads 18 and 19 to leads which already existed in the McCullough patent, the lead 18 of Doucet being connected to the positive side of battery 38 in McCullough and the lead 19 from Doucet being connected to one of the magnets in the register or shot counter of McCullough, just below the point indicated at 39 in the latter.

The circuit connections connecting the Doucet light gun with the McCullough circuit, as I have just pointed out, are indicated in blue in Defendants' Exhibit G.

From the output of the amplifier 20 of Hoxie, the lead 25 of the latter was connected to the signal means 35 of McCullough at one side thereof and the lead 26 from the Hoxie amplifier was connected to an electromagnet 23 in McCullough, which electromagnet releases the target 22 to indicate a hit.

The other side of this electromagnet 23 is connected

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to a negative side, let us say, of battery 14, and the positive side of that battery is connected at lead 36 to the other side of the signal means 35.

I believe I stated that it was not necessary to alter McCullough in effecting this combination. I have simply hooked in at the obviously convenient places.

We have, for purposes of simplicity in making this drawing up, omitted unnecessary circuit connections in McCullough because they would simply clutter up the sheet and be confusing.

Each of these devices operates as it did alone, and in the operation of the combination a pull on the trigger B of the Doucet gun will illuminate the light to cause a flash to be emitted from the gun. That light will be operated through the lens 10 along the line 11 -- No, I am mistaken in that 11. Simply along the dotted line through an aperture of the rotating disk 11 and impinge upon the photocell B in Hoxie. That photocell will affect the amplifier, which in turn will cause a change in the output current of that amplifier and, by leads 25 and 26, that current change will effect an operation in the McCullough mechanism to operate electromagnet 23 and pull back this little latch 21 to release the target 22 to indicate a hit. At the same time the signal

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means in the form of a symbol here will be operated to give a crash simulating the sound or report of a gun and this shot counter R will step up, indicating one shot. The target 11, of course, is being rotated meantime by the motor 16.

This combination does not have a shot-limiting means, and I think that is the only element of the device defined by claims 1, 2 10 and 11 which is omitted by this combination, but such a limiting means would be very easy to apply. For example, in one of the leads 18 or 19 there is a series arrangement of this combination to permit a predetermined number of shots, let us say 10. At the termination of the tenth shot the gun would be rendered inoperative. Such switches are very common and of very great variety and it would be very elementary to apply the switch in the manner I have described, or it could be applied in other parts of the circuit. I think if it were put in the gun circuit it would be the simplest and have the quickest effect.

Q Mr. Livingston, will you now refer to the patent in suit, please? With your understanding of the descriptive part of the patent in suit and the disclosure of that patent, advise the Court whether or not you find any reference in such descriptive part which would enable you to explain to the Court what element or elements constitute the target as that term

is employed in defining the device of the claims in issue.

A If I understood your question correctly, you asked what part of the specification of the patent in suit defines the term "target" as that term is used in the claims.

Q I am asking you whether the descriptive parts or the drawings of the patent in suit furnish you with any information which would enable you to explain to the Court what element or elements constitute the target as that term is employed to define the device of the claims in issue.

A In the specification, on page 1, about line 32, I find the language, "target portion 48," which indicates that the target is the member 48.

Q The target portion 48, in your opinion, based upon your understanding of the device of the patent in suit, is that the target which is provided with an aperture as defined in the device of the claims in issue?

A Yes, it is. The aperture 61 is in the target portion 48.

Q From your understanding of the descriptive part of the patent and the disclosure of the drawing of the patent in suit, do you find any reference in such descriptive part or disclosure which would enable you to explain to the Court what element or elements constitute a drop?

A No, I do not. The term "drop" is used in the claims and

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is also used in the specification but it is not defined and I have been unable to determine from diligent study of the patent what is meant by the term "drop."

Q The target portion 48 which you have testified is the target provided with the aperture as defined by claims 10 and 11 of the patent in suit, is that the element of the patent which is disposed in a vertical position and is adapted to drop into a horizontal position when a hit is registered?

A Yes, it is.

Q State whether or not under these circumstances it is your opinion that claims 10 and 11 are or not consistent with the disclosure of the patent in suit, including the drawings and the descriptive part of the patent in suit, in so far as those claims relate to a drop and means for releasably holding the drop in raised position?

A Well, as I have stated, having been unable to determine what is meant by the term drop from the patent, either the specification or any other part of the patent, claims 10 and 11, which include a drop, are unintelligible to me for that reason, and the structure defined or the device defined by those claims I cannot relate to the specification of the patent.

Q Then you would say, under those conditions, that claims

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10 and 11 are misdescriptive of the device of the drawings and specification of the patent in suit; is that correct?

A Yes, they are.

Q Refer to the patent in suit and advise the Court whether you find in the specification a description which would support the expression, "signal means actuated by the current from said amplifier," as recited in claim 1 of the patent in suit.

A No, I do not find any such structure in the drawings of the patent in suit.

Q I was speaking of the specification of the patent in suit, Mr. Livingston,

A Nor in the specification, for that matter. There is no signal means shown or described which is operated by current from a photoelectric amplifier.

Q May I inform you, Mr. Livingston, that the device of claim 1 of the patent in suit is described as including, among other things, "signal means actuated by the current from a photoelectric cell amplifier"? Advise the Court whether or nor the word "from", in your opinion, is controlling as indicating an agency which operates the signal means of the device thus defined by claim 1 of the patent in suit?

A Yes, that word "from" is controlling and it says plainly, in my opinion, that the current or the agency, which is the

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current, which operates the signal 83, must come from the photoelectric amplifier.

MR. THREEDY: Did the Court understand the witness' answer?

THE COURT: No, I did not.

MR. THREEDY: Will you read the question and answer?

(The last question and answer were read)

Q Then, Mr. Livingston, is the Court to understand that the word "from" used in claim 1 of the patent in suit and used in the expression, "signal means actuated by current from said amplifier," in claim 1 of the patent in suit, distinguishes the current of the photoelectric cell amplifier of the patent in suit from current from some other source other than the amplifier?

THE WITNESS: I wonder if you would please read me that question?

(The question was read)

A Yes; positively.

Q Then, Mr. Livingston, advise the Court whether or not, in your opinion, a device, to conform to the description of claim 1 of the patent in suit by virtue of the expression "signal means actuated by current from said amplifier," as used in claim 1 of the patent in suit, must include as a part of its structure a signal means which is operated by current from the

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photoelectric cell amplifier?

A Yes, claim 1 calls for such a signal means.

Q Advise the Court whether or not, in your opinion, the shot counter and the limiting switch of the patent in suit in any manner cooperates with the target mechanism to push the target mechanism, to push or urge the target portion 48 into hit position when a light impinges upon the cell?

THE WITNESS: Will you please read the question?

(The question was read)

A The shot-counter mechanism, which is generally indicated at 73 in Figure 4 of the patent in suit, in no way cooperates or operates with the target mechanism to cause the target portion 48 to fall into a hit position.

MR. THREEDY: That is all, if the Court please.

THE COURT: Cross-examine.

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CROSS-EXAMINATION

By Mr. Parker:

Q How long have you been a patent solicitor?

A Something over five years.

Q How long since you were admitted to practice before the Patent Office?

A Something over two years.

Q How long have you been in the employ of Mr. Threedy?

A Over three months.

Q Is my understanding correct that you are now in his employ?

A Yes, that is correct.

Q Are you familiar with the file wrapper of the patent in suit?

MR. THREEDY: That is objected to as not proper cross-examination, if the Court please.

MR. PARKER: He has answered questions which would seem to indicate such familiarity with the patent, would indicate that he has studied the procedure leading up to the issue of the patent. He has qualified as a patent expert.

THE COURT: The question is whether or not it is proper cross-examination. I will sustain the objection,

MR. PARKER: Q I hand you Plaintiffs' Exhibit 6, which is a certified copy of the file wrapper of the patent in suit, and I ask you to look through it and to read from the Patent Office actions in it the names and numbers of whatever patents of publications are cited by the Patent Office.

MR. THREEDY: If the Court please, I think that is improper. This witness has not testified concerning any contents of the file wrapper.

THE COURT: I will sustain the objection.

MR. PARKER: Q Referring to Defendants' Exhibit G, am I correct in my understanding that you have combined in one showing parts of the structures of three different patents?

A That is correct.

Q Referring first to the Doucet patent No. 1,451,294, which I understand has been offered in evidence, are you familiar with this patent?

A I have read it; yes.

Q From the drawings and description and claims of this patent, have you reached an opinion as to what the purpose of the structure of the patent is?

A I assume you mean its useful purpose?

Q As expressed in the patent.

A Its intended use?

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Q Yes.

A Answering in the light of this, the weapon was, as I recall, designed for practice of marksmanship for night engagements, and things of that sort, for use by the military.

Q Is there any disclosure or description in the patent of the function of the member indicated at 2 in Figures 1 and 2?

A I do not immediately find the exact language which describes its function, but I will try to answer your question by saying its function is to project a beam of light.

Q Can you tell me how the weapon operates to project this beam of light?

A The source of energy is connected to the leads 19 and 18 and a pulling of the trigger effects a connection to the lamp 2 and lights the same.

Q Does it direct a beam of light or a flash of light?

A A beam. As I recall it, the light is steady unless the trigger is depressed.

Q Will you please read the sentence from the patent which begins in the middle of line 65 of page 1?

A I read, beginning with line 65 of page 1:

"The electric lamp may be switched in only at the moment of firing or the source of light may be normally obscured by a shutter which is operated to permit of the projection of the beam at that moment."

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Q Does that indicate a steady beam or a flash?

A To my mind that indicates neither, alone.

Q Would you care to express an opinion?

A It could be either, I would say, from that sentence.

Q What are the elements 18 and 19 of Figure 1?

A They are leads, power leads.

Q Do I correctly understand you to say that the purpose of the Doucet patent is marksmanship practice for the military?

A I think I said that was my recollection of its stated purpose.

Q Does the patent teach how this purpose is attained?

A I do not understand the import of the question.

Q Is there any description in the patent of the operation of the device, how it is used?

A Yes, I think on page 1, beginning with line 42, there is a short description.

Q Please read the sentence which begins in line 42 of page 1 of the patent.

A Reading from the patent:

"Now according to this invention, the fire-arm, which may be an effective weapon or a dummy, is fitted with means for projecting a beam of light when fired and the illumination of the object or target, or the disk or spot light produced by such beam affords an adequate means for determining the accuracy or otherwise of the aim."

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Q On the basis of the language of that sentence which you have just read, are you able to form an opinion as to just how the marksman checked his aim or knows whether his aim is correct?

A Yes. Having taken aim and pulled the trigger, he is able to tell by the relative position of the target or object at which he has shot and the light how accurate his aim was.

Q You mean he shoots a flash of light at the target?

A His target, if his aim is proper, his light will be illuminated.

Q And it is the illumination of the target which he sees with his eye which is his guide?

A That is my understanding of it; yes.

Q Is there any description in the patent of the nature of the target?

A I do not recall one.

Q Now refer to the Hoxie patent No. 1,475,583, which I understand has been offered in evidence.

MR. PARKER: It is correct, these patents have all been offered in evidence, Mr. Threedy?

MR. THREEDY: Yes, I have offered them for the convenience of the Court.

MR. PARKER: Are the patents given individual numbers?

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MR. THREEEDY: They are all in a book of prior art patents, this patent, together with others, is contained in the book which has been offered.

MR. PARKER: Does that book, which I have not seen, include all the patents or publications?

MR. THREEEDY: I guarantee the book contains every patent, notice of which has been served on you.

MR. PARKER: Well, referring to the Hoxie Patent No. 1,475,583, are you familiar with this patent?

A Yes.

Q Is there any language in the patent or any indication which enables you to form an opinion from an inspection of the patent as to what was the purpose or use of the structure shown and described in the patent?

A Yes, the title of the patent is a fair indication of its intended use.

Q What is its use?

A It was designed as a variable current generator.

Q Referring to this Hoxie patent, does A indicate a source of light?

A It does.

Q Does it indicate a lens?

A Yes.

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Q What, in your opinion, is the purpose of the lens 10 in cooperation with the source of light A?

A Its intended purpose was that of concentrating the light from the source A into a form suitable for direction upon the rotating disk 11 and the aperture 17 therein.

Q What is the purpose of the member 12?

A The member 12, as I recall, is a fixed aperture behind the target. That serves a similar purpose, that is to say, the purpose of concentrating the light which passes through the aperture to the photocell, preventing a spread.

Q Are there any means shown in Hoxie for aiming or varying the aim of a flash or ray of light?

A Yes. The light A is schematically indicated in the patent drawing. That light is apparently movable. Circuit connections which would indicate whether the light was constant or intermittent are not given, and in my opinion that showing indicates that the light may be moved at will respective to the disk, and the nature of the light emitted may be intermittent or constant as desired.

Q Is there any mention in the patent of moving the light A or of any means for moving it or any purpose for moving it?

A I believe not.

Q Is the lens 10 described and shown as movable?

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A The lens 10 is shown, let me say, schematically in the same sense that A is. It is not described as fixed or movable, and I therefore believe that the reader of the patent would be at liberty to move it or not as he desired.

Q Is there any indication in the patent or any reason or any means for moving it?

A No. I would say that the patent would suggest that both the lens A and the light 10 could be held constant, that is, immovable.

Q If they are held immovable in the position shown in Figure 1, will they, in your opinion, perform the function demanded by the structure described and shown?

A If I understand you correctly, you ask whether, if the light A and the lens 10 are held fixed, they will function as requested?

Q Certainly.

A Yes, I believe they will.

Q Are any means shown for moving the member 12?

A No.

Q Is there any suggestion in the patent of any purpose for or advantage of moving any one of the members you have just testified about?

A No, there is not. The fact that they are not described as

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either movable or fixed, leads me to the opinion that they may be used as desired, that is to say, they may be moved or held fixed.

Q But you find no suggestion in the patent that they should be moved or that there is any advantage in moving them?

A No.

Q How do you define the member 11?

A The member 11 is a disk, rotatably supported evidently, and it has an apertured disk carrying a plurality of apertures 17 adjacent its outer periphery.

Q Has it the function of a target?

A It certainly could have the function of a target; yes.

Q Has it, as shown in the patent, the function of a target?

A No.

Q How do you define a target?

A A target may be said to be that which is aimed at, which is shot at, which is sought to be hit.

Q Is the member B a photoelectric cell?

A Yes.

Q How is it mounted?

A The structural mounting is not shown in the patent. It is schematically shown, as are some of the other elements, and it is positioned behind the rotating disk or target 11 relative

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to the light source A. I believe I stated it is positioned relative to the apertures in the disk as well.

Q Assuming that the members 10 and 12 are kept in fixed position, is there any suggestion in the patent or from the patent, in your opinion, any advantage of moving the cell B?

A No.

Q Are any means shown in the patent for moving the cell B?

A No.

Q Is it correct to say that the cell B is connected in circuit with the amplifier?

A Yes, it is.

Q In the line of connection or circuit between the amplifier and the cell, do you see any moving contacts?

A No, the circuit connections between the cell and the amplifier are fixed. Of course, there is no reason for applying them in the showing.

Q And none are shown?

A None are shown.

Q Is there any suggestion you can get from the patent of any purpose for fixed and moving contacts interposed between the cell B and the amplifier, which I judge is indicated at C.

A Such contacts are expedients and if there is any need for them, any desire for them, they may be readily applied,

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but they are not shown in the patent or called for.

Q Does the patent suggest any reasons why they should be used?

A The patent --

Q The patent as it stands.

A It neither suggests reasons why they should be used or not used.

Q Then would you say that patent was silent on that point?

A I believe it is.

Q Referring to the McCullough patent No. 561,124, please look at Figure 1. Am I correct in my understanding that in the target apparatus shown the gun A does not emit a flash or beam of light?

A That is correct. It is not that type of electric gun.

Q Am I correct in understanding that nowhere in the McCullough patent is there any suggestion of the employment of a photoelectric cell?

A That is correct.

Q Or amplifier?

A That is correct.

Q Do you see in the McCullough structure, as shown in Figure 1 or as shown in the schematic selection of Defendants' Exhibit G, a traveling target?

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THE WITNESS: Would you repeat that question, please?

(The question was read)

A Figure 1 of McCullough does not have a traveling target, but other figures do.

Q Will you please point out the figure that does?

A Figure 7, the member 26.

Q What means are employed to impart travel to the traveling target 26?

A It is the clockwork mechanism indicated in Figure 7-A at 25.

Q You mean mechanism that has to be wound up?

A Yes.

Q What stops the operation of the moving target 26?

A I do not recall that there is anything provided to stop it. It is set in motion and allowed to move until it runs down.

Q Is this motion in any way affected by anything done in connection with the gun A?

A No.

Q Is this motion in any way affected by the number of shots taken?

A No.

Q Is any photoelectric cell employed in connection with this

target?

A None.

Q Is there any portion in connection with the target 26 which can be described as a drop?

A Well, I don't know what you mean by a drop, Mr. Parker.

Q I would define a drop as a member which, in response to the use of the gun in a target structure of this kind, drops to indicate a hit.

THE WITNESS: And your question again, please.

(The second preceding question was read)

A In accordance with your definition, I would say not.

Q Is there anywhere in the McCullough patent an element which could be described as a target drop or which drops in response to a hit?

A Yes, I think in accordance with your definition, there would be several drops. For instance, in Figure 7-A, just referred to, the member 22 could be called a drop in that sense.

Q How does the member 22 operate in response to a hit?

A The member 22 moves to indicate a hit.

Q Does it drop?

A Yes, it does.

Q When the member 22 drops, where, in order to make it drop, does the user of the gun aim?

A He aims at the element 22 itself. The reason I hesitate in answering that is because in some of the other so-called targets in McCullough's figures, he does not have animal characters but simply the usual target structure, and of course, when you shoot at those with his gun A, you are aiming at characters delineated on the target background or support, whereas when you are shooting at some of the other characters which do have animal characters, such as 22, you aim at the animal.

Q Is there on the McCullough structure, as shown in the patent itself or in this excerpt from it in Defendants' Exhibit G, any member responsive to the number of shots, which indicates the number of shots?

A A shot counter; yes.

Q Please point out the part of the patent which refers to it.

A Figure 1. The register R is a shot counter.

Q Is this shot counter described in the body of the patent, in the specification?

A I think it is. It is described, for instance, on page 3, beginning with line 38, and I think that is the same part I read yesterday.

Q Doest this shot counter operate in any way to limit the number of shots which should be taken?

A You mean by its physical ^{effect} upon the gallery arrangement?

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Q Yes.

A No, it does not, not as shown.

Q Is it merely to register how many hits, or rather how many shots have been taken?

A Yes, it is, and I believe in my description of that Defendants' Exhibit G I explained that such a shot-limiting means could be made either a part of the register, the gun circuit or other parts of the circuit if desired.

Q Am I correct, that you testified to the effect that Defendants' Exhibit G, including parts of the Doucet, Hoxie and McCullough patents, constituted of itself a complete anticipation of the claims relied upon, 1, 2, 10 and 11?

A I do not know whether I used that exact language, but I did say that the combination shown by Defendants' Exhibit G produces a target mechanism having the functional -- which corresponds functionally to the subject matter of the claims enumerated.

Q In your opinion, does that combination of elements shown in Defendants' Exhibit G support all the limitations of all the claims you have just mentioned?

A Not in terms. I believe I pointed out, for instance, that the shot-limiting switch was lacking, and I explained how such a switch could very simply be supplied without any exercise

of invention, in my opinion.

Q You pointed out, in Defendants' Exhibit G, the traveling target?

A The member 11 may be said to be a traveling target.

Q Is the member 22 of Defendants' Exhibit G a target?

A Yes, you can also say that is a target.

Q Then two targets are shown?

A That would be correct; yes.

Q Are these two targets indicated as cooperating?

A They cooperate in this sense, that a hit registered properly upon the target 11 will be indicated by the target member 22.

Q Would it not be more proper then, to say that the member No. 22 of Defendants' Exhibit G is a signal means?

A Yes, you could call it that.

Q You have called the member 11 a traveling target. Where is the driving motor for that target?

A The motor 16.

Q Do you find means in this Defendants' Exhibit G for establishing a circuit for the motor?

A No, the motor 16, as shown in Hoxie, like most of the rest of the elements already pointed out, does not have any particular circuit connections and the user of the patent and the public is apparently at liberty to connect the motor and use

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the elements as desired or as necessary.

Q But you do not find in the Defendants' Exhibit G anywhere any means for establishing a circuit for that motor?

A No, it was not thought necessary to indicate that. In fact, they are not indicated in the patent. We did not make any change from the patent.

Q Do you find any shot limit switch in the structure of Defendants' Exhibit G?

A No, I pointed out, I think, that there was no shot-limiting switch. I told how one might be applied.

Q Then you do not find in Defendants' Exhibit G means for establishing a circuit for the motor which includes a shot-limit switch?

A No.

Q Do you find electrical actuating means for the shot-limit switch?

A There being no switch, I do not.

Q No actuating means. Then I presume you do not find an actuating means for the shot-limit switch which must be successively operated finally to open the shot-limit switch?

A That is correct.

Q And you do not find a circuit for said electrical actuating means controlled by the trigger switch?

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A That is correct.

Q Now referring to the Doucet patent again, and using, if you wish, simply the parts shown in Defendants' Exhibit G, what function has the trigger and the trigger switch of Doucet?

A As shown in Defendants' Exhibit G, you ask?

Q Yes, or you can use the whole patent.

A That of closing a circuit for the light source 2, primarily.

Q Does the Doucet patent suggest any reason for employing a trigger switch to perform anything besides controlling the light which flashes from the gun?

A No, I would say not.

Q Is there, in the Doucet patent, any suggestion that the lines 18 and 19 have any function other than to provide energy for the bulb 2?

A They are obviously and literally provided for the purpose of supplying power to the light source 2 and no source of power has been indicated in the Doucet patent, so that we do not know, for instance, what particular connections may have been intended or desired by the patentee.

Q Am I correct in stating, then, that there is no suggestion in the Doucet patent that the lines 18 and 19 should be put in

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circuit with shot-counting means or sounding means or signal means of any kind?

A Yes, that is correct.

Q You said, did you not, that in the function of the Doucet structure, the user of the Doucet gun corrected his aim by seeing whether or not he spotted a beam or flash of light on some target not shown in the patent; is that correct?

A If I understand your question, the operation of the Doucet gun results in a steady beam of the light and the operator of the gun, in addition to seeing what the instantaneous result of his aim is, may correct the aim if he desires?

Q By moving the gun?

A By moving the gun it is controlled.

Q But you do not find any suggestion in Doucet of any reason for tying up his lines 18 and 19 to any recording mechanism?

A Having left the conductors 18 and 19 free, as he did, there is no suggestion as to what they might be connected to except generally he has indicated a source of power.

Q Now referring to the Hoxie patent, you said that the purpose of Hoxie was to provide a variable current generator?

A That is right.

Q Assume that in the use of the Hoxie device a steady beam

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of light passes through the lens 10 and through the apertured member 12 against the cell B, which is aligned with it, what is the effect of the rotation of the disk 11?

A To interrupt the beam of light.

Q What is the result of that interruption?

A Ultimately, an operation of the amplifier C.

Q Why does he want to interrupt his light, so far as you can tell from the language of the patent itself?

A His intention was to provide an apparatus which would give him the variable wave form.

Q Assume that this light source of Hoxie is moved so that the light, instead of following the dotted line there shown, strikes some interior portion of this disk, so that none of the light passes through the apertured member 12. Will the device function for the expressed purpose?

A If I understand your question, you ask whether or not light from the gun falling on a portion between two apertures--

Q No, a portion out of alignment with the apertures, I mean.

A In other words, it misses the aperture, misses the target?

Q Exactly. Misses the apertured part of the target.

A Misses it, and therefore, the question is, would the apparatus function?

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Q Would the apparatus function for Hoxie's expressed purpose?

A That amounts to this: If there is no light on the cell B, does the apparatus work? No.

Q It does not?

A No.

Q In other words, if the aim of this flash of light or beam of light is bad, and you do something to the Hoxie circuit which interferes with the constant alignment of that stream of light, that beam of light, with the aperture, which permits it to reach the photoelectric cell, you are disturbing and interfering with the normal operation of the Hoxie structure. Am I correct?

A No, I would not say that was true. Hoxie did not define what kind of wave form he wanted and in fact, he suggests that the whole purpose of the thing is to provide an apparatus which would give a response or wave form at the output of the amplifier such as might be desired. Now that means that not only could he use a steady beam of light to get a particular form but he could use an intermediate beam or could change the apertures for that same purpose.

Q What type of wave form would Hoxie get if he put an inaccurate marksman in front of his disk 11 and peppered at it

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intermittently with a gun shooting flashes of light?

A He would get an interrupted form, a series of peaks, let us say, spaced haphazardly.

Q Supposing the user of the gun missed it altogether, or supposing no one used the device, did not fire the gun, would the Hoxie structure still serve as a variable current generator?

A No light, there is no light at all.

Q Referring again to the Hoxie structure or patent, is there anything in the Hoxie patent which would give you the opinion that Hoxie intended to interrupt the variable current produced by his generator?

A That he intended to interrupt the current?

Q Intended to interrupt it from time to time or use it in connection with the game of marksmanship?

A There is no such expressed purpose in the patent. The schematic showing, the patent, of course, would suggest to me, for example, that such use might readily be made of it.

Q Then someone coming later might modify the Hoxie structure to suit some other purpose?

A Well, that someone would not even be necessary to modify it. Someone picking it up, it would suggest to such a person the marksmanship or target use, for instance.

Livingston-cross

Q But you find no targets in Hoxie in the sense of a target at which a marksman shoots, do you?

A Yes. For instance, if the light A were provided with a push button, it is not provided, in fact, with any circuit connections, so you are at liberty to provide any kind you desire, in my opinion, and if it were provided with a push button one could, for instance, wait until one of the apertures 17 was positioned before the member 12 and push the button and he would have a perfect target mechanism.

Q That would involve putting in a current control which is not shown in Hoxie, would it not?

A Shows no current supply or control for the element A. The answer is yes.

Q It would also involve providing Hoxie with means for directing his light, which is not shown in Hoxie; am I correct?

A I believe not. The light A could be moved at will.

Q Does Hoxie use or show means for moving it at will?

A He does in this sense, that the light A is not attached or fixed to anything. It is rather suspended in space.

Q Then you base that merely on the fact that Hoxie employed a schematic diagram to illustrate his patent; is that correct?

A It is correct as far as it goes. Even if he had shown it other than schematically the suggestion on the face of the

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patent is there to move the light as desired, in my opinion.

Q Do you find in Defendants' Exhibit G a movable target and means for moving the target?

A Yes, I do, the member 11 and the motor 16, respectively.

Q Do you find a drop operatively associated with the target?

A I do. Assuming that we define a drop as you defined it this morning, the member 22 corresponds to the drop associated with the target.

Q How was it located in relation to the target?

A In the showing of Defendants' Exhibit G?

Q Yes.

A It is spaced away from it.

Q How do you interpret the term "associate" or "associated"?

A Associated in a patent sense, its particular meaning, is that what you mean?

Q Yes, how would you define the term "associated" as you used it in your answer?

A Operatively associated.

Q Does that mean it has to be adjacent it?

A No.

Q Physically mounted on it?

A No, it is operatively associated. It does not have to be mounted on it.

Livingston-cross

Q Is a conductive connection through intermittent mechanism an association?

A In a patent sense, it is an operative association; yes. It is not a structural association.

Q Do you find any aperture in the drop?

A No.

Q Does the drop 22 in any sense form part of or is it directly associated with the member 11?

A Do you mean by directly, structurally?

Q Yes.

A I point to a difference between operatively and structurally associated. Answering your question structurally, it is not associated with the target 11, but it is operatively associated with it.

Q Referring to the Hoxie patent again, does the patent teach how rapidly the disk 11 should be rotated to obtain the patentee's result?

A No, that is one of the things he left to the will of the user, apparently.

Q Have you any opinion as to how rapidly that would in practice be rotated to obtain what Hoxie calls a variable current?

A You could have a very wide range of frequency of rotation

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for his purpose, so wide you could say almost any speed would suit the purpose of the patentee.

Q In relation to the prior art generally, about which you have testified, do you find any instance in one patent, not in a combination of references, do you find any instance where in any single patent a photoelectric cell is employed to cause a target portion or drop to fall? That is a question which can be answered by yes or no.

A Is that the answer you request?

Q Yes, or no.

A Yes, I do.

Q What single patent do you find showing a photoelectric cell operating a target drop?

A The Swedish patent which I mentioned yesterday shows such a circuit. I qualified it to this extent, that the drop is used here as an indicating means, and in that sense the gun in the Swedish patent may be said to be the drop or the indicating means, because that is the thing that is ultimately affected by the marksman's effort through the medium of a photoelectric cell in the patent.

Q Are you able to read Swedish?

A No, I do not read it.

Q Have you a translation of this patent?

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A Yes, I do have. Do you want me to produce it?

MR. THREEDY: If the Court please, the last sheet of the book of prior art patents constitutes the translation.

A I am not sure that I have it at hand here.

MR. THREEDY: Here is is Mr. Livingston.

May I hand it to the witness, Mr. Parker:

MR. PARKER: Certainly.

Q Do you think you fully understand this Swedish patent?

A I believe I do.

Q Where are the photoelectric cells located in the Swedish patent?

A The photocells, and there are a number of them, are shown, for instance, in Figure 3 of the Swedish patent and are indicated by the numerals 14 and 13.

Q Where are these photoelectic cells located in relation to the gun itself?

A They are located on the gun.

Q On the gun itself?

A Yes.

Q How do they work, what is their function?

A This isa marksmanship device and it rather reverses the procedure we have here in the patent in suit, in that instead of aiming a beam of light with the gun, the gun is fixed upon

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a beam of light and when properly trained or reasonably directed at the light source, the selenium cells or photoelectric devices on the gun are operated to close circuits to one or more electromagnetic devices also on the gun, and position a movable element on the gun to indicate the relative accuracy of the aim. That connection is visible.

Q Is that your complete answer?

A Yes, that is the answer.

Q The photoelectric cell or these selenium cells are actually mounted on the gun structure?

A That is my recollection; yes.

Q Where is the target?

A The target is not shown, but it is indicated in Figure 1 by the arrow, which corresponds to a light beam.

Q Does this gun shoot a ray or flash of light?

A No, as I explained, it does not. It is the reverse. It receives the flash of light or ray of light.

Q Do you know the function of the central selenium cell 14 as shown in Figures 2 and 3?

A The circuit connections of that central cell 14 are not shown. That cell 14 would correspond in the showing of the patent to a direct hit.

Q What happens when a ray of light impinges on the cell 14

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of the Swedish structure?

A In the absence of any circuit connections to that cell, I could not tell you.

Q Is there not something said about it in the patent?

A Well, it is mentioned as a photocell. Its circuit connections, as I recall, are not discussed.

Q Have you a complete translation of that patent?

A Whether or not it is complete I do not know. I did not make the translation.

Q I am just wondering --

A I assume it is.

Q I am just wondering whether your translation includes a translation of the last sentence or two before the patent claims.

A It is not my translation, Mr. Parker.

Q The translation you have.

A I do not find a phrase corresponding to that general part of the patent offhand, the Swedish patent.

Q Do you think that by any chance this Swedish patent might be for a gun pointer?

A A gun pointer?

Q Yes.

A What do you mean by that, please.

Livingston-cross

Q Means for pointing a gun at a mark, such as an airplane, where you have a dark object against a uniform background.

A It could be used for that purpose.

Q You have no translation of the part of the Swedish patent which precedes the claims?

A I cannot identify it. I do not imagine, in any case, the translation follows word for word the patent, but I cannot correlate the few lines before the patent claims exactly with the translation I have.

Q Is it your opinion that there is any possibility that this Swedish patent might indicate a series of electromagnets which, when energized by the selenium cells 13, move the barrel 17 of the gun to aim at some mark and that when the aim is completed and the mark sends a light indication against the selenium cell 14 the gun is discharged?

A Oh, it could be used for that purpose, yes; and I believe I have explained something corresponding to that in the beginning.

Q You do not believe that action is described in the Swedish patent?

A I am not stating what is described verbatim in the Swedish patent.

Q The use of this structure is important, the details of it

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are rather important in connection with applying it to the claims of the patent in suit.

A My interest in the Swedish patent is simply this: It shows a photoelectric cell in connection with apparatus for aiming or indicating the aim of a gun, and to that extent it is a marksman's instrument or belongs in the category of shooting apparatus and target apparatus.

Q But you say it does not show a target?

A No, as such it does not.

Q Does it show a photoelectric cell employed to actuate a target?

A Not in terms.

Q Does it, in any sense, show a photocell employed to actuate a target?

A Bearing in mind a device of this kind, so far as it gives or can give an indication of aim, the operation of the device is such as to indicate the positioning of the weapon or part of a weapon relative to a target. Now the target itself, as such, is not shown. The indication is given on the weapon.

Q Is it correct to say, then, that the photoelectric cell or cells used in connection with the Swedish patent are employed in connection with the pointing or aiming of the gun and have nothing to do with the target?

A That is only partially correct. They do have something to do with the target. In fact, they indicate the aiming of the gun relative to some target, not any particular target.

Q Is there any operative connection shown of any sort between a target and a photoelectric cell in the Swedish patent?

A No.

Q Is it true then --

A May I explain this, that the photoelectric cells themselves may be considered as the target and, of course, in that sense, they would be operatively connected.

Q You mean, then, the gun has its own target on itself?

A That is one of the effects or results of the particular use of the photocells shown; yes.

Q You mean the gun is its own target?

A The gun has elements which are targets.

Q How does the user of the gun shoot at these targets?

A Well, for instance, assume that the arrow in Figure 1 represents a beam of light and that that gun is trained upon that beam of light, and let us say it is trained upon it in such a manner that the selenium cell 13 is struck by that light, circuit connections will be established which will actuate an electromagnetic device and produce an indication of the aim or hit.

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Q Have you ever seen a target which consisted of a ray of light?

A I can readily conceive of using a ray of light for a target.

Q Is there any description of such a target in the Swedish patent?

A No, it is only suggested by the arrow I mentioned in Figure 1.

Q Simply from the diagram of this foreign patent?

A Yes.

Q Then is it a fact that neither in the Swedish patent nor elsewhere you are able to point out in any single patent any instance of the employment of a photoelectric cell to actuate a target removed from the gun?

A I know of such a showing. I do not know whether it is competent for me to bring it up at this time. I have in my art such a device.

Q I am asking you to testify only about the material about which you testified on direct-examination. Anything else would be improper.

A I think the answer to that will be -- May I have the question again?

(The second preceding question was read)

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MR. THREEEDY: If the Court please, I believe counsel informed the witness that unless he had referred to material he has testified to on direct-examination it would be improper. I submit to the Court most respectfully that the question propounded to the witness would permit the witness to refer to any or all other publications found in defendants' book of prior patents, and I think, if the Court is inclined to sustain me in that respect, counsel's remark may have misled the witness.

MR. PARKER: I shall be very glad to withdraw the question and ask it in clearer form.

THE COURT: Very well.

MR. PARKER: Q In reference to the prior art about which you have testified on direct-examination, do you find in any single patent any instance of the employment of a photoelectric cell to actuate a target removed from the gun?

A I think the Wheeler patent meets the terms of that description.

Q Which patent?

A Wheeler.

Q Is that a patent about which you testified on direct-examination?

A Yes, I did.

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Q What is the number?

A It is No. 1,523,149. That is the means of control of electrical impulses.

Q Will you please point out the target in the Wheeler structure?

A The No. 10, indicated at 10, the particular target portion indicated at 13.

Q What is the purpose or function of the numbers 10 and 14 of Wheeler?

A 10 and 14 constitute a pendulum, which corresponds to a moving target. It is adapted to move to and fro.

Q Did you not define a target as something which was shot at?

A I did. It can be shot at.

Q Is the member 13 in the Wheeler patent shown in the patent as being shot at?

A Oh, yes, I would say it was.

Q What does the shooting?

A The light source 12 in the hands of an operator.

Q Any means shown whereby an operator can take the light of the source 12 and use it to shoot?

A Well, this patent is like that Young patent and the Hoxie patent in that respect. The light source 12 is suspended in

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space, as it were, and presumably it can be moved around at will.

Q Does the patent itself expressly or specifically teach shooting at the target 13?

A No, it does not.

Q I will rephrase my question. In the prior art about which you have testified on direct, do you find any combination of a gun shooting a flash of light at a moving target and a photo-electric cell moving with the target?

A Limiting the structure as you now have, my answer is no. Of course, the Wheeler still corresponds functionally to such an arrangement.

Q You think that is the express teaching of Wheeler?

A Express to what extent, please?

Q Would any ordinary reader of the Wheeler patent be directed by it to employ that as a target device?

A He would not be told in so many words to, no.

Q Just a minute. You are taking the elements of Wheeler and applying them to a use not taught by Wheeler.

A He could take the elements of your question and use them for target purposes.

Q Without any modification?

A Yes, without modification, assuming that he is at liberty,

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of course, to move the light 12 as he pleases.

Q To move the light 12 would he have to modify lens 15?

A No.

Q If he moved light 12 out of line with lens 15, where would his ray of light go?

A Into space, generally.

Q Would it then continue to fulfill the purpose for which Wheeler uses it, as expressed in his patent?

A No.

Q You mean, then, in order to use this as a target device you have to reduce or eliminate its value for Wheeler's purpose?

A No, I would say not. Wheeler's purpose is that of providing the electrical impulses. He does not specify or limit the use of the apparatus to the production of any particular kind of an impulse. He does describe impulses as an example, but he suggests, inferentially, at least, as I recall the description and specification, that the apparatus is useful for producing electrical impulses generally, and that being true, no modification or departure from the intended purpose of Wheeler would be necessary to produce a variety of impulses, and such impulses could be produced by moving the lamp 12.

Q Do you find a gun in Wheeler?

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A No.

Q Do you find any means in Wheeler for directing a flash of light, not a beam, but a flash of light, at the target?

A No; there again Wheeler is like Hoxie, he does not show any circuit to his lamp and you are at liberty to supply whatever connections you need.

Q But so far as the patent is concerned, they are not supplied?

A They are not defined or suggested.

Q Right. Do you find in any single patent in the prior art about which you testified this morning, any instance of a shot-limit switch?

A I believe not.

Q Do you find any instance in the prior art about which you testified this morning, of a movable target, a motor for moving it, a shot-limit switch in circuit with the motor?

A Only as I described in discussing the Hoxie structure, to the extent that such a switch could be associated in circuit with the motor; yes.

Q Do you mean you could build up a combination by using Hoxie as one of the elements?

A Hoxie has been described as one of the elements of the combination.

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Q But Hoxie does not show the combination?

A No, he does not.

Q Or any other single patent?

A I believe not.

THE COURT: We will suspend until 2:00 o'clock.

WHEREUPON a recess was taken until

2:00 o'clock p.m. of the same day.

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Wednesday, July 1, 1936

2:00 o'clock p. m.

Court convened pursuant to recess.

PRESENT: Messrs. Threedy
Parker

THE COURT: Proceed.

C A L L A R D L I V I N G S T O N

resumed the stand for further cross-examination by Mr. Parker:

Q Have you a copy of the Swedish patent No. 37,410 before you?

A I believe I have; yes.

Q Referring to Figure 4, what is the member 17?

A The member 17 is a movable part which simulates the usual gun barrel.

Q Are you sure that it merely simulates it? Could it be a gun barrel?

A Yes.

Q Is it described in the patent as a gun barrel or as a simulation of a gun barrel?

A Substantially as a gun barrel; not as a simulation. That

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is my term.

May I have that translation again, please?

MR. THREEDY: The translation, Mr. Parker.

The Court: You may have this copy (handing document to witness).

THE WITNESS: I am waiting for you, Mr. Parker.

MR. PARKER: I thought you were reading the patent to determine whether or not the patent describes that as a gun barrel or as a simulation of a gun barrel.

A I believe I answered it was not described as a simulation.

Q It is described as a gun barrel?

A Yes.

Q As described in the patent, is it your opinion that it is intended to, or adapted to fire a real shot?

A No; the gun is not intended to fire a real shot.

Q You are sure of that?

A Reasonably, relying upon the translation I have before me.

Q Are any means shown in connection with the patent for firing from the gun a flash or ray of light?

A No.

Q What is the member indicated as 18 in Figure 4?

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A The member 18 is, I believe, described as a fulcrum or pivotal point for the barrel 17.

Q What are the members indicated at 4 in Figure 3?

A The members 4 are a plurality of electromagnets.

Q What is the member 16?

A The member 16 is an extension of the barrel 17. It is a magnetic substance, that is, formed of a magnetic substance, and is positioned relative to the magnet 4.

Q What is the function of the member 16?

A The member 16 acts as an armature in connection with these same electromagnets 4.

Q What actuates the electromagnets?

A They are actuated by current from the battery 5.

Q What causes current from the battery 5 to flow?

A The closing of a relay switch. The relay winding is indicated at 7.

Q What actuates the relay switch?

A The relay switch is actuated by the winding 7 when current flows through the latter.

Q What causes current to flow through the winding 7?

A The conductive side of the selenium cell 13.

Q Is the selenium cell 13 mounted on the gun?

A It is.

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Q On the barrel?

A At the extremity of the barrel.

Q Are any means shown for moving it in relation to the barrel?

A No, it is fixed on the barrel and moves with it.

Q Is any manual trigger mechanism shown in connection with the gun?

A No, it is not.

Q Is any trigger switch shown in connection with the gun?

A No.

Q Are any means shown for causing anything to work or operate in response to the closure of a trigger switch or the movement of a trigger?

A No, the operation of the device, which would correspond or which would be responsive to the pulling of a trigger in a related class of device, marksmanship device, gun or the like, is only inherently present in the gun; that is to say, by moving the gun relative to the target or the like, which I consider the target, the operative results are procured which otherwise would be procured through the use of trigger mechanism.

Q Is the light the target, you say?

A Yes.

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Q Is the selenium cell in any sense a target also?

A It might also be considered a target; yes.

Q Then you have two targets?

A Yes.

Q Or as many targets as you have selenium cells?

A That would be a fair interpretation; yes.

Q Is the member 14 a target?

A In the sense, yes, that it is part of the plurality of individuals targets, cells.

Q Does the operator of the gun aim the gun at the targets 13 or 14?

A No, they are part of the gun. They are aimed, but the gun itself is not aimed at them. They are aimed with the gun.

Q In this case, you aim the target then, and not the gun?

A That is correct.

Q Does the gun barrel 17 move in relation to the stock 19 of the gun?

A It may; yes.

Q Do you understand that the member 16 is externally visible or is it housed within the stock of the gun?

A In accordance with the showing of Figure 4 it is housed within the stock.

Q What is the indicating means or signal means for indi-

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cating a hit?

A The position of the gun barrel relative to the stock.

Q As I understand it, the gun barrel 17 does not project a real bullet nor does it project a flash of light; is that correct?

A That is correct. This is simply a reversal of the operations we have been talking about here in conjunction with projecting a beam of light on to the photocell here. The photocell is positioned relative to the light and the effect is the same, but the operation is just reversed.

Q Is it your understanding then, that the purpose of this structure of the Swedish patent, as expressed in that patent, is to enable the user of a gun to point the gun accurately at a light ray of some kind?

A Yes.

Q What happens when he points it accurately at some ray or source of light?

A Assuming that the gun barrel is in a normal position relative to the gun stock, by that I mean particularly that the barrel 17 is extended substantially parallel with the stock portion indicated at 19, and the operator aims the gun at a light target, such as indicated by the arrow in Figure 1, and that light target or light of the target impinges, let us

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say, on the cell 13 of Figure 3, the photocell becomes conductive and operative to cause the energization of the relay 7. Thereupon, the switch of the relay closes and energy is transmitted from the battery 5 to one of the electromagnets 4. That electromagnet attracts the arm 16 of the gun barrel and will pivot that barrel relative to the stock in such a way as to give an indication of the accuracy of the aim within the limits determined by the general target structure. Well, I would like to correct that, within the limits defined by the group of cells in the housing at the end of the gun.

Q Then you are perfectly positive, are you, that the purpose of this device, as set out in the Swedish patent, is to tell the man who is pointing the gun whether he is pointing it in the right direction or not?

A That is one of its uses.

Q Is that its main use?

A That is the use I understand it is adapted for.

Q What other purposes has it?

A Specifically, I have not noted any.

Q Referring to Defendants' Exhibit G, I notice a part 22 taken from the McCullough patent. Is this member 22 the target?

A Is it the target?

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Q Is it a target?

A Yes, it may be a target.

Q Can it be actuated by the gun of Doucet shown at the left hand of Defendants' Exhibit G?

A It can be affected by the Doucet gun and in that sense actuated.

Q If the user of the Doucet gun shown in Defendants' Exhibit G points at the target 22 and strikes the target portion 22 with a flash of light, what happens?

A Assuming that none of the photoelectric mechanism, including the rotating target, is positioned relative to that member 22, nothing will happen.

Q Would you say then, that the member 22 in McCullough, in the environment in which it is associated in Defendants' Exhibit G, serves as a target?

A In that sense, no.

Q In the environment in which it is positioned in the McCullough patent, does 22 serve as a target?

A No. No attempt was made in formulating that combination to change the relative positioning of the various elements as they were shown in their respective patents.

It would be a simple matter to position that member 22, if we desired to do so, relative to the rotating disk,

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so that by aiming at that member 22 the same effects could be accomplished.

Q That was not my question. What I asked and what I would like to have you answer by yes or no is the member 22 a target or is it not a target when it is in the environment in which it is shown in the McCullough patent, taken by itself; is it a target or is it not?

A It is a target; yes.

Q But if you take the Doucet gun of Defendants' Exhibit G and point it directly at the target 22 and direct a flash of light against it, I understand you to say that nothing happens to the target 22.

A Yes, assuming that the cell and disk are positioned away from the member 22 such a distance that none of the light from the gun can affect the cell, then nothing is going to happen to the member 22.

Q That is not an answer to the question I asked. The question I asked was whether or not, in the assembly shown in Defendants' Exhibit G, if the Doucet gun is so pointed that the flash of light directly strikes the member 22, does anything happen to the target 22?

A Nothing will happen.

Q Then would it be safe and honest to say that in the assem-

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bly of parts shown in Defendants' Exhibit G, the member 22 works in a way different than it works in the McCullough patent? That is a question which can be answered yes or no and I request you to answer it that way.

THE WITNESS: I will have to have the question read, if you please.

(The question was read)

A Different from the way it works in the McCullough patent?

Q In other words, does the member 22 or does it not work in a different way in this assembly of Defendants' Exhibit G than it works in the original McCullough patent?

A No, the member 22 works in identically the same way it works in McCullough. It will be moved to indicate a hit on a properly directed shot.

Q In the McCullough patent does the marksman shoot at the member 22?

A I believe I am correct in saying that he does. I explained this morning there were several different target structures in McCullough and in some of them you do not shoot at the so-called drop, but at a portion immediately near it, and I recall in this particular instance, in connection with the target 22, you shoot at that target.

Q Then I understand you to say that in McCullough, when you

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shoot at the target 22, the target drops, and yet you have just said that in Defendants' Exhibit G, when you shoot the Doucet gun directly at the target 22 it does not drop?

A That is correct.

Q You still say that the target 22 works the same way in the assembly of Defendants' Exhibit G that it does in the McCullough patent?

A Yes, I do, for this reason, that the McCullough gun does not release anything in the nature of a projectile, neither light nor any body. The McCullough gun merely effects certain circuit connections that result in the movement of the member 22 if the aim has been accurate.

Q With reference to the Hoxie, or the part of the Hoxie structure shown in Defendants' Exhibit G, I notice that the disk 11 has a number of apertures in it. There are three shown. Do you understand it to be the teaching of the patent that only three apertures are employed, or does that indicate a complete circle of apertures?

A Those three apertures are intended to be a part of the group that extends around the periphery of the Hoxie target or disk.

Q Do you notice any gear reduction or change of speed in the arrangement between the pulley of the disk 11 and the pulley of

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motor 16?

A No, it seems to be substantially a direct drive.

Q On the basis of your experience as an expert and your reading of the Hoxie patent, have you any opinion as to the probable minimum speed of rotation of an electric motor?

MR. THREEDY: I think that is objected to, if your Honor please.

MR. PARKER: This man is qualified as an expert.

MR. THREEDY: Motors may vary in size, type of construction or manufacture, and so forth.

THE COURT: He may answer, if he knows.

THE WITNESS: I think your question is, do I have an opinion as to the speed of this particular motor?

MR. PARKER: Q As to the probable speed of a motor of this type, the range of speed, if you want to say, the maximum and minimum?

A The motor being merely indicated diagrammatically, without even any circuit connections, I would state that the motor could be adapted to run at any speed.

Q Would you consider 60 r.p.m. a low speed or a high speed for such a motor?

A Very low.

Q Very low?

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A Yes.

Q Assume that it is rotated at a speed of 60 r. p. m.
What would be the approximate visible effect to an observer of
the rotation of the disk 11 as regards leaving the apertures
17 individually visible?

A At such a speed they would present, probably, a substantial-
ly continuous opening.

Q Assume that the operator is directing the gun of Doucet
at the device of Hoxie, do I understand you to say that the
disk 11 is the target?

THE WITNESS: I am sorry. I will have to ask for the ques-
tion again.

(The question was read)

A Yes, that may be the target.

Q Then the photocell B is not the target?

A It is, in a secondary sense, the target also.

Q You mean, that the term "target" includes both?

A Yes, the device without the cell would be inoperative.

Q Is that the usual interpretation of the meaning of the
word target?

A Is what the usual interpretation, please?

Q Is the definition you have given of the member 11 and
the member B, both targets, does that conform to the general

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meaning of the word "target"? What is a target?

A A target may be that which is shot at, that at which a projectile of some sort is directed, and in that sense, answering your question, certainly the structure 11 and the cell behind it could be considered a target.

Q In your opinion, what was the purpose or the function of the rotation of the disk 11 in Hoxie so fast that the individual apertures 17 would be indistinguishable?

A Well, that function is the result of your assumption, assigning a speed of 60 r.p.m. to the motor. There is nothing in the patent that I recall which assigns such a speed to the motor.

Q You said a speed of 60 r.p.m. would be a very low speed.

A Yes.

Q Can you see any advantage in rotating it at a speed higher than 60 r.p.m.?

A In this instance?

Q Yes.

A No. The speed should be lowered.

Q How about the speed necessary for producing the pulsating current called for by the Hoxie patent?

A Hoxie does not specify what cycle or what frequency of variation he gets with this apparatus. In other words, he

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provides an apparatus giving him a variable current. It is not, as assumed by you, 60 cycles or any other frequency.

Q There is no teaching, then, in Hoxie as to the speed of rotation; is that correct?

A That is my recollection.

Q Refer to Defendants' Exhibit F. Will you please point out what constitutes the target?

A The question is, what is the target in Defendants' Exhibit F?

Q Yes.

A On Defendants' Exhibit F we have the disk 2 as a target.

Q The disk 2?

A Yes.

Q What, in Young, is the equivalent of the gun of defendants' structure or of plaintiffs' patent in suit?

A Either of the lights 9 or 10.

Q Are the lights 9 and 10 simultaneously illuminated?

A They may be.

Q Is there any reason given in the patent why it would be advantageous to have them both illuminated at the same time?

A Yes, because the device was designed, or the photometer was designed for the purpose of comparing the illumination qualities of a lamp with the setup.

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Q For the purpose of the Young patent, as to employing the photometer, would it affect its efficiency if one of the light sources 9 or 10 were permanently extinguished?

A It would then not be a photometer.

Q Do you mean, then, that the extinguishment of one of those light sources would destroy its utility for the purpose stated in the patent?

A No, it would not destroy its utility. It would simply not be operating as a photometer.

Q Would it change its operation?

A No, inherently not.

Q You mean, though, it acts as a photometer with two light sources, though it does not act as a photometer when one light source is extinguished, still its operation is not changed by the elimination of one of the light sources; is that correct?

A That is substantially correct.

Q Then it does not make any difference whether you employ one or two light sources in the Young structure in order to obtain the expressed purpose of the patent; is that correct?

A By extinguishing one of the two lights no change in the functional operation or relationship of the elements of the device as a photometer is effected. You simply, by turning out one of the lights or removing it, are not using it as a photo-

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meter, but the device is still a photometer and may be used as such by putting the lights in to compare them.

Q In other words, it is a photometer only as long as two lights are simultaneously illuminated?

A No, I think the correct statement of that would be it is being used as a photometer only so long as two lights are being used.

Q Is there any suggestion in the Young patent of any use other than the photometer use?

A No, only the suggestion that appears on the face of the drawing, the suggestion which would appeal to anyone skilled in the art as to other uses to which it might be put.

Q What is there in the drawing which points to the way one may remove one of the lights 9 or 10?

A The fact, first, that the lights 9 and 10 are indicated schematically; they have no fixed position or connection. The fact also, possibly, that the aperture 6, as shown in the drawing is closed, indicating that there is some function going on between the light 10 and the open aperture.

Q Is the cell 8 a target?

A I think more properly it could be said to be part of a target, or, yes, it is, ultimately; this is the thing you really are trying to hit.

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Q Would you say that the aperture 6 is part of the target?

A In the sense that that also is something you are trying to hit; yes.

Q And the shutter, apparently numbered 2, which rotates in the housing 1, that is part of the target?

A In the same sense; yes.

Q Are any means shown for moving the photoelectric cell 8?

A No, that cell is fixedly mounted.

Q In the circuit between the cell 8 and the amplifier is there any employment of fixed and moving contacts?

A No. I believe I said this morning or at some previous time that if the cell 8 were moved with the shaft 4 and its shutter, that fixed and moving contacts would then become necessary and could very readily be applied in that circuit.

Q But such a change would involve a change in the structure shown in the patent, would it not?

A Not a functional change. A structural change; yes.

Q Is any function suggested in the patent which would necessitate or be helped by the movement of the cell 8?

A No. In accordance with the teaching of the patent it is desirable, or convenient at least, to leave the cell 8 in a fixed position.

Q Now, I notice that in Defendants' Exhibit F you have asso-

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coated with the structure of Young, part of the structure of the Fey Patent No. 1,668,675. Is there anything in the teaching of the Fey Patent or the Young Patent to direct you to connect the lines you have shown in red extending from 26 and 27 of Fey to the amplifier output of Young, is that taught in either of the patents?

A Not in words.

Q How is it taught?

A Only inferentially on the face of the disclosures, namely, or to this effect, that they connect the Fey target, this does not go to operate as a target, and to one skilled in the art the obvious place to connect it is at the output of the amplifier.

Q In other words, if some expert wished to change the structure of Fey by using some different target operating means, you think it might occur to him to make the change shown in Defendants' Exhibit F?

A Yes.

Q Would that involve a change in the target operating means shown in Fey?

A No change in the operating means; simply a substitution.

Q Then you mean the structure shown in the Young patent is the same as the structure shown in the Fey patent?

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A It is the functional equivalent. It is not structurally the same. It is the functional equivalent in the sense that it accomplishes the same result.

Q Referring to the part of the Fey patent shown in Defendants' Exhibit F, please point out, if you can, any target structure.

A The target structure part of it is the target proper 12.

Q In the normal use of the Fey patent, does or does not the user aim at the target 12?

A Yes, he does.

Q In the structure you have combined from these two patents in Defendants' Exhibit F, does the user aim at the target of Fey?

A No, he aims at the rotating disk 2 and the apertures therein.

Q In the Fey patent or in Defendants' Exhibit F, is any photoelectric cell movable with the target structure 12 or the target 12?

A No; Fey shows no photocell.

Q Have you a copy of the Fey patent before you?

A Yes, I have.

Q How does Fey actuate the target structure shown in Figure 6?

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A The Fey device is somewhat similar to the McCullough apparatus. The electric gun of Fey is aimed manually at one of the targets 12, for example, and the mechanical operation of aiming the gun, when it is aimed properly, establishes a circuit connection with the electromagnetic releasing device in Fey, so that when the trigger is pulled the electromagnetic device will be energized and the target will be released to indicate a hit.

Q How many of the members 26, roughly, are shown in the Fey patent or their equivalent in any other figure of Fey?

A Well, there is a plurality of them, in Figure 6 there is one such element, in Figure 5 there is another such element, and a plurality of them not marked.

Q You have shown in Defendants' Exhibit 5 a single circuit including one of the members 26 and one of the members 27. How many such circuits, roughly, are shown in the Fey patent?

A In Figure 6, which we have used in Defendants' Exhibit F, only one is shown; in other figures there are a number of them.

Q Do I read the Fey patent correctly then, when I say that Fey shows a separate circuit for each one of the electromagnets 31 or 19 shown in the Fey patent, referring to Figures 2 and 6?

A If I follow the question correctly, I think the answer is yes, he shows separate circuits for these target releasing

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members 19.

Q Are you familiar with the Fey Patent No. 1,743,377?

A I am. I do not find it in the group here. If I may have Defendants' Exhibit L?

(The book of prior art patents was

handed to the witness by Mr. Threedy)

A I have looked this over; not recently.

MR. PARKER: Q Referring, for example, to Figure 1 of the Fey patent No. 1,743,377, please state whether or not the member 19 of that patent corresponds to or serves the same purpose as the member 26 of Defendants' Exhibit F?

A I believe it does.

Q Would it also be true in referring, for example to Figure 9 of the patent to Fey No. 1,743,377, to say that the member 20 corresponds to the member 27 of Defendants' Exhibit F?

A Apparently it does.

Q Does the member 25 of the same figure of the patent No. 1,743,377, perform the same function as the member 31 of Defendants' Exhibit F?

A Yes, in that it is a device for operating the target to indicate a hit.

Q Would it be a fair statement to say, then, that the means for causing the target to drop in the Fey patent No. 1,743,377

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is substantially the same as that shown in the Fey Patent No. 1,668,675?

A From my recollection of the operation of this Fey device of Patent No. 1,743,377, I think the answer is yes.

Q Referring again to Defendants' Exhibit F, are any means shown in this exhibit which would cause the target portion 12 to fall if a flash of light were directed against it?

A In the Fey patent?

Q No, in Defendants' Exhibit F, this combination of parts.

A No. Of course, the target falls to indicate a hit.

Q That was not the question.

A The answer was no, Mr. Parker.

Q Is any means shown in Defendants' Exhibit F for directing a flash of light from a light source?

A If we provide circuit connections for either the lights 9 or 10, yes. They have not been provided because it was endeavored to change none of the patents.

Q Then it would involve a change in the patent to provide such means?

A Not a material change, no; simply putting in what the patentee had left out and left to the discretion of the public.

Q But it would involve putting in something that the patentee left out?

A Obviously the lights would have to have a source of energy and we have to provide it if there are to be lights.

MR. PARKER: Will you please answer that question? I will ask to have the question read, please. Yes, or no?

(The question was read)

A No.

Q You mean, then, that you do not have to add anything to the patent that is not already shown in it to adapt 9 or 10 to direct a flash of light; is that correct?

A That is correct.

Q Then as shown they do direct a flash of light; is that correct?

A They may be used to do that; yes. Inferentially, they do have a source of power, so that they are illuminated through that.

Q Are any means shown in the circuit of Defendants' Exhibit F to enable the operator to aim a flash of light at will in any direction he wants to?

A Yes, through the lights 9 or 10. They can be moved to aim a flash of light at the rotating disk.

Q As I understand the showing of Defendants' Exhibit F, these light sources are out in the open. Also, no conductive connections are shown at all. Would it or would it not be a

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fact that so far as the structure is shown in Defendants' Exhibit F from the Young patent, each one of the sources 9 and 10 would burn steadily and radiate light in every direction?

A If you assume that a closed circuit has been supplied for either or both of these lights, where in fact no circuit is shown by the patentee.

Q Are any means shown in this Young patent in such a manually aimable gun which would enable a user consciously to direct a beam of light in some particular and limited direction and cause that beam of light to project in the form of flashes of minute duration?

A Well, of course, Young shows no gun as we have been using the term here. Functionally, either the elements 9 or 10 may be used as the gun.

Q You consider, then, that the elements 9 and 10 are the full functional equivalent of the manually aimable gun of the patent in suit and of defendants' structure, able to perform all the functions performed by such a gun?

A If we provide those elements with a source of energy, which we must do if they are to be used as lamps, and if we put a circuit-closing means, such as a push button, in the energizing structure, which we are also at liberty to do, in view of the fact that no circuit-closing means, or energizing means

for that matter, has been provided for the lamps 9 and 10, the answer is yes, they will be the equivalent of a gun for projecting a flash of light toward the target.

Q Do you see any circuit-breaking means in the patent?

A There is no circuit even, for the lights 9 and 10.

Q Do you see any means for limiting the flow of the beam of light at the will of the operator to any particular axis or direction?

A No.

Q Do you see any means in the Young patent for limiting this movement of light along its aimed path to a flash of limited direction?

A There is no means for misdirecting the beam of the light and, of course, if I am allowed my assumption that we have a push button in the light circuit, then we have a flash.

Q Then your assumption is that the Young structure could be made to work like the later structure of the patent in suit by associating means with it which are not shown in the Young patent and whose use is not taught by Young; is that correct? Answer the question yes or no.

A I think a fair answer is no.

MR. PARKER: Read the question, please.

(The question was read)

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A Well, I am confused on the question now. I will have to ask you to have it read again, if you please.

MR. PARKER: Perhaps I can clarify it by repeating it in somewhat different terms.

Q Is it the substance of your testimony that in order to make the light source 9 or 10 the full equivalent of the gun employed by defendants and shown in the plaintiffs' patent in suit, it would be necessary to add instrumentalities to Young which are not actually shown in the Young patent; is that correct?

A That is correct, to add instrumentalities which are not actually shown but which may inferentially be applied

Q From what showing or description in the Young patent do you draw that inference?

A The fact that neither of the lights 9 or 10 has been provided with a circuit or circuit-closing means. We know that the lights are illustrated as electric lights and we know to be effective as lights they must have energy.

Q So long as they have no energy and no means are shown to operate them, you then say that the Young structure as shown in the patent is inoperative?

A No, it is still a photometer. It is simply not being used as one.

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Q Then you could use the Young structure as it stands without closing circuits through the lights 9 and 10?

A If you produced another pair of lights. In other words, the Young device is not restricted to use with the lights 9 and 10 themselves. Those lights are to be interchanged.

Q What means in Young, what means actually shown and described in Young, and excluding these inferences, are effective to permit a target shooter to direct a flash of light along a single aimed axis, the aim of that axis being under the control of the marksman?

A There is no such means.

Q Referring to the Wheeler patent, what is the number of that patent?

A No. 1,523,149.

Q Referring to the Wheeler patent, I notice the statement in line 12 and following of page 1:

"The object of this invention is to produce pulses as a means for indicating time intervals.

"Another object of the invention is to produce a source of electrical impulses of equal intervals and equal duration for indicating time."

Assume that the light source 12 of Wheeler has substituted for it a gun such as Doucet, would the Wheeler structure still be available to produce a source of electrical impulses of equal intervals and of equal duration for indicat-

ing time?

A Using the Doucet gun?

Q Using the Doucet gun and operating it manually as it is operated in connection with target practice.

A Yes, on the face of it, you could simply aim the Doucet gun at the lens and aperture 16 and hold it there and as the pendulum swayed to and fro the impulsing would be substantially the same as it would be with the source 12.

Q In that event, would the Doucet gun serve as a useful means for target practice while it was being so held?

A Not if the gun were held rigidly. You could wave it back and forth, of course, and get the effect.

Q Could you at the same time employ the Doucet gun as means for producing a source of electrical impulses at equal intervals and equal duration for indicating time, and also use it at the same time as a means for target practice?

A Well, in fact, you could.

Q How?

A The steadiness of the aim would be an indication whether or not that light were properly directed upon the shutter portion 16 and correspondingly the photocell 17.

Q Then you seriously take the position that you could set up a target range and let all comers practice their marksman-

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ship by employing the Doucet gun in connection with the Wheeler time-measuring device and simultaneously obtain both results?

A By both results you mean the target effect and the timing effect?

Q Adequate practice in marksmanship and highly accurate time measurement.

A Well, I suppose the accuracy of the time measurement would depend on the skill of the marksman. If he were a very skillful person you might get very accurately timed signals.

Q Does the Wheeler patent show a device for testing marksmanship or for determining time intervals of equal duration and of equal intervals?

A On its face it is a device for producing time impulses, but I have been interested in the functional elements of the device as they compare with the patent in suit. In that sense, the Wheeler showing has all of the functional elements corresponding to Griffith's device.

Q All of them?

A Substantially all of them. Functionally, so far as the objective is concerned.

Q Why was it necessary to combine it, then, with this Fey diagram?

A I believe I have explained that at length by reciting the structure and operation of Wheeler and its bearing upon the patent. I will be very glad to go over that again.

MR. PARKER: It will not be necessary.

THE WITNESS: Wheeler, of course, we have not combined, or I have not combined.

Q Do you see in this Defendants' Exhibit F, any trigger mechanism?

A No.

Q Do you see any limiting switch, which limits the number of shots to be taken?

A No, there is no shot-limit switch.

Q Do you see any cooperation or connection between the trigger mechanism and the circuit for energizing the motor?

A No.

Q Do you find any of those in Griffith?

A Those elements are present in the structure defined by the specification in Griffith.

Q Then is it accurate to say that there are in Griffith and in Griffith's claims features or elements which are absent from Defendants' Exhibit F?

A There are structural limitations which are not present in Defendants' Exhibit F, but as I pointed out, of course the

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functional elements are present.

Q What is the function of the gun of Griffith?

A That of directing a light flash or ray upon a target.

Q Is it part of the function that this direction be under the control of the user so that he can aim the beam as he wishes?

A Desirably, yes.

Q Is it part of the function of the Griffith gun that a light flash of minute duration be directed from the gun?

A It is at least a part that the light flash be directed. Whether it is instantaneous or minute is not functionally important.

Q I find the following language in the Griffith patent, page 3, column 1:

"Nothing but a single flash is projected, as distinguished from a continuous beam, so that if the gun is not aimed at the target at the instant the flash is projected, subsequent correction of the aim makes no difference. It is this flash arrangement and this entire portability of the gun which makes my device different from other non-bullet target-shooting devices, because it enables the user to do exactly what he would do if he were firing a bullet."

Do you still feel that in the Griffith structure the direction of a flash of light of short duration has no function?

A It certainly has a function within the limitations pointed

out by Griffith, but it is not necessary to operate Griffith's device as a target mechanism, if I can amplify that simply by taking the Doucet gun, which gives a steady beam of light.

Q Then as I understand you, you feel that when the controlled light flash is employed in the Griffith claims, it has no significance; is that correct?

A It limits, it has the significance of limiting Griffith to a particular type of gun.

Q Well, if Griffith is limited to a particular type of gun which shoots a light flash, and the Young patent has no means and does not show a gun for shooting a light flash, do you still say that the function of the two devices is the same?

A So far as the ultimate result is concerned, they are substantially the same, qualifying that by the provision of circuit means for either of the lights 9 or 10 that I have already pointed out. That means of producing the light bullet, let us say, is not structurally identical with what Griffith specifies, but the effect can be the same.

Q What are Young's means for directing a light bullet?

A The lights 9 and 10.

Q As they stand, they are capable of directing a light bullet?

A As they stand, they are not.

Q Without any modification?

A As they stand they are not capable of emitting any kind of light, but of course, that would be an unreasonable interpretation of the patent.

Q Well, assume that you had a little conductive current there to be delivered in closed circuit, with some sort of power, a steady source of power, are they still, then, without further addition, without further insertion in the patent, available to permit a man at target practice to aim a gun, or its functional equivalent, to direct an aimed flash of light of short duration?

A Yes, easily, by simply taking one of those lights 9 or 10 in the hand and gauging your speed of your disk, and at the instant the apertures were in register just move that light relative to that disk so that the light would be passed through it to the cell.

Q You would consider that the equivalent of an aimed gun?

A Functionally, yes, so far as the result is concerned, because we have operation of the photocell directing the operation of the amplifier and an indication on the means 13 that a hit has been scored.

Q Is such action or use of the hand suggested in Young?

A Certainly not in terms. I have tried to explain several

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times that the fact that those two lights 9 and 10 are not fixedly secured and in fact, are just diagrammatically indicated leaves one at liberty, namely the public, to use those lights as he sees fit.

Q Then you interpret that drawing as showing the lights out in space, which can be grasped by the hand of a user and waved around?

A They could be so used.

Q That is how you interpret that drawing?

A They could be so used. I have interpreted it in that manner. There is nothing there to restrict my using it some other way.

Q But you do not see any means there for limiting the number of flashes which can be manually directed in that fashion, do you?

A No; you can go on flashing it forever.

Q Is there any operative connection of any kind between such flashing means which you infer into the patent, and the motor 5?

A If I understand your question, there is no connection between the flashing means and the motor.

Q Will the Young structure be available as a target arrangement if the lights 9 and 10 are simultaneously illuminated?

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A If they are simultaneously moved, it will be.

Q You would say, then, that employing two sources of light with Young is the equivalent of employing a single source of light in the structure of the Griffith patent; am I correct?

A It could be if those two lights were moved simultaneously relative to their respective apertures. There would be no purpose in so doing.

Q Are there any directions in the patent for moving them simultaneously?

A None other than the fact, as I have repeated, that those lights are not qualified in any way and evidently can be used as desired.

Q In the use of Young's device, what does Young's signal means indicate?

A In the use of the device?

Q The Young patent itself.

A They indicate the relative illuminating power of the lights 9 and 10.

Q Of both lights?

A Yes.

Q If one of the lights is extinguished, will Young's signal means 15 function in response to a projection of light from the other source?

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A Yes, it will.

Q What will it indicate?

A That would depend on the intensity of the light. That pointer 15 would move in one or another direction.

Q In Defendants' Exhibit F, what part or function does the member 15 perform when the Young and Fey structures are tied together as shown in the exhibit?

A That of a signal means.

Q An additional signal means?

A Yes.

Q Assume that you employ the structure precisely as it is shown in Defendants' Exhibit F without inferentially moving the lights 9 or 10, without flashing the lights 9 or 10 on or off, but merely leaving them where they are and starting the motor operating so that the shutter is continually rotating, what will happen to the member 12 shown at the right near Figure 6 of the Fey patent?

A The member 12?

Q Yes.

A This is operating as it stands, both lights.

Q Both lights on, no shutter means employed except the rotating shutter 2 and that rotating shutter rotating at whatever speed might be inferred from the patent description?

A In my opinion, the member 12 would drop into a hit position and stay there, of course.

Q How long would it stay there?

A Until it was put back, and then it would again fall, at least within a short interval of time.

Q Is there any relationship between the speed of rotation of the shutter and the movement of the target 12?

A I am afraid I do not follow that question.

Q Well, this shutter, as I understand, rotated at the reasonably high speed you have suggested, 60 revolutions per minute, as a low speed of a motor of this type, then we will assume that if this shutter rotates at 60 r.p.m., at least 60 impulses per minute will be received on the photoelectric cell 8 and will be transmitted through the amplifier to the target 12. What is the result of this succession of impulses?

A If the device is used as you have suggested, by leaving these lights 9 and 10 stationary, and other things being equal, that target 12, as I said, will go down and stay down.

Q Referring to Defendants' Exhibit G, and assuming that the steady source of light is left in the Hoxie patent in the place of this Doucet flashing gun, and assume that this shutter 11 is rotated at, say the speed of 60 r.p.m. that you mentioned what will be the effect on the portion 22 of the McCullough

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patent shown at the right of Defendants' Exhibit G?

A On its face that target will go down.

Q If this bombardment of rapidly repeated impulses is continued, how will you get the target 22 back up?

A You can manually push it back up, but it will again fall, assuming that you have a steady beam of light trained on the cell.

Q Then am I correct in stating both as to Defendants' Exhibit G and Defendants' Exhibit F, if you assume the steady source of light such as shown in Hoxie and in Young, that the target structure 22 of McCullough or 12 of Fey, will be held down as long as this bombardment of short impulses continues; is that correct?

A That is correct.

Of course, I would like to state that when I explained this previously I pointed out that it is necessary to use the Doucet gun, for example, to use it manually for instance, by waving it to give you a flash on that target. Of course, the operation is going to be the same in any case if you aim that gun properly at a given instant of time upon that rotating disk and pull the trigger, the target will be released and you have accomplished the objective of the combination. That also would be true of the Young and Fey com-

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bination, using the lights 9 or 10 to give you a flash.

Q Is it a fact, referring to Defendants' Exhibit G, that even though you take the gun from Doucet and connect it in circuit with part of the McCullough structure and then carry a part of the McCullough circuit over into Hoxie to get a structure assembled from three patents, that you still lack any showing of a photoelectric cell moving on or with the target; is that correct?

A Yes, I think that is correct.

Q Is it correct to say of this same assemblage from these three patents that you would still lack any trigger pull limitation means effective to limit the number of shots which can be taken?

A Yes, that is correct. I think I pointed that out.

Q Is it a fact that it would still be necessary, in order to show the precise structure of the Griffith patent in suit, to secure, or rather to provide, not merely a photoelectric cell moving on or with the target, but an apertured drop member also moving on and with the target and also movable in relation to the target when a hit is recorded or received by the photoelectric cell; is that correct?

A Well, Griffith does not teach what is a drop in relation to the target as you have just defined it, or the structure as

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you have defined it.

Q Does Griffith in his drawings show a part which drops mounted on a target structure?

A Yes.

Q He shows it?

A Yes.

Q But he does not teach that?

A I do not know whether it is a drop. He does not term it as a drop. In fact, the thing that drops in Griffith is indicated as a target.

Q The member 48 in Griffith is described in some parts of the patent as the target portion, is it not?

A Yes.

Q And you interpret the words "target portion" to mean that the member 48 is the entire target?

A The term "target" is, in my opinion, ambiguously used in Griffith's specification and claims. He speaks of it at one time in a manner which indicates that he means the entire structure, the moving means, the contacts, and the pushing means, and all of it. At other times he specifies "target portion 48" and then he uses the term "drop," and I have been unable to know what he means, particularly when he refers to a drop.

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Q Does he ever refer to the drop by number?

A I do not recall. I believe not. He uses the term "drop" in connection with other limitations by number. For instance he speaks of the duck drop, electromagnet 69.

Q Then the term "duck drop" does not mean anything to you from a reading of the patent?

A If anything, it confuses me.

Q Is it a fact that in Figure 1 of the patent in suit the number 48 is shown shaped like a duck?

A In which figure?

Q Figure 1.

A I believe that is correct. I do not have the figure before me at the moment. He shows the drop, or the duck rather, Yes, the target 48 is in the form of a duck in Figure 1.

Q Would you consider it an unwarranted inference, then, to assume that when the term "duck drop" is employed in the patent it might be applied to the portion 48?

A Well, from my experience in patent matters, a patent specification and its drawings and all parts of the patent are not supposed to identify their various elements inferentially but specifically. I do not think any inference is permissible in that sense in reading Griffith.

Q Well, when Griffith says in his patent, in line 5 and following of page 1, "In the present disclosure this target is of the traveling type and is provided with a plurality of portions 48, which may simulate ducks," would you say that was a matter of inference?

A Where were you reading, please?

Q Starting in the middle of line 5 of column 2 of page 1.

THE WITNESS: And the question, please?

(The second preceding question was read)

A That is a plain statement.

MR. PARKER: The witness is excused.

THE COURT: Take a recess.

(A short recess was taken)

THE COURT: Any redirect-examination?

MR. PARKER: Would this be a proper time to say that Mr. Threedy and I have agreed that it will be satisfactory to both of us to file a translation of the Swedish patent made by some authorized bureau upon whom we agree?

THE COURT: Very well.

MR. THREEDY: That will be agreeable.

REDIRECT-EXAMINATION
By Mr. Threedy:

Q Mr. Livingston, I advise you that the device of claim 1 of the patent in suit is defined as a device including, among other things, a traveling target having a photoelectric cell. Advise the Court, please, whether the device of Defendants' Exhibit F includes a traveling target having a photoelectric cell?

A Yes, it does. The apertured rotating disk 2 is a traveling target and it has a photoelectric cell 8.

Q Now I will ask you that same question with reference to the disclosure of Defendants' Exhibit G?

A The answer is the same. The disk 11 is a rotating target and has a photoelectric cell B.

Q In connection with the disclosure of Defendants Exhibit F is it intended that the light beam from the light source 9 or 10, or both of them, be directed at the target 12?

A Did I understand you to say is intended?

Q Yes.

A In the operation of the device as shown in Defendants' Exhibit F, it is intended that the light from either of the lights 9 or 10 be directed at the rotating target 2.

Q I will ask you that same question in relation to the disclosure of Defendants' Exhibit G. Is it intended that a beam of light from the gun 1 be directed to the target 22 or the disk 11 and its aperture or apertures 17?

A It is intended that light from the gun 1 be directed to the apertured rotating disk 11.

Q Does the descriptive part of the patent in suit inform you as to the speed of the target-driving motor?

A No, it does not.

Q Do any of the prior art patents to which you have referred on cross-examination inform you as to the speed of the motors where such motors are employed?

A No, they do not.

MR. THREEDY: That is all, if the Court please.

THE COURT: Any recross-examination?

MR. PARKER: Yes.

Livingston-recross

RECROSS-EXAMINATION
By Mr. Parker:

Q Does the photoelectric cell 8 of Defendants' Exhibit F move?

A No, photoelectric cell 8 is stationary.

Q Does what you have called the target move?

A Yes, it does.

Q Does the photoelectric cell B of Defendants' Exhibit G move?

A No, it does not.

Q Does the shutter 11 move?

A It does.

Q In the device of the patent in suit and in the defendants' device, does the photoelectric cell move?

A In both of the devices the photoelectric cell does move.

Q Referring to Figure 1 of the patent in suit, I notice a member marked 60. Can you tell me what it is?

A The member 60 as I recall, is a speed reducer.

MR. PARKER: That is all.

THE COURT: Call your next witness.

MR. THREEEDY: There are no more witnesses on behalf of the defendant.

If the Court please, at this time I offer in evidence the Defendants' Exhibits F and G, illustrating the combination of the patents to which the witness has referred. These exhibits are offered for the purposes for which they have been used and for such other value as the Court may attach to them.

THE COURT: Any objection?

MR. PARKER: No objection.

THE COURT: Let the exhibits be admitted in evidence.

(The exhibits were so marked)

THE COURT: Any rebuttal?

MR. PARKER: No rebuttal.

THE COURT: What is your pleasure as to the argument?

MR. THREEDY: Mr. Parker and I talked the matter over during the noon recess and we have agreed, if approved by the Court, that we would like to have this arrangement, that the plaintiff be given three weeks to file brief and that defendant be given three weeks thereafter to file a brief, plaintiff to be given two weeks thereafter to file a reply brief to the defendants' brief, and then at the convenience of the Court, upon notice, either formal or informal, that a date be set for an oral hearing, but not until such time as all of our briefs have been placed on file.

THE COURT: I had some sort of a suggestion like that in my own mind.

MR. THREEEDY: I realize the case is somewhat involved.

THE COURT: It is certainly a very interesting case, I assure you. I do not feel as if I ought to set it now. That would bring it along the latter part of September or the first part of October.

MR. THREEEDY: As to the date for an oral hearing, I would suggest that that be left open until we come in.

THE COURT: That is what I thought of. I will probably have criminal cases the first week or so in the fall. That is perfectly agreeable to me.

MR. THREEEDY: I assume that both parties may retain their respective exhibits, subject to inspection by the other side at any time.

THE COURT: Yes.

MR. THREEEDY: I think they should be filed at the proper time with the briefs, if that is agreeable.

I would like to take Plaintiffs' Exhibit 34.

THE COURT: Yes. I want this for my own private memorandum, Plaintiffs' brief to be filed when?

MR. THREEEDY. In three weeks.

MR. PARKER: Three weeks.

THE COURT: And defendants' brief three weeks thereafter. Plaintiffs' reply two weeks thereafter, was it?

MR. THREEEDY: That is right.

MR. PARKER: Would that make that the 21st of July?

THE COURT: Well, it is not necessary to be precise.

MR. THREEEDY: If more time is necessary, I am sure neither one of us will quarrel about that.

MR. PARKER: I don't think so.

THE COURT: It has been a most interesting case.

MR. THREEEDY: May I thank the Court for the Court's attention and patience?

MR. PARKER: Yes, indeed.

THE COURT: I think also, thanks are due to counsel for the manner in which it has been presented. I appreciate your method of presentation.

MR. THREEEDY: We thank the Court.

WHICH were all of the proceedings had
at the times and place above indicated.

LIST OF PLAINTIFFS' EXHIBITS

		Offered at page
6	Certified copy of file wrapper of patent in suit No. 2,007,083	25
8)	Photograph of machine built by Carter	
9)	in 1935	184
12	Patent in Suit	24
24	Certified copy of Articles of Incorpora- tion of Ford Amusement Devices, Inc.	25
29	Ford Amusement circular	57
30)		
31)	Copies of blue prints, Plaintiffs' Ex-	
32)	hibit 34	56
33)		
34	Original blue print submitted to counsel for plaintiffs by counsel for defendants, marked Wiring Diagram of Ford Amusement Devices	24
35	Drawing illustrating a section of defend- ants' gun and trigger switch mechanism	32 53
36	Drawing made by witness Schnellhart from machine seen by him at the factory of Ford Amusement Company, identified at page 33	53
36-A	Drawing of electrical contacts between defendants' shot counting mechanism	67
37	Drawing of axial section of defendants' targets and actuating means	67
38-A	Drawing of defendants' shot counting mechanism	67
38-B	Drawing of electrical contacts between photoelectric cell and amplifier	67
39	Drawing of defendants' score indicating means	67
46	Photostat of sketch made by Carter	184

LIST OF DEFENDANTS' EXHIBITS

		<u>Offered at page</u>
A	Illustration of the target structure of defendants' machine	305
B	Drawing of that portion of the device of the patent illustrated in Figure 3 of the patent in suit	305
C	Partial circuit diagram of defendants' structure	305
D	Diagram of signal circuit No. 1	305
E	Diagram of signal circuit No. 2	305
F	Disclosure of the Young patent combined with disclosure of Figure 6 of the Fey patent, identified at pages 310 and 327	430
G	Drawing showing Figure 1 of the Doucet patent and the single figure of the Hoxie patent and Figure of the McCullough in combination, identified at pages 310 and 337	430
H	Model of device shown in Defendants' Exhibit A	306
J	Model of device shown in Defendants' Exhibit B	306
L	Book of prior art patents	307
34	Photostatic copy of Plaintiffs' Exhibit 34	307