March 21, 1933. J. F. MEYER 1,902,040

AMUSEMENT MACHINE

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Fig. 1.

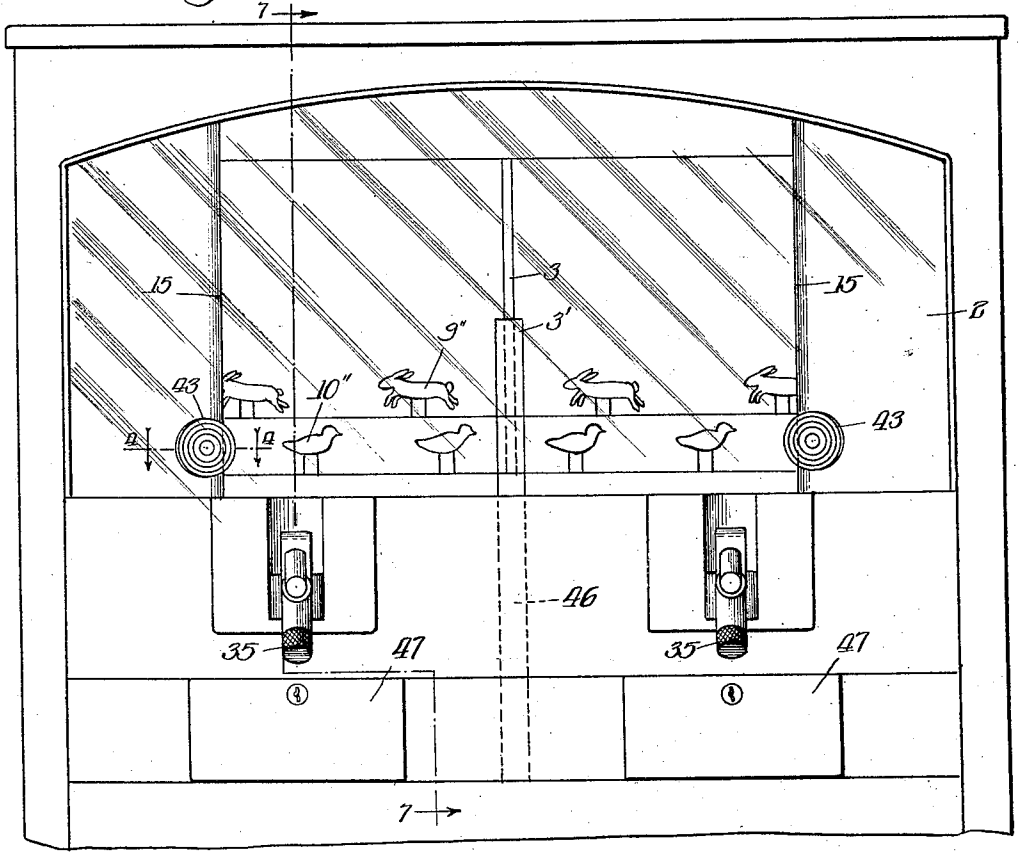

Fig. 2.

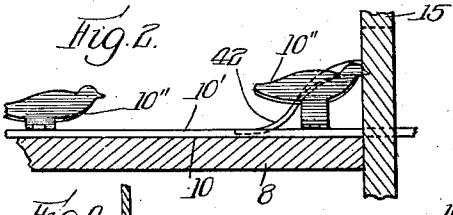

Fig. 3.

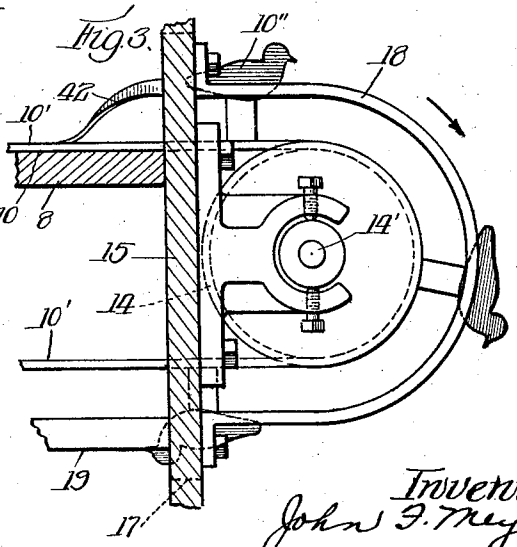

Fig. 4

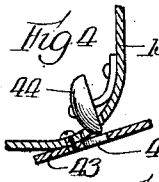

Fig. 5.

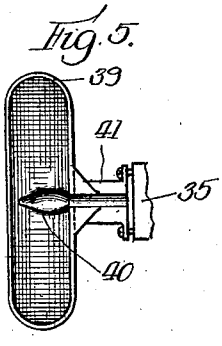

Fig. 6.

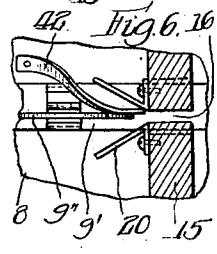

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Fig. 7.

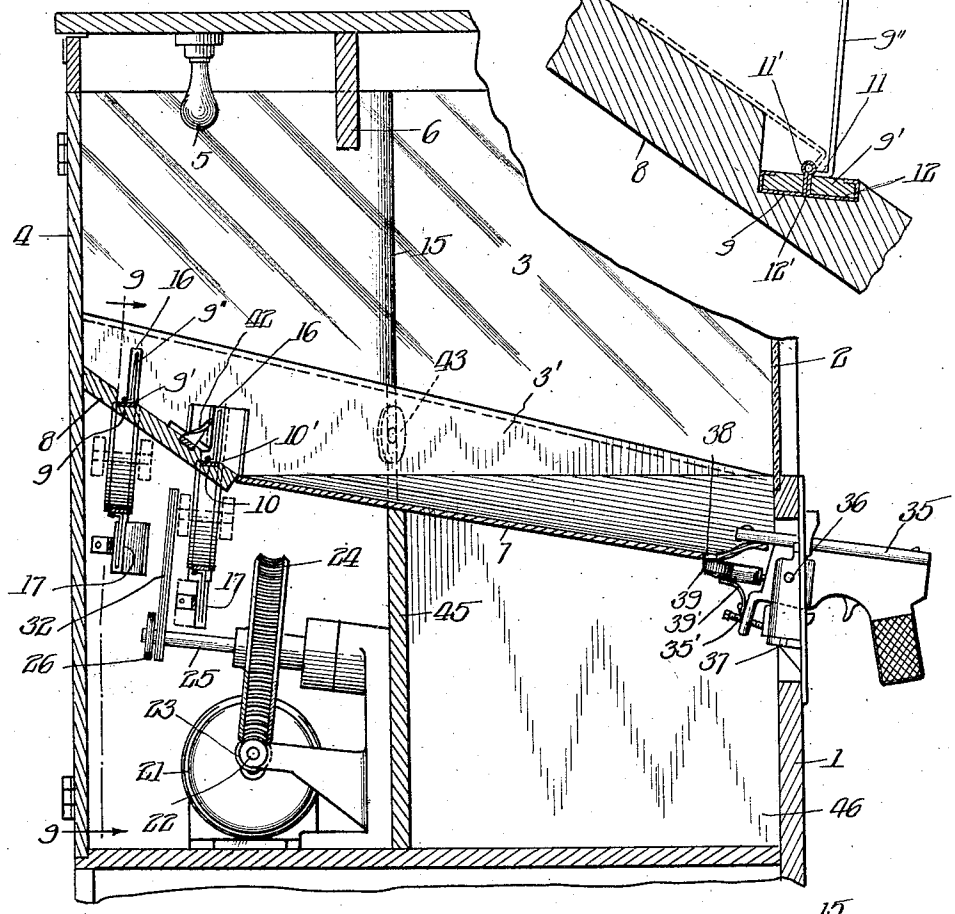
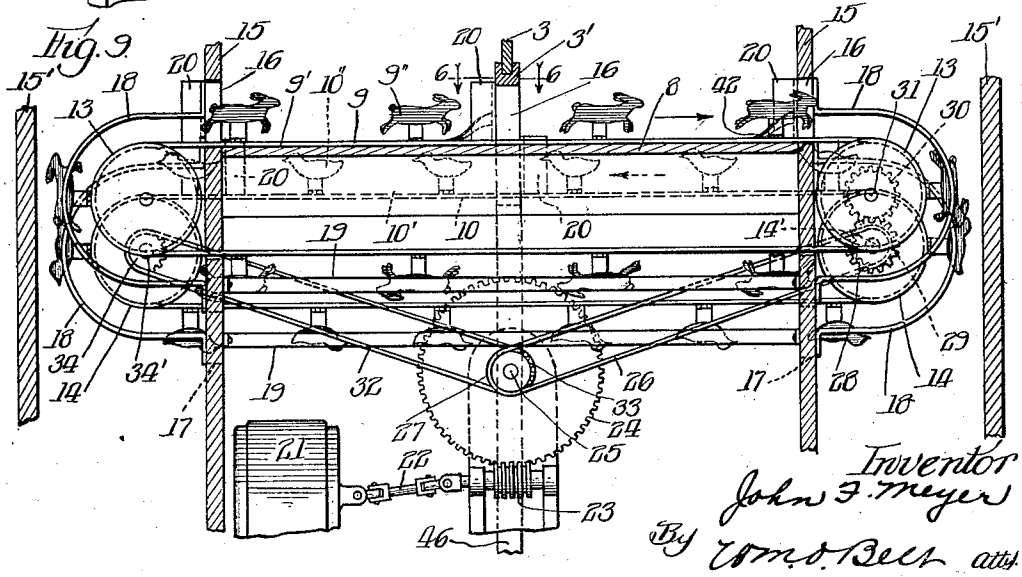


Fig. 8.

Fig. 9.



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UNITED STATES PATENT OFFICE

JOHN F. MEYER, OF CHICAGO, ILLINOIS

AMUSEMENT MACHINE

Application filed March 23, 1929. Serial No. 349,355.

This invention relates to amusement machines and it has for its primary object to provide a novel machine of the shooting gallery type provided with movable and stationary targets and one or more coin operated pistols combined and arranged in a portable machine adapted to be displayed in public and other places and to furnish entertainment and amusement to the general public.

Another object of the invention is to provide two oppositely movable carriers having targets mounted thereon and provided with means for maintaining the carriers taut while they are passing across the shooting range.

Another object of the invention is to provide a plurality of movable targets pivotally mounted to fall over when struck and means for automatically restoring the down targets to upright position.

A further object of the invention is to provide means of simple construction for operating the movable targets in a regular and orderly manner whether or not any of the targets are struck by balls.

And a further object of the invention is to construct and arrange the movable and other parts and mechanisms of the machine so that the balls will not be obstructed thereby and will not interfere with the operation thereof and also to provide means for quickly returning the balls to the pistols and without interfering with the operation thereof.

In the accompanying drawings illustrating a selected embodiment of the invention,

Fig. 1 is a front elevation of the machine.

Figs. 2 and 3 are detail sectional views showing parts of the movable target devices.

Fig. 4 is a detail sectional view of a stationary target.

Fig. 5 is a detail plan view of the ball receiving tray.

Fig. 6 is a detail view showing the movable target guide on the line 6—6 of Fig. 9.

Fig. 7 is a sectional view on the line 7—7 of Fig. 1.

Fig. 8 is a detail sectional view.

Fig. 9 is a sectional view on the line 9—9 of Fig. 7.

Referring to the drawings the invention comprises a cabinet 1 having in the upper part thereof a glass front 2 for one or more ranges, two being shown in the drawings separated by a glass partition 3. There is a door 4 at the back of the cabinet to permit access to the interior thereof and one or more lights 5 at the top of the cabinet, and at the rear thereof, with a barrier 6 depending from the top of the cabinet in front of the lights to hide the lights from the spectators. This arrangement of the lights and the barrier gives the effect of indirect lighting upon the targets beneath the lights. The bottom of the ranges is formed by an inclined plate 7 which is suitably supported in the cabinet above the operating mechanism and adjoins at the rear a more sharply inclined support 8 which extends transversely of the cabinet and is provided with groove trackways or tracks 9, 10 for the belts 9′, 10′ which carry the movable targets 9″, 10″. For convenience the targets 9″ are made in the shape of animals and the targets 10″ are made in the shape of birds. Each movable target consists of a relatively thin plate bent laterally at the bottom to form a base 11 which is pivoted at 11′ to a clamp 12 on the belt, Fig. 8. This clamp is shaped to embrace the bottom of the belt, the side edges and portions of the top adjacent said side edges and it is bent upward centrally at 12′ through the belt and shaped to form an eye for the pivot 11′. The belt 9′ travels on pulleys 13 and the belt 10′ travels on pulleys 14, Fig. 9, these pulleys being mounted in the cabinet so that the belt 9′ and its targets 9″ will travel across the pistol ranges in a higher plane than the belt 10′ and its targets 10″. Side partitions 15 spaced from the side walls 15′ of the cabinet extend forwardly from the rear door 4 of the cabinet part way to the glass front 2 of the cabinet and then extend laterally to the side walls. The glass partitions 3 is mounted on a wood base 3′ which extends from front to back of the cabinet. The partitions 15 and 3′ are provided with openings 16 to permit the movable targets to pass through the partitions, Figs. 7–9. These openings are in the pistol ranges and are preferably of just sufficient height

and width to permit passage of the movable targets. Other openings 17 of any size are provided in the partitions 15 to permit passage of the movable targets on the lower travel of the belts 9′, 10′. Guide bars 18 are mounted on the partitions 15 adjacent the pulleys 13, 14 to hold the movable targets perpendicular as they travel around the pulleys and guide bars 19 may be provided between the partitions adjacent the path of travel of the movable targets to maintain them in perpendicular position so far as they may be necessary. Diverging guides 20 are provided at the entrance of the openings 16 to insure that the targets will enter the openings in upright position so that they may pass freely therethrough. Power from an electric motor 21 in the lower part of the cabinet is transmitted through a shaft 22, a worm 23 and a worm gear 24 to a drive shaft 25 mounted in the cabinet. A drive chain 26 operates on a sprocket wheel 27 on shaft 25 and on a sprocket wheel 28 on the shaft 14′ which carries the pulleys 14 at the right Fig. 9. A gear 29 on shaft 14′ drives a gear 30 on shaft 31 which carries the pulley 13. Thus the belt 9′ is caused to travel through the pistol ranges from left to right, Fig. 9, and the belt 10′ is caused by the same mechanism to travel through the pistol ranges from right to left, Fig. 9. The belt 9′ will be pulled on its travel through the ranges and therefore will have no slack in the pistol ranges, but this mechanism will push the belt 10′ on its travel through the ranges and there may be slack in the belt which would obstruct the return of the balls to the pistols and might cause damage to the mechanism. Therefore I provide a chain 32 which travels on a sprocket 33 on shaft 25 and on a sprocket 34 on shaft 34′ which carries the pulley 14 at the left Fig. 9. Thus the belt 10′ is pulled through the ranges which will eliminate any slack that might be caused by the mechanism at the right, Fig. 9, tending to push this belt through the ranges.

An automatic coin operated spring pistol 35 of any suitable description is pivotally mounted at 36 and 37 in the front of the cabinet to swing vertically and laterally. The pistol is capable of adjustment within the range to aim at any of the targets and the muzzle of the pistol projects into the cabinet and above the plate 7. This plate is dished at the front and provided with an opening 38 to discharge the balls which travel down the inclined plate into a tray 39, Figs. 5, 7 which is mounted on the pistol and is sufficiently elongated to receive the balls in any position of the pistol. The bottom of this tray inclines to a depression 40 to receive the balls. A tubular member 41 connects the tray with the body of the pistol and the balls roll through this member into the magazine of the pistol. More balls are provided than the magazine of the pistol will hold to provide for rapid firing and the tray provides a convenient receptacle for receiving the balls so that they will not remain on the range and in the path of the ball being shot. If a movable target is hit by a ball it will fall down backward as far as the inclined support 8 will permit and to upright fallen targets before they pass through the opening 16 I provide curved guides 42 adjacent certain of the openings 16. Fallen targets will ride on these guides and thereby be uprighted before they enter the openings 16. A stationary target 43 is mounted on each partition 15 and is provided with an opening 43′ in front of a bell 44 also mounted on the partition 15, Fig. 4. These targets are in range of the pistols and if a ball passes into the opening 43′ it will strike the bell and produce an audible sound. The coin mechanism of the pistol discharges the coin into a receptacle for each pistol formed in the bottom of the cabinet by the transverse partition 45 and the longitudinal partition 46, and doors 47 in the front of the cabinet give access to these coin receptacles.

My invention provides a portable machine of simple construction which is adapted to furnish entertainment and amusement to operators, with the movable targets in continuous operation. The drawings show the machine equipped with two pistol ranges which is desirable for simultaneous competitive shooting but the invention may be embodied in a single range machine or in a machine having more than two ranges. The pistol is mounted to swing vertically and horizontally and it can be readily moved for aiming. The tray 39 is mounted on the pistol and moves therewith, and it is of a size and shape to register with the opening 38 in all positions of the pistol. The adjusting screw 35′ prevents the pistol from being aimed too low and a spring 39′ on the pistol holds the tray 39 up in position to receive balls through the opening 38.

I have shown the invention in the accompanying drawings in a form satisfactory for accomplishing the desired results but the invention may be embodied in other forms and constructions and modified as required to meet different conditions and I reserve the right to make all such changes as fairly fall within the scope of the following claims.

I claim:

1. The combination of a cabinet having a pistol range therein, a pistol mounted in the cabinet at the front of said range, an inclined support at the rear end of said range and having a groove trackway therein, an endless carrier neatly fitted in and traveling through said trackway and held against movement other than in the direction of its travel, means moving said carrier through said trackway, and targets pivotally mounted on said carrier.

2. The combination of a cabinet having a pistol range therein, partitions forming sides for said range and having openings therein, a pistol mounted in the cabinet at the front of said range, an inclined support at the rear end of said range between said partitions, an inclined plate providing a bottom for said range, said support having a trackway therein, an endless carrier traveling in said trackway, targets pivotally mounted on said carrier and movable through the openings in the partitions, and means arranged below said inclined support and inclined plate for driving said endless carrier, said inclined support, inclined plate, and partitions cooperating to prevent objects discharged from said pistol from passing to said driving means.

3. The combination of a cabinet having a pistol range therein, partitions forming sides for said range and having openings therein, a pistol mounted in the cabinet at the front of said range, an inclined support at the rear end of said range between said partitions, an inclined plate providing a bottom for said range, tracks on said support in different horizontal planes, endless carriers traveling on said tracks in opposite directions, targets pivotally mounted on said carriers and movable through the openings in said partitions and adapted to fall from an upright position when struck by balls from the pistol, guides for uprighting fallen targets without interrupting the travel of the carriers, other guides for directing the targets into said openings in the partitions, and means arranged below said inclined support and inclined plate for driving said endless carriers, said inclined support, inclined plate, and said partitions cooperating to prevent the balls discharged from said pistol from passing to the driving means.

4. The combination of a cabinet having a pistol range therein, partitions in the cabinet, a pistol mounted in the cabinet at the front of said range, an inclined support at the rear end of said range between the partitions, an inclined plate providing a bottom for said range, tracks on said support in different horizontal planes, pulleys mounted on the outer sides of said partitions, endless carriers traveling in opposite directions on said tracks and pulleys and through said openings, targets pivotally mounted on said carriers, said partitions having restricted openings therein to prevent passage of balls projected from said pistol therethrough and adapted to permit passage of the targets when uprighted, means for guiding the targets in upright position through said openings and around said pulleys, and means arranged below said inclined support and inclined plate for driving said endless carriers, said inclined support, inclined plate, and partition cooperating to prevent balls discharged from said pistol from passing to said driving means.

5. The combination of a cabinet having a pistol range therein, a pistol pivotally mounted in the cabinet at the front of said range to swing vertically and laterally, a target at the back of said range, an inclined plate to receive balls discharged by the pistol at the target and having an opening therein, a tray resiliently supported on the pistol beneath said opening to receive balls therefrom, said tray being elongated to register with the opening in any position of the pistol and held against said plate by the resilient support therefor, and a conduit for conducting balls from said tray to the pistol.

6. A mounting for a target including a clamp embracing the bottom and edges of the carrier for the target and projecting through the carrier intermediate of its edges, and a target pivotally mounted on said projecting portion of the clamp.

7. A mounting for a target including a clamp embracing the bottom and edges of the carrier for the target and having the medial portion thereof folded upon itself and projecting through the carrier intermediate of its edges and having the bight thereof looped and projected beyond the top of the carrier, and a target pivotally mounted on the looped portion of the clamp.

8. The combination of a cabinet having a pistol range therein, a pistol mounted in the cabinet at the front of said range, a target at the back of said range, an inclined plate to receive balls discharged by the pistol at the target and having an opening therein, a tray mounted on the pistol beneath said opening to receive balls therefrom and movable with the pistol, and a spring yieldingly supporting the tray in operative position beneath said opening.

9. In an amusement device, shooting means, means for supporting said shooting means for vertical and horizontal movement, an inclined plate having an opening therein adjacent said shooting means and having a raised portion intermediate said opening and said shooting means for directing objects into said opening, an elongated tray below said plate, and resilient means for supporting said tray from said shooting means below said opening and in engagement with said plate.

10. The combination of a cabinet having a pistol range therein, a pistol at the front end of said range, an inclined support at the rear end of said range, an inclined plate providing a bottom for said range, partitions providing side walls for said range, tracks on said support in different horizontal planes, endless carriers traveling on said tracks in opposite directions, pulleys outwardly of said partitions and about which said endless carriers are directed, a driving motor, means connected thereto for driving one of said

carriers, and gears connecting the second carrier with the motor driven carrier for driving the second carrier, said inclined support, inclined plate, and said partitions covering said driving motor connecting means, and gears to prevent objects discharged from said gun from passing thereinto.

11. The combination of a cabinet having a pistol range therein, a pistol at the front end of said range, partitions in said cabinet, an inclined support at the rear end of said range between the partitions, tracks on said support in different horizontal planes, pulleys mounted on the outer side of said partitions, said partitions having openings therein, endless belts traveling in opposite directions on said tracks and pulleys and through said openings, a driving motor in said cabinet, a sprocket operated by the motor and driving one of said pulleys, means connecting said chain with a pulley of the other belt for driving said other belt, and an inclined plate cooperating with said inclined support in said partitions to prevent objects discharged from said pistol from passing to said driving motor, chain, and connecting means.

12. The combination of a cabinet having a pistol range therein, a pistol at the front end of said range, an inclined support at the rear end of said range, an inclined plate providing a bottom for said range, partitions providing side walls for said range, tracks on said support in different horizontal p anes, a pair of endless carriers traveling on said tracks in opposite directions, targets mounted on said carriers, a driving motor, a sprocket chain operated by the motor and driving one of said carriers, and gearing operated by the sprocket chain to drive the second carrier, said inclined support, inclined plate, and partitions providing a covering for preventing objects discharged from said pistol from passing to said driving motor, sprocket chain, and gearing.

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