

W. F. MANGELS.  
ELECTRIC TARGET.

APPLICATION FILED NOV. 25, 1902.

NO MODEL.

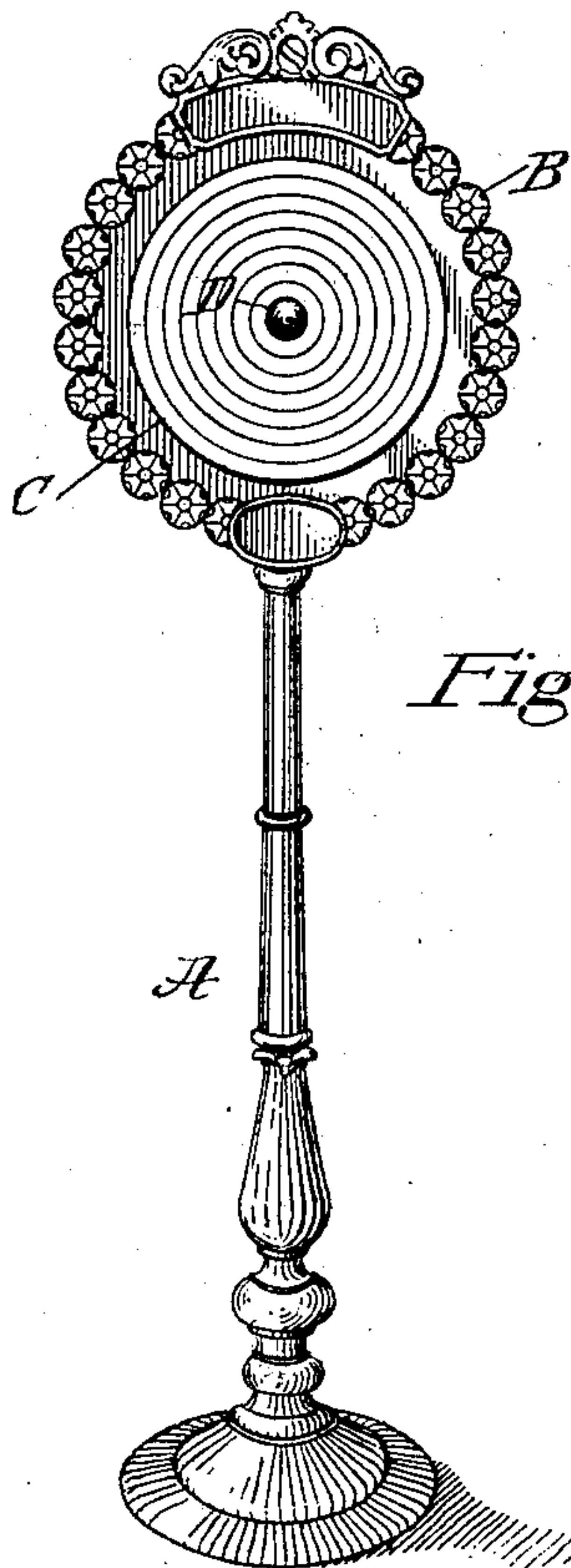


Fig. 1.

Fig. 3.

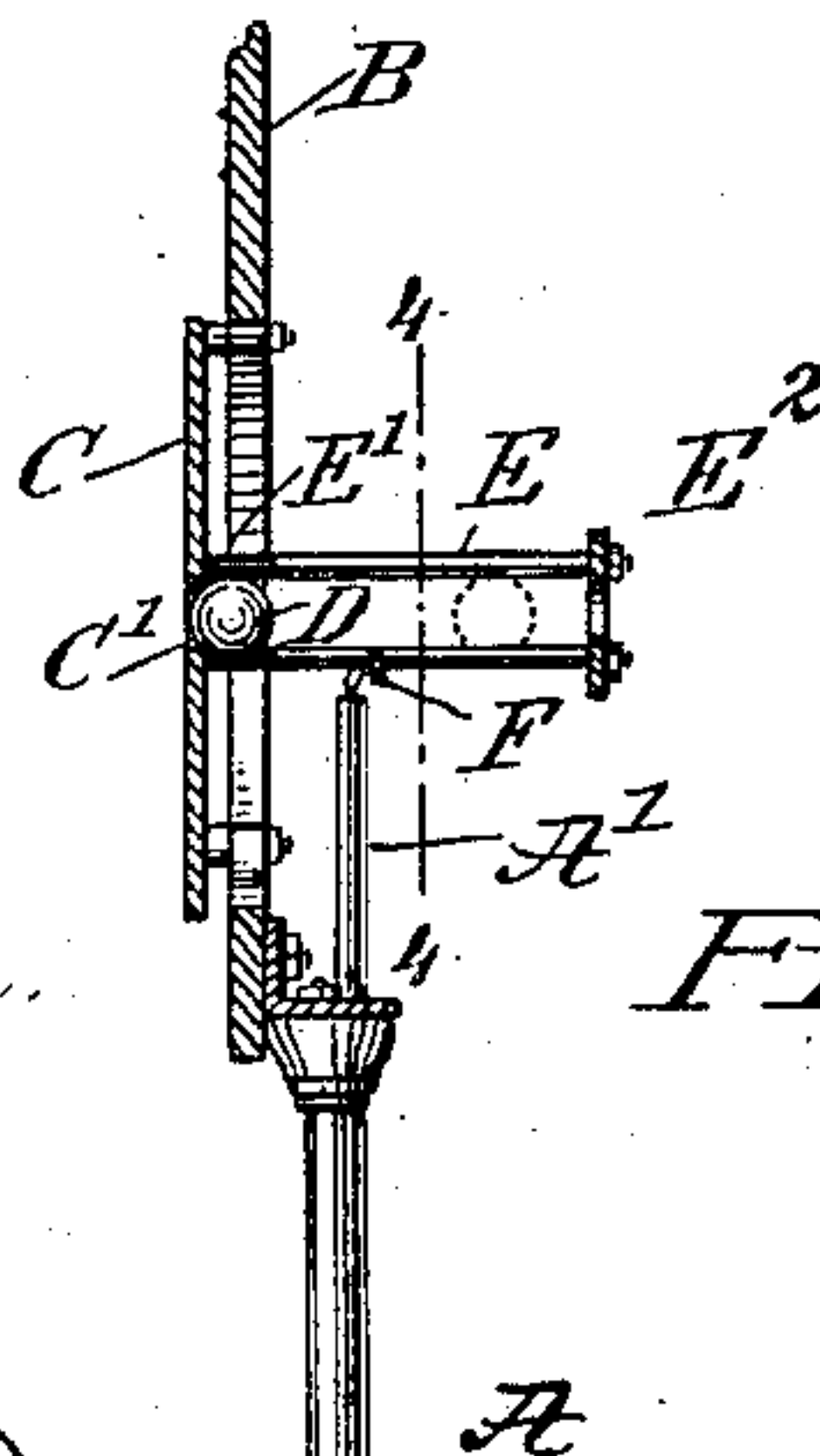
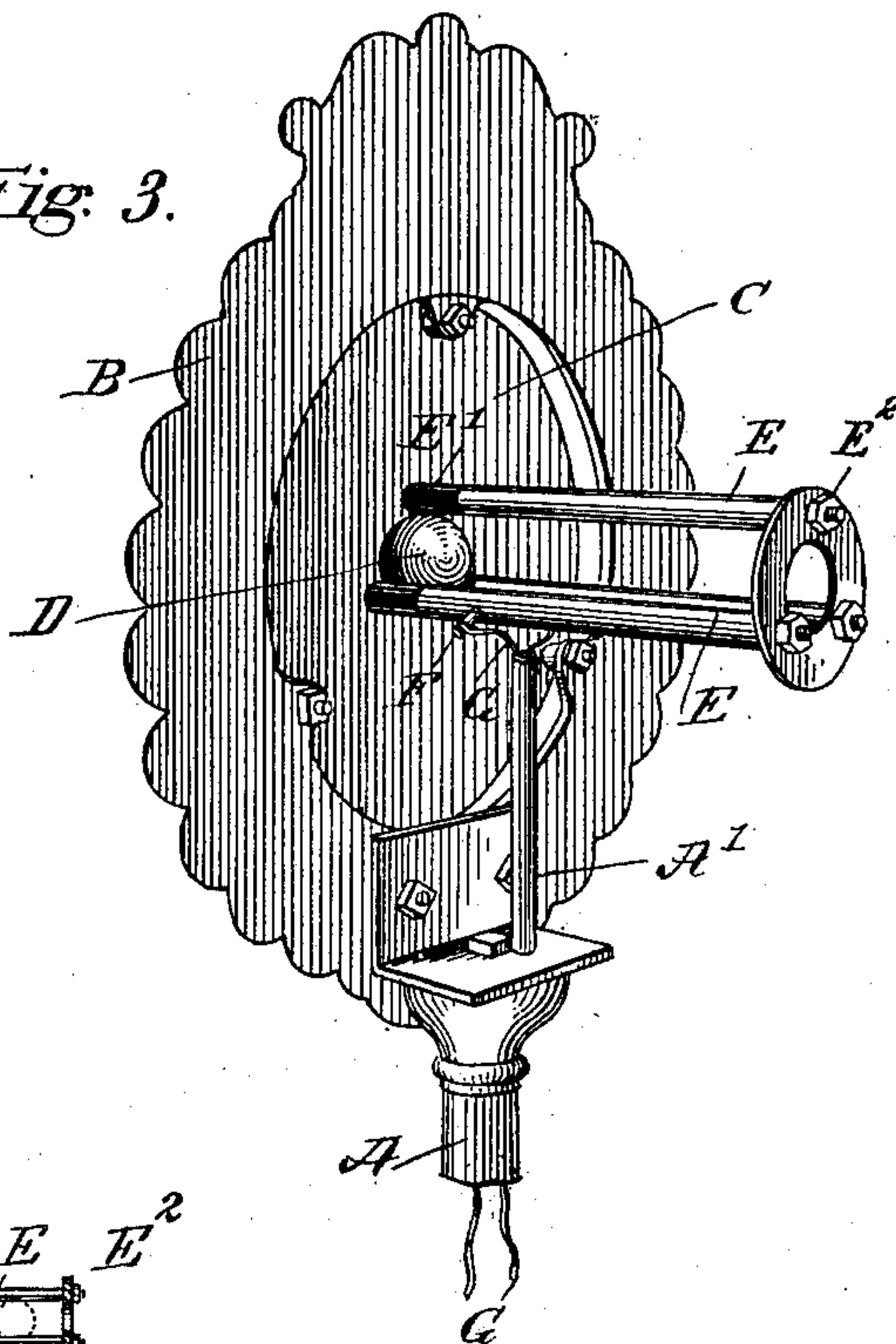
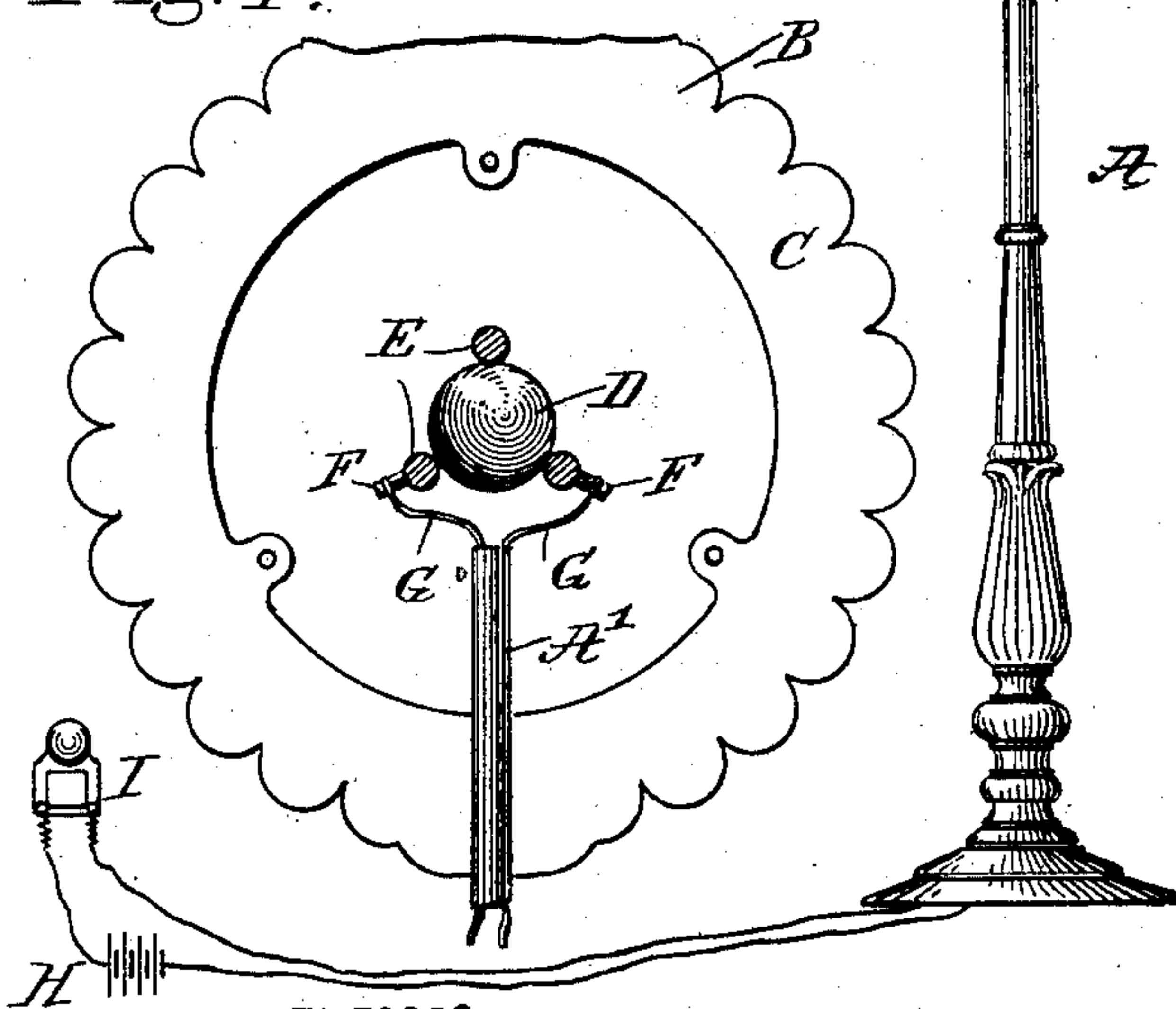


Fig. 2.

Fig. 4.



WITNESSES:

Robert Head  
A. C. Keaton

INVENTOR  
William F. Mangels  
BY *Wm. F. Mangels*  
ATTORNEYS.



## UNITED STATES PATENT OFFICE.

WILLIAM F. MANGELS, OF NEW YORK, N. Y.

## ELECTRIC TARGET.

SPECIFICATION forming part of Letters Patent No. 734,911, dated July 28, 1903.

Application filed November 25, 1902. Serial No. 132,766. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM F. MANGELS, a citizen of the United States, and a resident of the city of New York, Coney Island, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Electric Target, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved electric target which is simple and durable in construction and arranged to sound an electric alarm whenever the bull's-eye is struck by a projectile, the alarm being automatically sounded a length of time governed by the impelling force exerted by the projectile on the bull's-eye.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of the improvement. Fig. 2 is a transverse section of the same. Fig. 3 is an enlarged rear perspective view of the improvement, and Fig. 4 is an enlarged rear sectional elevation of the same on the line 4 4 of Fig. 2.

The target shown in the drawings is a portable one and is mounted on a stand A, supporting at its upper end an ornamental head B, preferably made ring shape, on the front of which is secured a plate C, covering an opening in the head B. On the plate C are formed the usual concentric rings and a central aperture C', into which projects from the rear a metallic ball D, which forms the bull's-eye for the target-plate C, as will be readily understood by reference to the drawings.

The bull's-eye ball D is mounted to travel on an inclined track E, arranged on the back of the target-plate C and preferably inclined upwardly in a rearward direction, so that when the ball D is struck at the front by the projectile it travels rearwardly and upwardly on the track E, and when the force of the projectile is spent then the ball runs down the track E by its own weight to again assume its normal position by projecting into the cen-

tral aperture C' from the rear of the target-plate.

The track E is preferably formed of three bars having their forward portions E' insulated for the ball D to rest on normally—that is, when extending into the central aperture C'. The remaining portions of the rods of the track E are made of metal and connected with each other at their rear ends by a stop-plate E<sup>2</sup>, serving to prevent the ball from leaving the track when forced rearward by a projectile, as previously explained. The non-insulated or metallic portions of the rods of the track E are provided with binding-posts F, connected with the wires G of an electric circuit containing a source of electricity H, and an alarm I of any approved construction. The wires G are preferably insulated and extend through a pipe A' and the hollow stand A and preferably under the flooring to the place where the shooter is located.

Now when the bull's-eye ball D is struck by the bullet or other projectile and passes from the insulated portions E' of the track E to the non-insulated parts thereof then the circuit is closed by the bull's-eye ball being of metal and connecting the rods carrying the binding-posts F with each other, so that the alarm I is sounded. Now the alarm remains in action as long as the ball travels on the non-insulated portion of the track E—that is, until the ball has returned to the insulated portion E', when the alarm ceases. Thus if the ball is struck in the center it travels farther rearward on the track E, and consequently the ball remains longer on the non-insulated portion of the track, and thus sounds the alarm for a longer period than when the ball is only struck slightly at the side and travels but a short distance rearward on the track E. In the latter case the alarm is sounded for a comparatively short time only.

From the foregoing it will be seen that the alarm is sounded a length of time governed by the impelling force of the bullet on the bull's-eye. Thus from the length of time the alarm I is ringing the shooter can judge how fairly the bull's-eye was hit.

The device is very simple and durable in construction, not liable to easily get out of order, and automatically rings the alarm when



the bull's-eye is struck, and stops the electric alarm as soon as the bull's-eye returns to its normal position.

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

1. An electric target having a target proper provided with a movable part adapted to be moved from its normal position of rest by a projectile, means for returning the movable part to its normal position of rest, and an electric alarm controlled by the said movable part, the duration of the sounding of the said alarm being governed by the travel given to the said target part, as set forth.
2. An electric target having a bull's-eye arranged to travel when struck by a projectile, and to return when the impelling force of the projectile is spent and an electric alarm controlled by the said bull's-eye, the duration of the sounding of the alarm being governed by the travel of the bull's-eye, as set forth.
3. An electric target having a bull's-eye ball and an inclined track for the said ball to travel on freely in a rearward direction when struck by a projectile and to return by its own gravity when the impelling force of the projectile is spent, as set forth.
4. An electric target comprising a ring-plate having a central aperture, a ball bull's-eye for the central aperture, and an inclined track on the rear of the ring-plate, for the ball bull's-eye to travel on rearwardly and upwardly when struck by a bullet and to return by its own weight to position in the aperture, as set forth.
5. An electric target comprising a ring-plate having a central aperture, a ball bull's-eye for the central aperture, an inclined track on the rear of the ring-plate, for the ball bull's-eye to travel on rearwardly and upwardly when struck by a bullet and to return by its own weight to position in the aperture, the forward portion of the track being insulated, and the non-insulated rear portion of the

track forming contact-plates, adapted to be connected with each other by the ball bull's-eye, and an electric alarm connected with the non-insulated rear portion of the track, as set forth.

6. An electric target comprising a ring-plate having a central aperture, a ball bull's-eye for the central aperture, an inclined track on the rear of the ring-plate, for the ball bull's-eye to travel on rearwardly and upwardly when struck by a bullet and to return by its own weight to position in the aperture, the forward portion of the track being insulated, and the non-insulated portion of the track forming contact-plates, adapted to be connected with each other by the ball bull's-eye, an electric alarm connected with the non-insulated rear portion of the track, and a stop-plate at the rear end of the track, as set forth.

7. An electric target comprising a hollow stand having a head, a ring-plate, having a central aperture, secured on the said head, a ball bull's-eye for the central aperture, an inclined track on the rear of the ring-plate, for the ball bull's-eye to travel on rearwardly and upwardly when struck by a bullet and to return by its own gravity to position in the aperture, the forward portion of the track adjacent to the aperture being insulated, and the non-insulated rear portion of the track forming contact-rods, adapted to be connected with each other by the ball bull's-eye, binding-posts on the non-insulated rear portions of the track, and an electric alarm having its wires connected with the said binding-posts, the wires extending through the hollow stand, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM F. MANGELS.

Witnesses:

THEO. G. HOSTER,  
EVERARD BOLTON MARSHALL.