

(No Model.)

B. DUFNER & E. FREINER.

TARGET.

No. 399,604.

Patented Mar. 12, 1889.

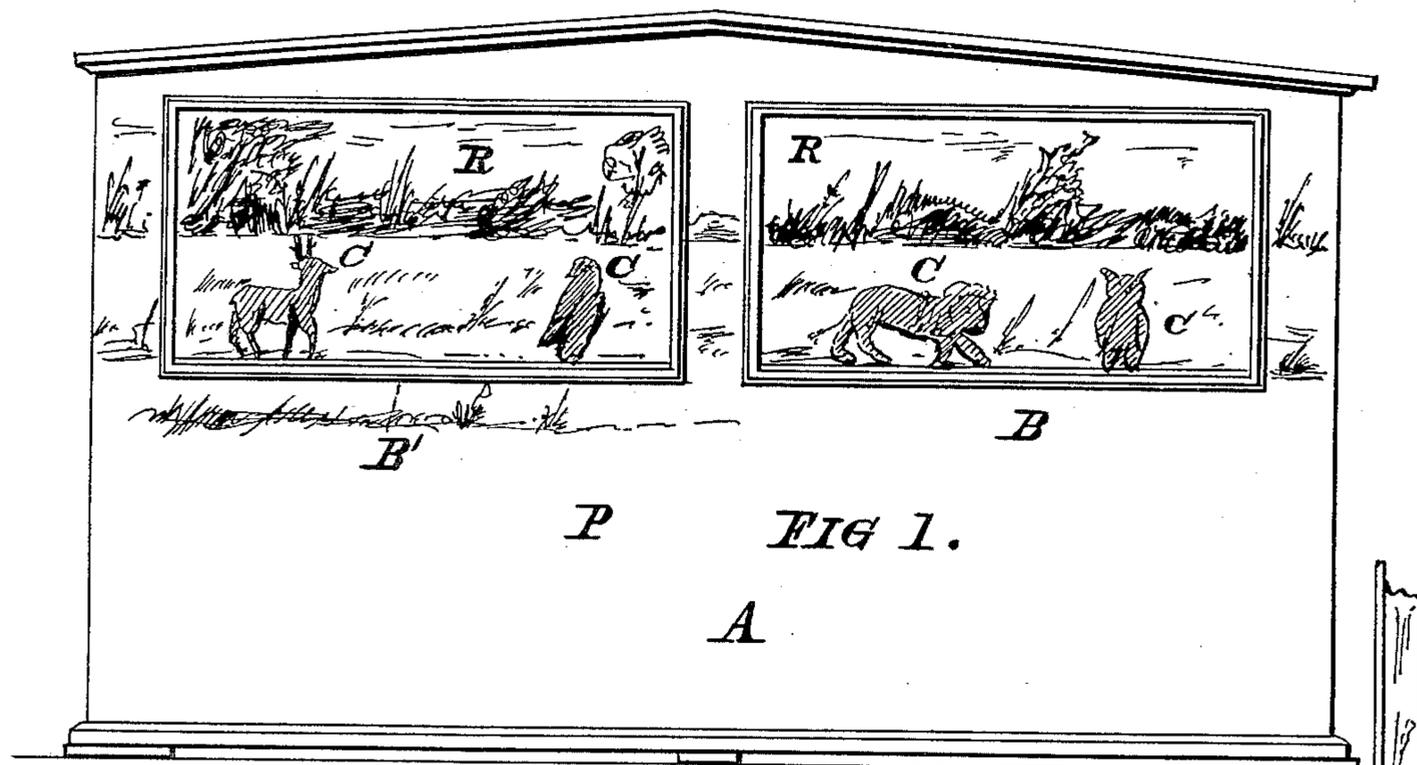


FIG. 1.

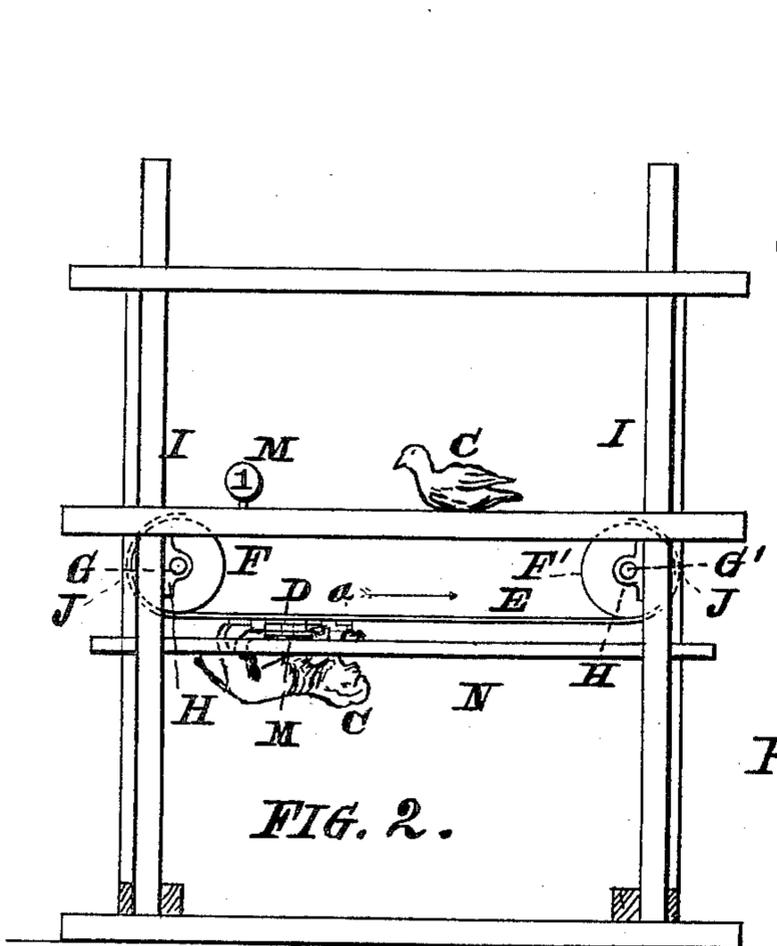


FIG. 2.

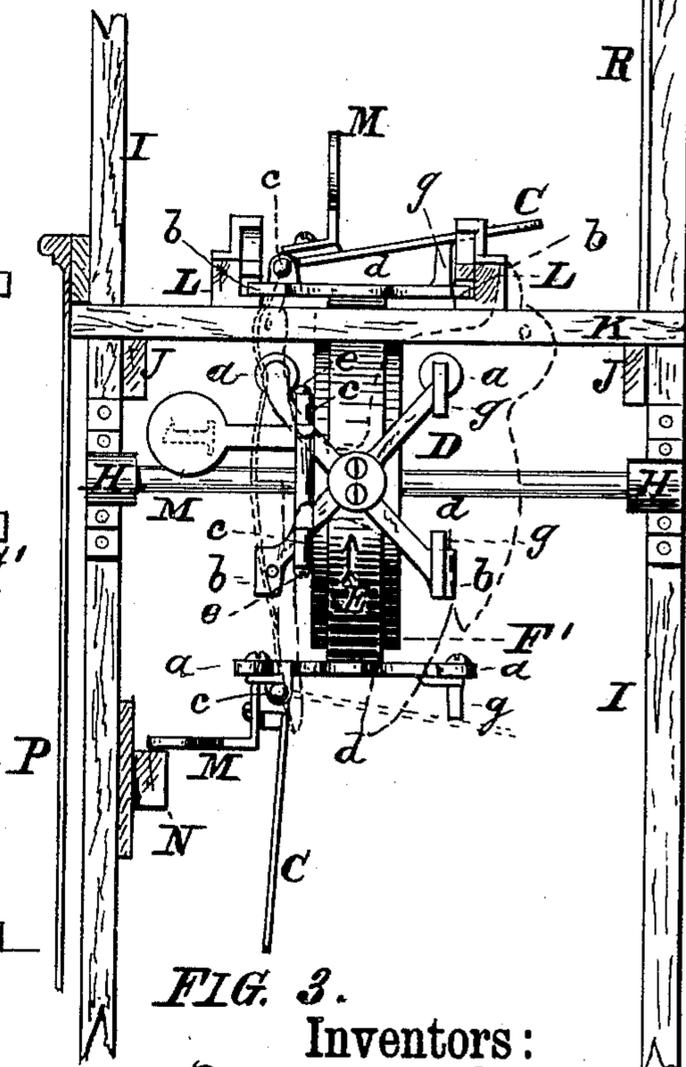


FIG. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

BERNHARD DUFNER AND EMIL FREINER, OF BUFFALO, NEW YORK.

TARGET.

SPECIFICATION forming part of Letters Patent No. 399,604, dated March 12, 1889.

Application filed October 29, 1888. Serial No. 289,392. (No model.)

To all whom it may concern:

Be it known that we, BERNHARD DUFNER and EMIL FREINER, both of Buffalo, in the county of Erie and State of New York, have jointly invented certain new and useful Improvements in a Shooting-Gallery; and we do hereby declare that the following description of our said invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

Our present invention has general reference to shooting-galleries; and it consists, essentially, in the novel and peculiar arrangement of the targets and details of construction, as hereinafter first fully set forth and described, and then pointed out in the claims.

Figure 1 in the figures of the drawings, which serve to illustrate our said invention more fully, is a front elevation of a shooting-gallery constructed in accordance with our invention. Fig. 2 is a skeleton elevation of the same. Fig. 3 is an end view of a portion of the same drawn on a slightly-larger scale than those of the preceding figures.

Like parts are designated by corresponding letters of reference in all the figures.

The object of our present invention is the production of a shooting-gallery having movable targets, which, when hit by a bullet-shot, will fall over out of sight, but at the same time exhibit a secondary or auxiliary target giving the number or otherwise identify the target hit. To obtain this result, we construct our shooting-gallery substantially in the form of a house, as shown in Fig. 1, the front A of which has one or more openings, B B', through which the movable targets C may be seen and aimed at with a shotgun for the purpose of hitting the same with a bullet. These targets C represent birds, animals, or other desirable objects, and they are hinged to a carriage, D, Fig. 3, which carriage in turn is fastened to a belt or strap, E, traveling over two pulleys, F F', in a horizontal plane, said pulleys being secured upon shafts G G', revolving in bearings or boxes H, fastened to uprights I of the frame-work in a suitable and proper manner. One of these shafts G G' is

revolved at a suitable speed by any of the well-known means—such as a crank, or spring, or weight-motor, (not shown, such mechanism being so well understood as not to require illustration in the drawings or further description in this specification.)

Upon suitable longitudinal pieces, J, of the frame-work are placed two cross-pieces, K, carrying longitudinal guide pieces or ways L L, within which the carriage D moves, it being pulled along by the belt E in the direction of the arrows placed in Figs. 2 and 3.

The carriage D (shown in the plan, front, and rear elevation in Fig. 3, owing to the positions assumed by said carriage when in operation) consists of a spider or casting having the shape of the letter X, it being screwed or riveted to the belt E at the intersection of the members of the carriage or central portion, d, in a suitable manner. The forward end of the forward members of the carriage have horizontally-located guide-wheels a, and the extreme ends of the rear members are also either provided with such wheels, or they may be simply formed into sidewise-projecting slides b b, said wheels and slides engaging ways or grooves in the guide-pieces L, as clearly illustrated in Fig. 3.

Upon the members of the carriage are provided upwardly-projecting lugs c, within which is hinged by screws e a bar, f, to which the target-figures C are fastened in any suitable manner. The forward and rear members of the carriage opposite those having the lugs c are provided with upwardly-projecting lugs g, serving as rests for the target-figures C after having been shot at and thrown over in a horizontal position, so as to easily and readily carry the same in this position.

To the face of the target-figures C and at right angles thereto are fastened secondary targets or indicator N, which secondary targets are marked on their faces with numbers or other means for identification of the target-figures when lying in a horizontal position, said secondary or auxiliary targets serving also the purpose of sustaining the lower side of the belt and carriages in conjunction with a horizontal guide-piece, N, fastened to the front standards, I.

In operation the shafts G G' are revolved in a direction corresponding with that in which the target-figures are to travel. These figures are assumed to stand erect when passing the upper side of the pulleys in view of the person who is to shoot at the same. If hit by a bullet, the figure will drop and immediately exhibit the auxiliary target, thus showing which target-figure has been hit, thereby avoiding any and all controversy as to whether or not or which target has been hit. If a target has not been hit, it will continue its circuit in an erect position; but if thrown down it will as soon as it has passed the horizontal center line of the pulley F begin to drop down into a pendent position, which, as a matter of fact, rights the target, so that when it passes over the pulley F' to occupy the position on the upper belt-course it is in an erect position, the change being an automatic one, unassisted by any mechanism.

The front wall, P, of the structure, as well as the back wall, R, are made of strong sheet-iron to prevent the balls from penetrating and injuring the mechanism, and for other obvious reasons.

In Fig. 3 we have indicated both the vertical and horizontal positions of the target-figures in dotted lines, the erect position being the proper one relative to the other portions of the mechanism, having shown the figure of a bird in dotted lines to enable us to show the carriage D in a proper plan view.

Having thus fully described our invention, we claim as new and desire to secure to us by Letters Patent of the United States—

1. In shooting-galleries, a target-figure pivoted to a suitable carrier, in combination with an auxiliary target affixed to the main target at approximately a right angle to the face of the main target, whereby the latter, when hit by a bullet, will be knocked down and thereby exhibit the auxiliary target automatically, as and for the object set forth.

2. A compound target consisting of a main target pivoted to a suitable carrier, with the axis of the target in a horizontal line across the line of firing, and an auxiliary target affixed to the main target at approximately a right angle, whereby the latter in disappearing automatically exhibits the auxiliary target, as and for the purpose stated.

3. In compound targets, a main target pivoted to a suitable carrier, with the axis of the target in a horizontal line across the line of firing, in combination with an auxiliary target affixed to the main target at approximately a right angle, the carrier being moved by suitable mechanism for moving-target practice, as and for the purpose set forth.

4. In shooting-galleries, the combination,

with an endless belt revolving around two pulleys with shafts the axes of which are in horizontal planes, of a series of carriages, each having a pivoted target adapted to be knocked down when struck by a bullet, said targets being provided with laterally-projecting portions supporting the targets upon a suitable rail while traveling with the lower horizontal line of said belt, in a manner as and for the object set forth.

5. In shooting-galleries, the combination, with the belt, of a carriage consisting of an X-shaped frame, D, the four extremities of which engage guides L L, as described, said frame D having upon its upper face lugs *c*, engaging a bar, *f*, affixed to the target proper, and further lugs *g*, carrying said target free of the rear rail, L, after being knocked down, the whole being moved by suitable mechanism, as and for the purpose set forth.

6. In shooting-galleries, the combination, with the movable-target figures C, having auxiliary targets M affixed at approximately a right angle to the face of the said movable-target figures, as described, of the supporting-bar N, arranged parallel with the lower line of the belt, the driving-pulleys with their shafts, and suitable operating mechanism, substantially as and for the purpose set forth.

7. The combination, with a suitable frame, of the two horizontally-revolving shafts G G', carrying the pulleys F F', and the belt E, stretched over said pulleys and carrying upon its flat side a series of carriages, D, provided with targets C, the carriages being arranged to move in guides L L when upon the upper plane of the belt, and supported upon the rail N by the auxiliary targets M when upon the lower plane, said auxiliary targets being placed at approximately a right angle to the face of the target proper and sliding upon said supporting-bar N, as and for the object stated.

8. The carriage D, consisting of an X-shaped body having its forward members provided with guide-wheels *a* and upwardly-projecting lug *g*, and its rear members provided with laterally-projecting slides *b*, one of which is also fitted with an upwardly-pointing lug, *g*, the lugs *c*, bar *f*, and bolt *e*, the whole being arranged upon an endless belt driven by suitable mechanism for target practice, as and for the object stated.

In testimony that we claim the foregoing as our invention we have hereto set our hands in the presence of two subscribing witnesses.

BERNHARD DUFNER.
EMIL FREINER.

Attest:

MICHAEL J. STARK,
FRED GANG.