Feb. 19, 1952 L. C. MARLEY 2,586,547

HAND TRAP

Filed Oct. 15, 1948

Fig. 1.

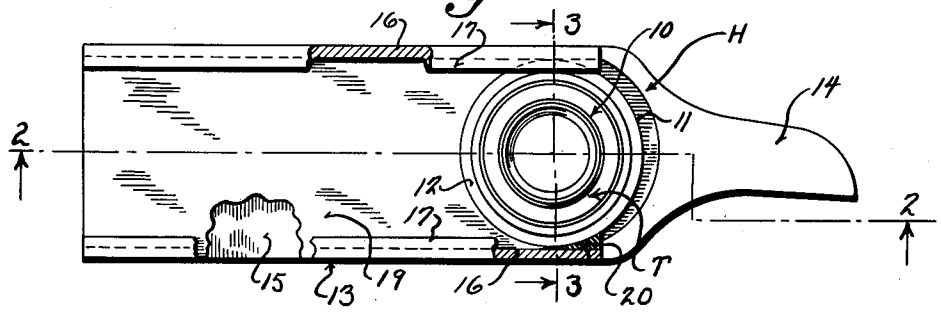


Fig. 2.

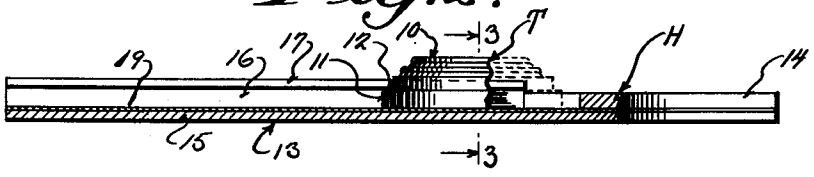


Fig. 3.

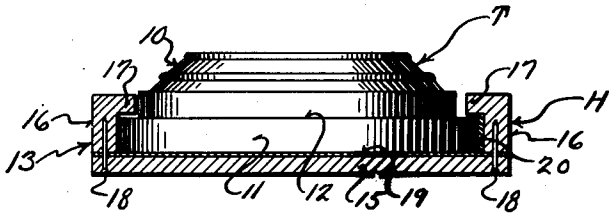
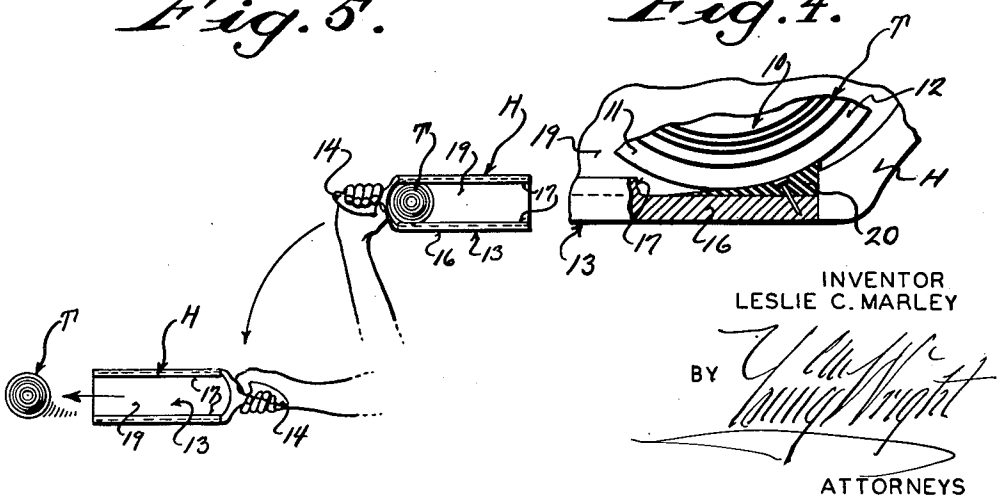


Fig. 5.

Fig. 4.



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HAND TRAP

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1 Claim. (Cl. 124—5)

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This invention appertains to traps for the throwing of targets, and more particularly to a novel device for facilitating the accurate and distance throwing of targets or clay birds by hand.

One of the primary objects of my invention is to provide a hand trap embodying a hand grip and an elongated guide extending forwardly from the hand grip for the target, with novel means located at the inner end of the guide for frictionally gripping an edge of the target to hold the same in place until the trap is given a rapid, circular motion by the hand and arm and a snap at the end of the motion or stroke; the snap or whip at the end of the stroke functioning to release the target from the holding means, so that the same under influence of centrifugal force will fly from the guide in the desired direction.

Another salient object of my invention is to provide a tapered friction shoe at the inner end of the guide, so that the trap can be "cocked" by merely pushing the target back against the shoe, the shoe engaging the target at one side thereof and back of its transverse center, so that a spin will be placed on the target as the same leaves the guide.

A further important object of my invention is to provide a hand trap of the above character, which will be durable and efficient in use, one that will be simple and easy to manufacture and one which can be placed on the market at a reasonable cost and easily manipulated by the user.

A still further important object of my invention is to provide a hand trap in which the use of all mechanical parts, such as springs and the like, is eliminated, and one in which the breakage of clay birds incident to the placing of the birds in the trap and the throwing of the birds is eliminated.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more fully described and claimed, and illustrated in the accompanying drawing, in which drawing:

Figure 1, is a top plan view of my improved hand trap with parts thereof broken away and in section to illustrate structural details.

Figure 2, is a longitudinal sectional view through the hand trap taken on the line 2—2 of Figure 1, looking in the direction of the arrows.

Figure 3, is a transverse sectional view taken on the line 3—3 of Figure 1, looking in the direction of the arrows, the trap showing a target in place therein, the view being on a larger scale than Figures 1 and 2.

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Figure 4, is an enlarged fragmentary plan view partly in section, illustrating the engagement of the friction shoe with the edge of the target.

Figure 5, is a diagrammatical view in top plan illustrating the use of my hand trap.

Referring to the drawing in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter H generally indicates my improved novel hand trap for throwing a target T.

The target T is referred to by trap shooters as clay birds or pigeons. As illustrated, the target T includes a substantially circular body 10, having an annular base 11 providing an annular shoulder 12.

The hand trap H includes an elongated guideway 13, having a hand grip 14 at the inner end thereof. The guideway 13 includes a flat base plate 15 carrying on its upper face, at its longitudinal sides, guide rails 16. The guide rails 16 are provided with inturned flanges 17.

The hand trap can be constructed in various ways and out of any preferred type of material, but as illustrated, the same includes a flat bottom board, which forms the base plate 15 and the side rails 16 are fastened thereto by securing elements 18. If desired, a sheet of anti-friction material 19 can be secured to the top of the base plate 15. This sheet material can be constructed from a smooth plastic film in order to permit the free movement of the target T from out of the trap, as will be later set forth.

One guide rail 16 has secured thereto at its extreme inner end and adjacent to the handle 14, a friction shoe 20. This shoe is preferably formed from soft rubber and is tapered from its rear end toward its forward end, as can be clearly seen from Figures 1 and 4 of the drawing.

In use of my hand trap H the target T is slid into the guide 13 from the forward end thereof with the flanges 17 over the annular shoulder 12. The target is moved to the extreme inner end of the guideway 13, after which the same is given a rearward push toward the handle 14, which will bring the target into intimate frictional contact with the shoe. This "cocks" the trap.

The hand grip 14 is now firmly grasped in the hand of the user (see Figure 5) and the trap is given a circular motion substantially in a horizontal plane, but with the forward end of the guideway elevated to a desired pitch. As the end of the stroke is reached, at the point where the target is to be discharged, a whip or snap is given to the trap. This dislodges the target from the friction shoe and the target is rapidly discharged

from the forward end of the guideway 13. The angle at which the trap is held and the point where the snap or whip is given to the trap governs the course of flight of the target. As the shoe is positioned at the extreme inner end of the guideway and engages the target solely at one place on its edge in rear of the transverse center of the target, a drag will be created on the target as the same leaves the shoe, and this will impart a desired spin to the target. This will increase the distance of travel of the target and give other advantages such as directness of flight, which is also aided by the elongated guide.

From the foregoing description, it can be seen that I have provided an exceptionally simple form of hand trap, which can be placed upon the market at a reasonable cost and which will effectively permit the convenient and accurate placing of targets by hand, and one in which the use of mechanical springs and the like is eliminated and the breakage of birds is prevented.

Changes in details may be made without departing from the spirit or the scope of my invention, but what I claim as new is:

A hand trap for throwing targets comprising an elongated guideway extending for a length of at least twice the diameter of the target including a flat base plate and longitudinally extending guide rails having inturned flanges for receiving the opposite sides of a target, a hand grip on the rear end of the guideway, said guide rails opening out at the front end of the guideway, and a resilient friction shoe at the extreme rear end of the guideway arranged within one of said rails, whereby to frictionally contact an edge of the target when said target is pushed rearwardly into the guideway toward the handle, said shoe being tapered downwardly and forwardly from the rear end of the guideway toward the front end of the guideway, said shoe being in rear of the transverse center of the target, when the target is in the extreme rear end of the guideway and in its "cocked" position, said hand grip closing the rear end of the guideway and having its central longitudinal axis aligned with the central longitudinal axis of the guideway, whereby at the end of the throwing motion the longitudinal axis of the guideway and the thrower's arm are substantially aligned to aid in controlling the direction of the flight of the target.

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