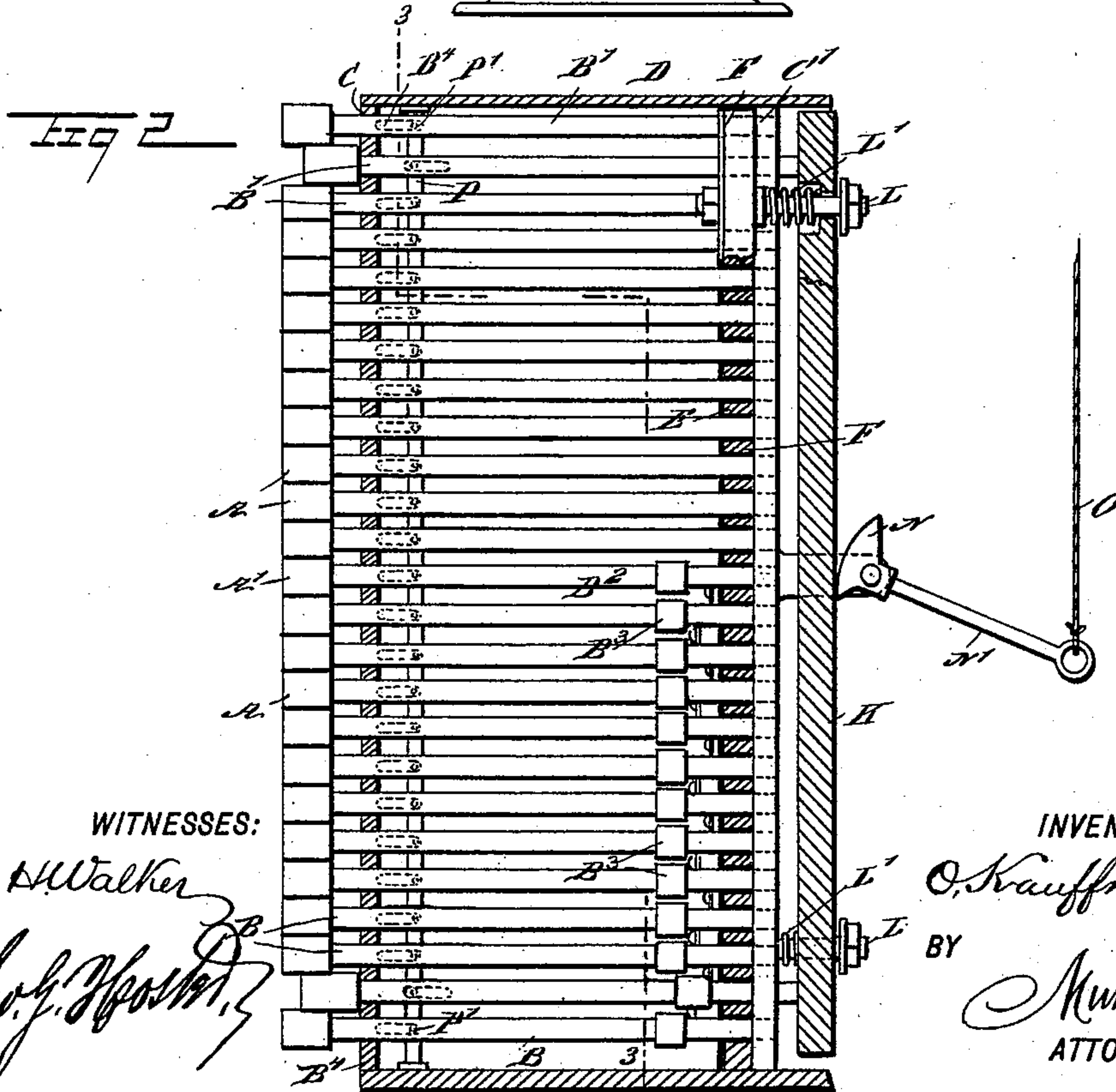
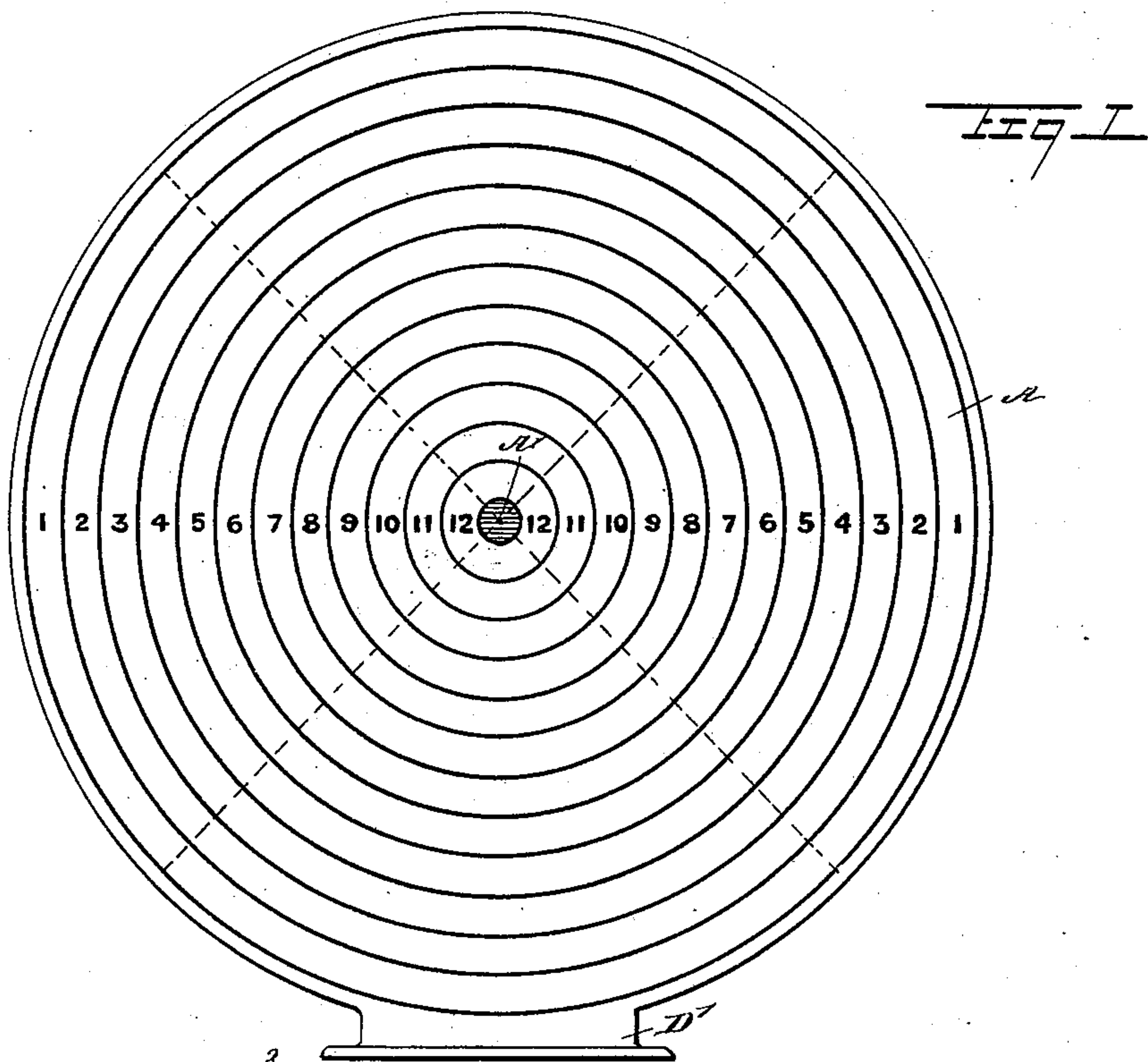


2 Sheets—Sheet 1.

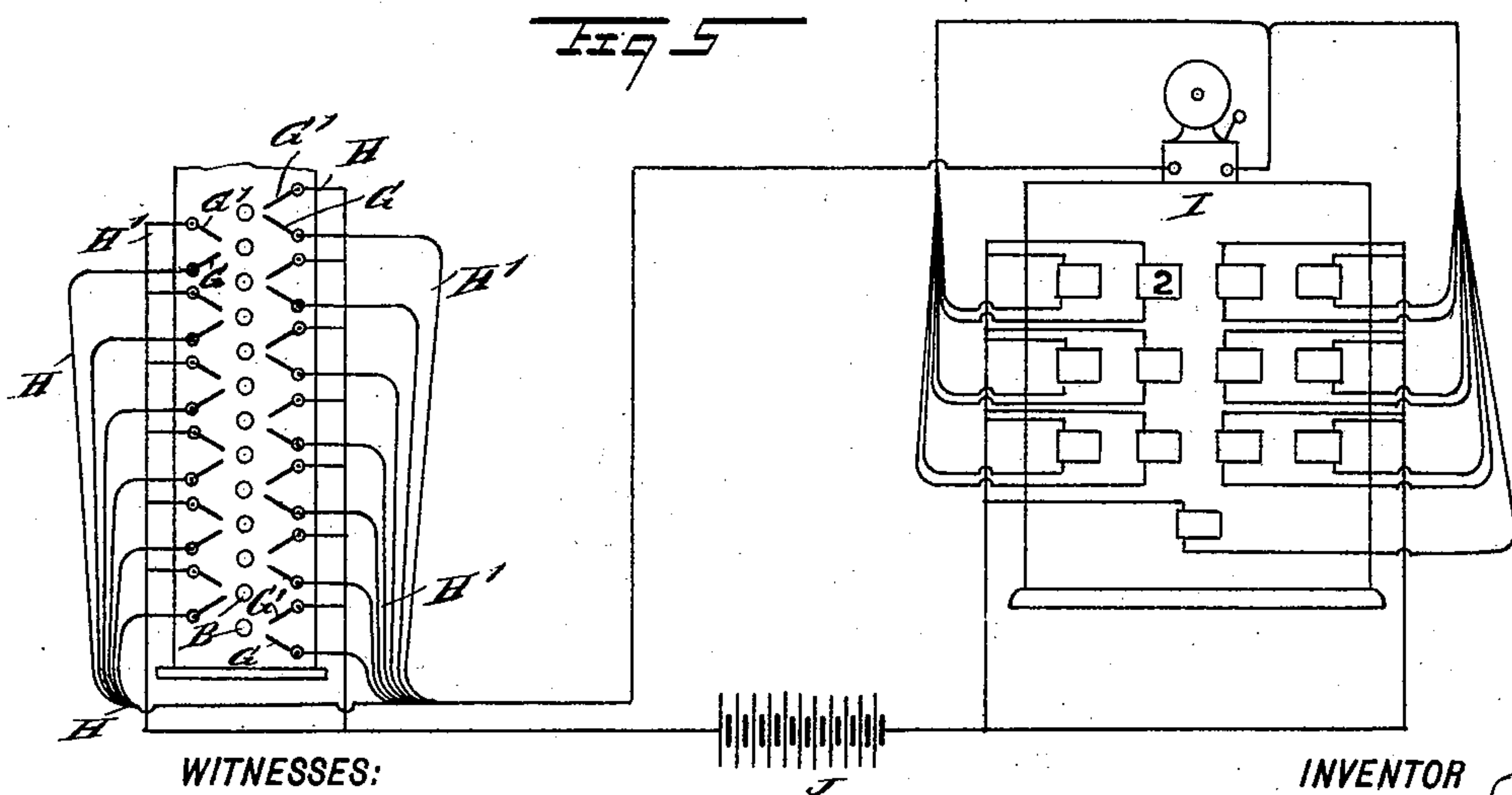
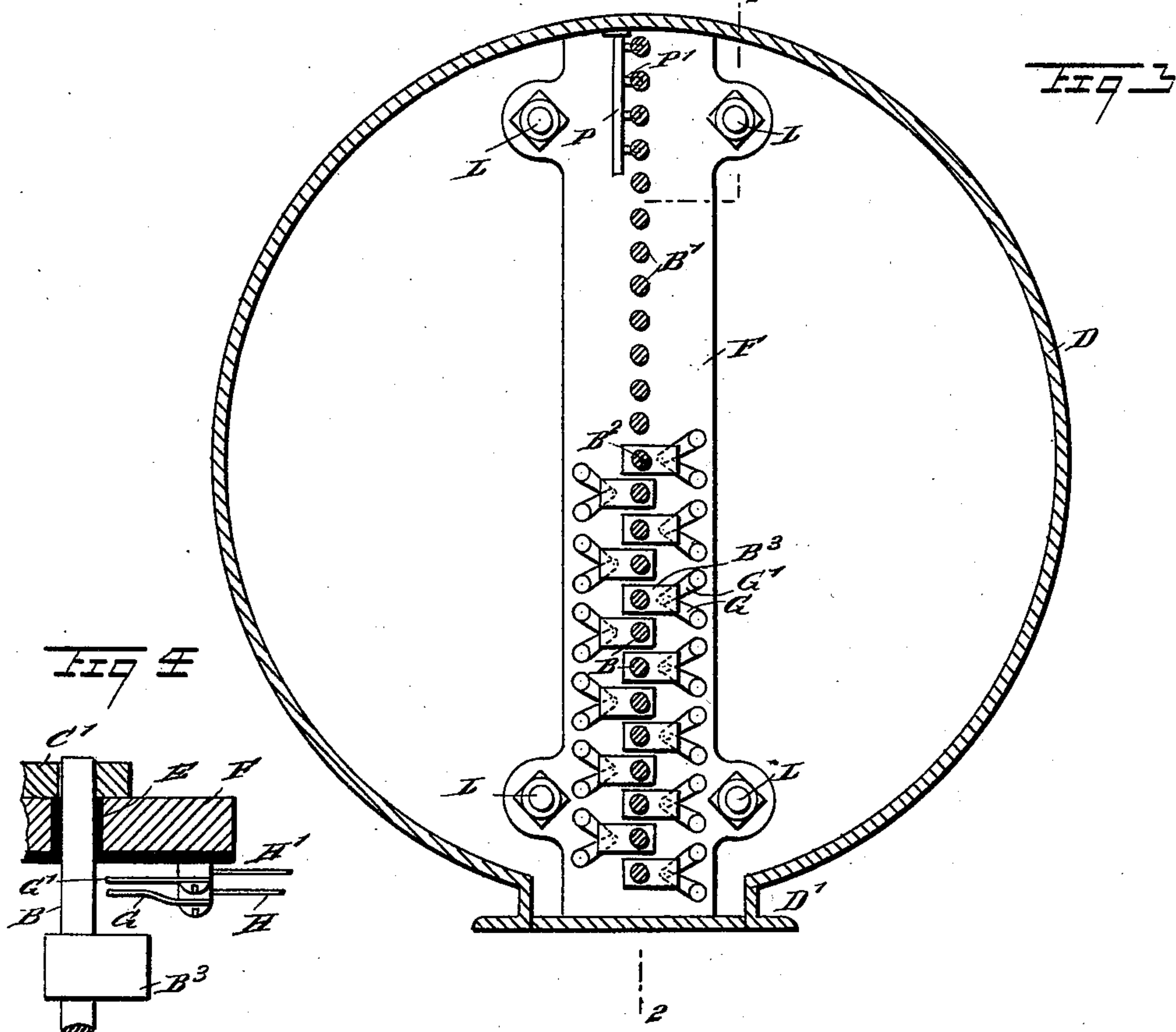
Patented Sept. 3, 1895.



2 Sheets—Sheet 2.

No. 545,699.

Patented Sept. 3, 1895.



**WITNESSES:**

H. Walker

Geo. F. Hostetler

***INVENTOR***

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# UNITED STATES PATENT OFFICE.

OTTO KAUFFMANN, OF SACRAMENTO, CALIFORNIA.

## ELECTRICAL ANNUNCIATING-TARGET.

SPECIFICATION forming part of Letters Patent No. 545,699, dated September 3, 1895.

Application filed November 15, 1894. Serial No. 528,882. (No model.)

*To all whom it may concern:*

Be it known that I, OTTO KAUFFMANN, of Sacramento, in the county of Sacramento and State of California, have invented a new and Improved Combined Target and Annunciator, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved combined target and annunciator arranged to at once indicate accurately the value of a shot fired by a marksman.

The invention consists principally of independent movable target-rings and a bull's-eye adapted to make an electric contact to actuate an annunciator.

The invention also consists in certain parts and details, and combinations of the same, as will be hereinafter fully described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters and numerals of reference indicate corresponding parts in all the views.

Figure 1 is a face view of the target proper. Fig. 2 is a transverse section of the same on the line 2 2 of Fig. 3. Fig. 3 is a sectional front view of the same on the line 3 3 of Fig. 2. Fig. 4 is an enlarged sectional plan view of the contacting arrangement, and Fig. 5 is a diagrammatic view showing the electric connections between the target and annunciator.

The improved device is provided with a target having independent movable rings A and a bull's-eye A', the rings being consecutively numbered in the usual manner, as indicated in Fig. 1. Each of the rings A is provided with two rearwardly-projecting rods B and B', and a similar rod B<sup>2</sup> projects from the bull's-eye A'. The several rods B, B' and B<sup>2</sup> are fitted to slide transversely in plates C and C', secured in a casing D, having a suitable base D', set on a foundation or other suitable support. The inner ends of the rods B, B', and B<sup>2</sup> are also fitted to slide in insulation E, held in a contact-plate F, secured within the casing D, and carrying a set of contact-plates G G' for each rod B and B<sup>2</sup>. (See Fig. 3.) Each of the rods B and B<sup>2</sup> is provided with a contacting arm or lug B<sup>3</sup>, adapted to engage

the contacting-plate G to press the latter in contact with the plate G' to make contact between the two plates G and G'. Normally the lug B<sup>3</sup> is in the position shown in Fig. 4 at the time the several rings A and bull's-eye A' of the target are in alignment, but when one of the said rings or the bull's-eye A' is hit by a bullet, then it is moved rearwardly by the force of the bullet, so that the lug B<sup>3</sup> makes contact with the plate G and moves the latter in contact with the plate G'. The several sets of contact-plates G and G' are insulated one from the other, and each set is connected by wires H H' with an annunciator I of any improved construction and located at the stand for the marksman, so that the latter can see at a glance the value of the shot fired. It is understood that a battery J or other suitable source of electrical supply is connected with the annunciator I, and the sets of wires H H' are arranged in such a manner with the annunciator as to indicate the value of the corresponding ring A by displaying the corresponding numeral in the annunciator I whenever the same-numbered ring is struck by the bullet. For instance, as shown in Figs. 2 and 5, the marksman has struck the ring A, marked 2, and moved the same rearward, so that its lug B<sup>3</sup> has made contact between the plates G G', and consequently the numeral 2 is displayed by the annunciator, as indicated in Fig. 5.

As illustrated in Fig. 2, a device is employed for moving the ring back to its normal front position, and for this purpose a bar K is employed, mounted to slide on bolts L, projecting rearwardly from the support F, previously mentioned, springs L' being coiled on the bolts between the support F and bar K, to normally hold the latter in an outermost position. A cam N is adapted to engage the back of the bar K, and this cam N is provided with a arm N', connected with a rope or cord O, extending to the stand, to be under the control of the marksman or operator in charge of the target. Now when a shot has been fired and a ring or bull's-eye A or A' has been moved rearwardly by the force of the shot, then the rear ends of the corresponding rods B, B', or B<sup>2</sup> move in contact with the bar K, (see Fig. 2,) and then the operator by pulling on the cord or rope O imparts a swinging motion to



the cam N, so that the latter presses the bar K forward and thereby pushes on the corresponding rods B, B', or B<sup>2</sup>, to move the ring or bull's-eye forward to its normal position.

5 The springs L' are compressed by the forward movement of the bar K, and as soon as the operator releases the pressure on the cord O, then the said springs L' return the bar K to its normal rearward position.

10 In order to prevent the rods B, B', and B<sup>2</sup> from accidentally sliding out of their bearing-plates C and C', I provide each rod with a slot or groove B<sup>4</sup>, engaged by a pin P', projecting from a fixed rod P, secured within the casing D in the rear of the plate C, as shown in Fig. 2 and in the upper part of Fig. 3. This arrangement also prevents the bull's-eye A', which is circular in form, from turning, where-  
by its circuit closing devices would become  
20 inoperative.

It will be seen that by the arrangement described the value of the shot fired by the marksman is immediately indicated by the annunciator located close to the marksman,  
25 so that the device is very serviceable, especially in long-distance rifle-ranges. It will further be seen that by the arrangement described no scorer is required, as the value of the shot is immediately, accurately, and auto-  
30 matically brought to the notice of the marksman by the annunciator I.

The target may be arranged in such a manner that the individual rings and the bull's-eye are made in sections, and each section is  
35 mounted on two rods, making electric contact with plates G and G', as above described, and the several contact-wires from one section run to a separate annunciator. By this arrangement I am enabled to indicate whether the

marksman has struck the lower or the higher 40 or the right hand or left section of the target to aid him in taking proper aim for the next shot.

Having thus described my invention, I claim as new and desire to secure by Letters 45 Patent—

1. In a registering target, the combination of a casing, comprising front and back plates provided with aligned perforations, a bull's-eye and concentric rings having on their rear 50 faces rods which project through said perforations, a plate movably mounted behind the said rods and adapted to engage and move the same equal distances, and means for moving said plate forward, whereby said rods are 55 engaged thereby and the bull's-eye and rings brought into alignment, substantially as set forth.

2. In a registering target, the combination of a casing having front and back plates pro- 60 vided with aligned perforations, a bull's-eye and target rings having on their rear faces projecting rods extending through the perforations in the casing bolts behind the casing extending parallel to the rods on the 65 target rings, springs on the bolts, a plate movable on said bolts outside the springs adapted to engage said rods, and a cam lever pivotally mounted behind the casing and adapted to bear on said plate, whereby said rods are en- 70 gaged thereby and the bull's-eye and rings brought into alignment, substantially as set forth.

OTTO KAUFFMANN.

Witnesses:

LEWIS WINTER,  
ALLEN A. COOK.