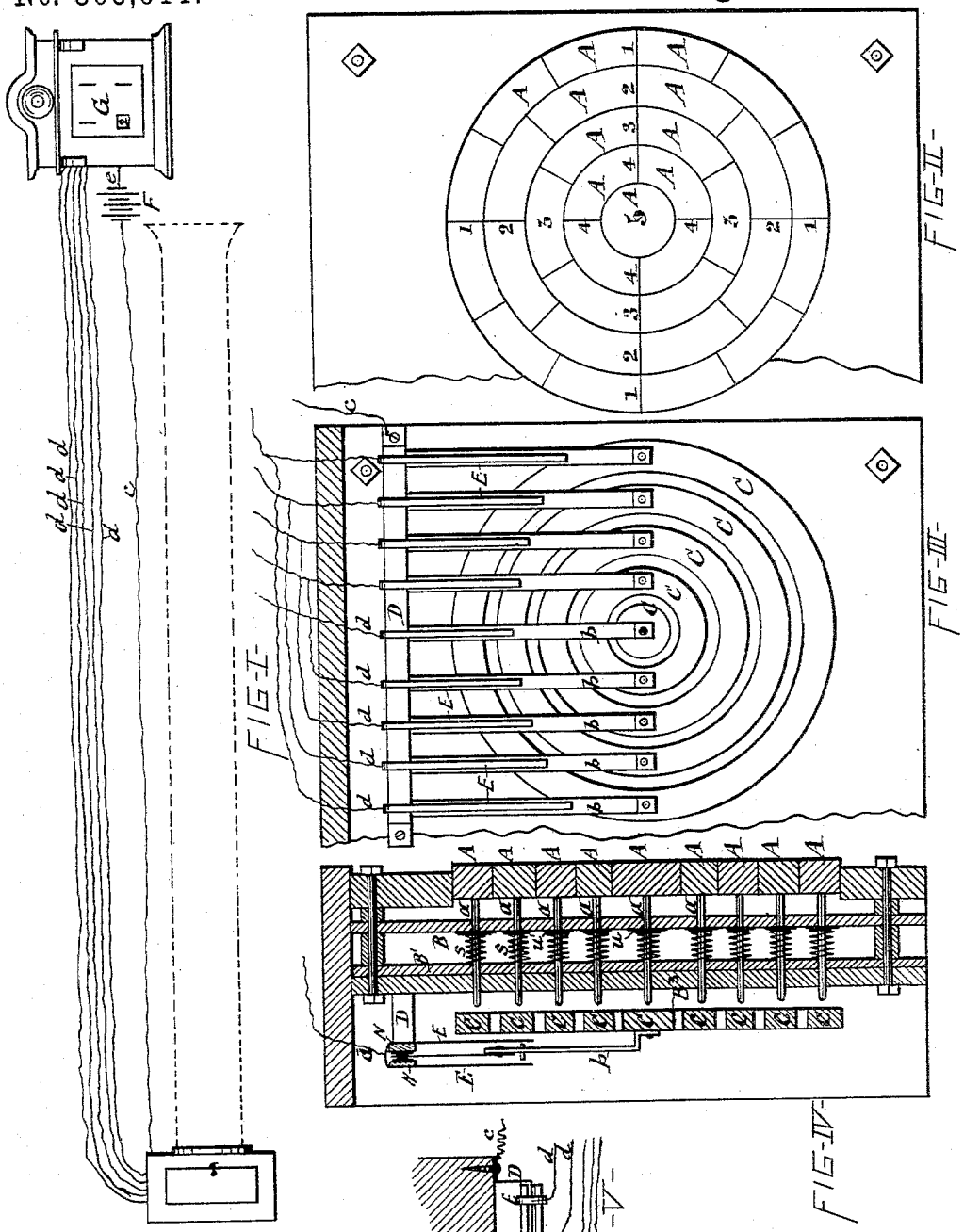
(No Model.)

J. BOONE.

SELF REGISTERING ELECTRIC TARGET.

No. 303,911. Patented Aug. 19, 1884.



WITNESSES

E. Bendixon

Wm. L. Raymond

INVENTOR

John Boone

per Dull, Laass & Hay

his attys

UNITED STATES PATENT OFFICE.

JOHN BOONE, OF SYRACUSE, NEW YORK, ASSIGNOR TO RALPH B. STRONG, OF SAME PLACE.

SELF-REGISTERING ELECTRIC TARGET.

SPECIFICATION forming part of Letters Patent No. 303,911, dated August 19, 1884.

Application filed March 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN BOONE, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Self-Registering Electric Targets, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention consists in novel means for automatically registering the section of the target hit by the shot, as hereinafter more fully described, and specifically set forth in the claims.

In the annexed drawings, Figure I illustrates a shooting-gallery provided with my improvement. Fig. II is an enlarged face view of my improved target. Fig. III is a rear face view of the same and the mechanism connected therewith. Fig. IV is a vertical transverse section of the aforesaid target and its mechanism; and Fig. V is a top plan view of the main portion thereof.

Similar letters of reference indicate corresponding parts.

The target I construct of a heavy metal plate divided into sections A A, which are arranged movably independent of each other, and sustained yieldingly in the plane of the target by means of pistons or plungers *a* projecting from the rear of the target-sections A, and passing through guide-plates B and B′, which serve to hold and guide the target-sections in their movement. Springs *s*, bearing against the rearmost guide-plate, B′, and against a collar, *u*, fixed to the plunger A back of the guide-plate B, serve to hold the target-sections A in their requisite position, or in the plane of the target, as aforesaid. To the back of the guide-plate B′ is secured a wooden plate, B², and to this wooden plate is attached a metal yoke or bar, D, from which are suspended a series of plates, C, corresponding in number to the concentric annular sections of the target, said plates C being normally sustained in proximity to the end of the plungers *a* aforesaid.

The connection of the plates C C with their support D consists of a vibratory metal arm *b*, at opposite sides of which are the free ends of a metal plate, E, which is suspended from plates N connected with, but insulated from the support D.

F denotes an electric battery, and G an electric annunciator similar to those used in hotels, or of any other suitable and well-known construction. The battery F is connected with the annunciator G by the conductor *e*, and is also connected with the support D back of the target by means of the wire or conductor *c*. The several plates E E are each connected with the annunciator by wires *d d*, thus forming an open electric circuit between the target-annunciator and battery.

By the impact of the missile on one of the target-sections A, said section is driven rearward from the plane of the target, and in said movement the plunger *a* encounters the plate C directly at the rear thereof, thereby producing a vibration on said plate, and a corresponding vibration on the supporting-arm *b* of said plate. In the vibration of said arm *b* the latter comes in contact with the free ends of the plate E, and thereby closes the electric circuit. The resultant electric impulse is transmitted to the annunciator by the wire *d*, which actuates the usual indicators of the annunciator, each of said wires *d* being connected with the aforesaid indicators, marked corresponding to the number of the target-section by which the closing of the electric circuit is effected. By placing the annunciator in a convenient position at the front end of the gallery, the person shooting at the target sees his shot reported immediately after the discharge of the gun.

It will be observed that by my improved apparatus the danger and the expense of keeping a person at the end of the gallery is obviated.

What I claim as my invention is—

1. In combination with the target-sections A, plunger *a*, plate C, support D, and suspending-arms *b*, the insulated plate E, extended along opposite sides of the suspending-arms *b*, and the battery F, and annunciator G, electrically connected with each and with the support B and plate E, substantially as described and shown.

2. The combination of the target composed of movable sections A A, provided with plun-

ger *a*, guide-plates B and B′, springs *s*, plates C C, metallic suspending-arms *b*, supporting-bar D, insulated plate E, suspended along opposite sides of the arms *b*, battery F, annunciator G, and the electric conductors C, *d d*, and *e*, all combined to operate substantially as shown and described.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 14th day of March, 1884.

JOHN BOONE. [L. S.]

Witnesses:

FREDERICK H. GIBBS,

C. BENDIXON.