

N<sup>o</sup> 6730



A.D. 1904

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# COMPLETE SPECIFICATION.

## Improvements in Mechanical Recording Targets.

I, WILLIAM HENRY ELL, of, 14 Camden Grove North, Peckham, London, S.E. (Gentleman), do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 The invention relates to improvements in mechanical recording targets, particularly adapted for use in connection with mechanical shooting ranges such as described in the Specification of my former Letters Patent No. 4469, A.D. 1904, but also suitable as targets for use in connection with saloon rifles and the like, the object of the present invention being to provide a target of  
10 simple construction whereby the number of bull's-eyes scored is clearly indicated and where the target is intended for use in connection with coin freed shooting ranges such as described in the specification of the aforesaid former Letters Patent, to provide means for the release of the coin when any pre-determined number of bull's-eyes has been scored.

15 In order that this invention may be fully understood, it will now be described with reference to the accompanying drawings, in which:—

Fig. 1 is a side elevation, partially in section, of the essential parts of the target.

Fig. 2 is a front elevation thereof, with some of the parts broken away for  
20 clearness.

Fig. 3 is a partial plan of the mechanism, and

Fig. 4 is an elevation of the mechanism arranged at the back of the case, where the target is employed in connection with a coin freed shooting range.

This improved target comprises a disc *a*, mounted on a spindle *b*, formed  
25 with bosses *c* and *d* and around the boss *c* a spiral spring *e* is arranged tending to revolve the disc *a*, while around the boss *d* a cord or suitable flexible connection *f* is arranged for returning the target to its normal or starting position. Around the edge of the face of the disc *a*, figures are marked at equal intervals, as shewn, and it is also furnished with a series of catches or stops *g*, and to a  
30 cross plate *h*, a rocking bar *i* is pivotted, within the support *j* and the right angled extremity *k* of the rocking bar *i* is normally retained, by means of a spring *l*, against the face of the disc *a* and in contact with one of the catches or stops *g*.

A covering or protecting plate *m* is mounted in front of the mechanism and  
35 this plate is formed with an opening or perforation *n* through which the figures on the disc *a* may be read and also with a flanged opening *o*, through which a disc *p*, forming the bull's-eye, carried by an arm *q* projecting from the opposite extremity of the rocking bar *i*, projects, while the rocking bar *i* is formed with a step *r* for limiting the movement of the rocking bar.

The operation is as follows:—

40 When the bull's-eye *p* is struck, the rocking bar *i* is depressed at that end and the extremity *k* momentarily lifted out of contact with one of the catches  
[Figs 8d.]

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or stops *g*, and the disc *a* revolved under the action of the spring *e*, a distance corresponding to that between any two consecutive stops, the extremity *k* then engaging the next stop and preventing the disc *a* further revolving until the bull's-eye is again struck.

As the disc *a* revolves, the cord or flexible connection *f* is wound up on the boss *d*, and when one revolution has been completed, the disc *a* is returned to its normal position, by drawing the flexible connection *f* off the boss *d*, which at the same time winds up the spring *c*.

When the target is intended for use in connection with a coin freed shooting range and the coin is required to be returned when any pre-determined number of bull's-eyes have been scored, an approximately circular disc *s*, slightly flattened at one side *s*<sup>1</sup>, (Fig. 2), is mounted on the boss *c*, a bell crank *t* is pivotted to a bracket *t*<sup>1</sup>, and one arm *u* of the bell crank bears against the edge of the disc *s*, while the other arm *u*<sup>1</sup> is pivotted to a rod *v* connected with the coin retaining plate referred to in the specification of the aforesaid former patent, so that the rod *v* and the coin retaining plate are held in their normal positions until the disc *a* has revolved sufficiently to allow the arm *u* of the bell crank *t* to come into contact with and bear against the flattened portion of the disc *s*, when the rod *v* is drawn back by means of a suitably arranged spring, not shewn, and the movement of this rod operates the coin retaining plate for releasing the coin, and in order that the parts may be returned to their normal positions, the flexible connection *f* is carried over pulleys *w*, *w*<sup>1</sup> and secured at its extremity to an arm *x* (Fig. 4) pivotted as at *y*, which in turn is connected with the draw bar of the machine.

The covering or protecting plate *m* may be made in the form of a human head or of an animal or the like and the bull's-eye may represent some material part thereof, such as the nose of a face, for instance, or the said protecting plate may be of any grotesque or suitable form.

By duplicating or multiplying the parts, it is obvious that an "inner" or an "outer" might be registered in a similar manner to a bull's-eye, while the mechanism might be arranged in combination with a horizontal target instead of with a vertical target as shewn.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. The new or improved recording target comprising a disc, mounted so as to be capable of revolving under the action of a suitably arranged spring, carrying numbers marked around its outer edge and furnished with a series of pins or stops, a pivotted rocking bar having one extremity normally in engagement with one of the pins or stops and at its other extremity formed with a step and furnished with an arm carrying a disc forming the bull's-eye, a covering or protecting plate of suitable form, furnished with openings or perforations through which the figures on the disc may be read and through which the bull's-eye projects, and means for returning the disc to its normal position, preferably taking the form of a flexible connection wound around a drum or boss, formed with or secured to the said disc; substantially as described and shewn with reference to the accompanying drawings, and for the purposes specified.

2. The combination with a recording target such as claimed in Claim 1, of means for operating the coin release mechanism, comprising an approximately circular disc mounted upon the same spindle or in connection with the disc of the target and slightly flattened at one side, a pivotted bell crank lever having one arm bearing against the edge of the said disc the other arm pivotted to a rod connected with the coin release mechanism, the whole arranged and operating, substantially as herein described and shewn, and for the purposes specified.

3. The combination with a recording target such as claimed in Claim 1, of means for returning the parts to their normal positions when the target is enclosed within a case, comprising a flexible connection having one extremity

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wound around a drum or pulley formed with or secured to the target disc and having its other part carried over other pulleys and its extremity secured to a pivotted arm connected with the draw bar; substantially as described and shewn with reference to the accompanying drawings.

5 Dated this 25th day of February 1904.

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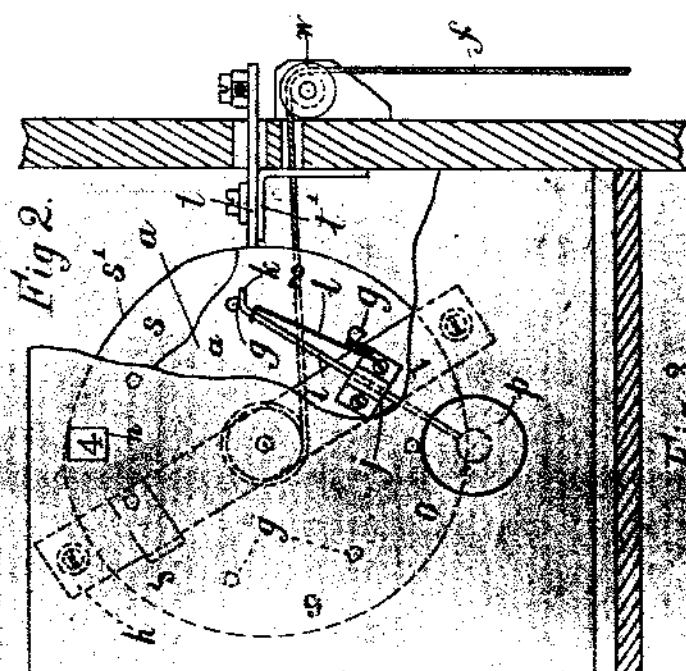


Fig. 2.

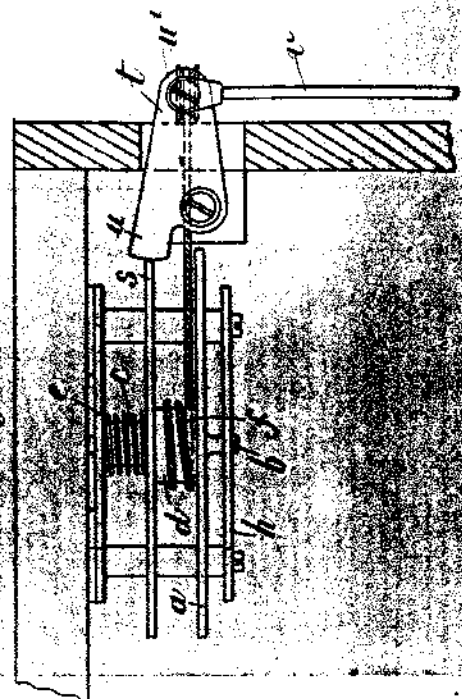


Fig. 3.

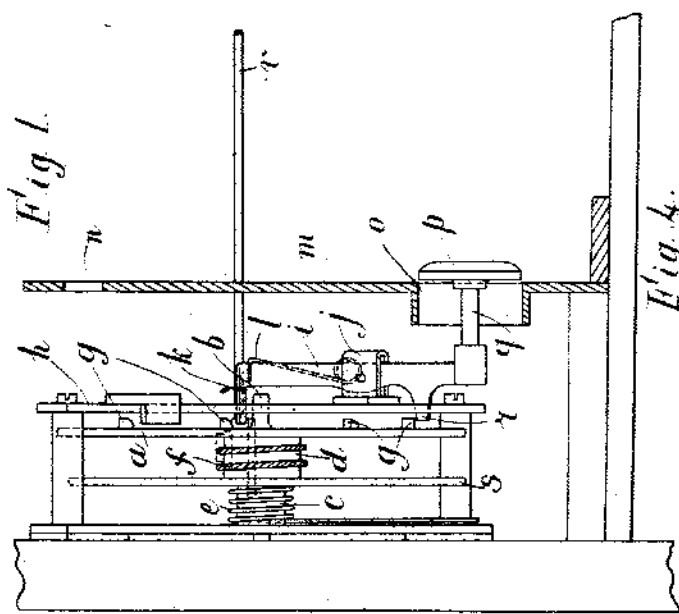


Fig. 1.

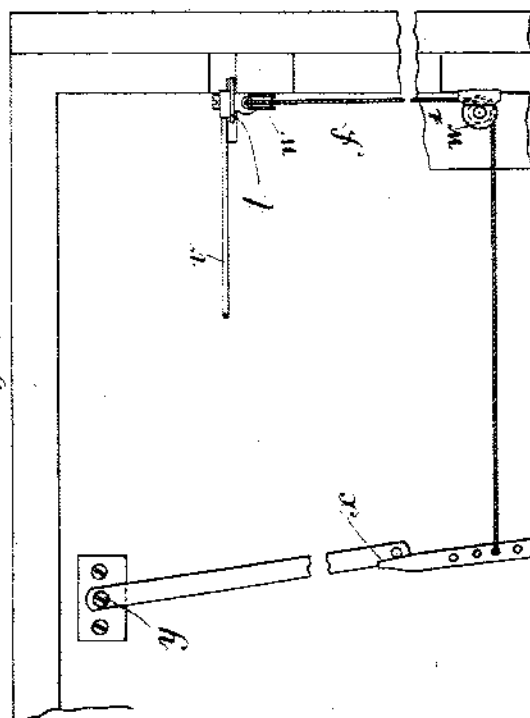


Fig. 4.