Sept. 13, 1949. C. R. LIVERMON 2,481,522

THROWING TOOL

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Fig. 1.

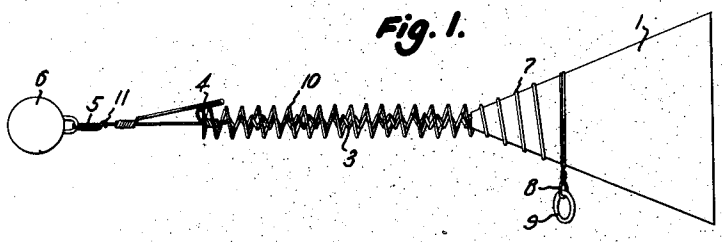


Fig. 2.

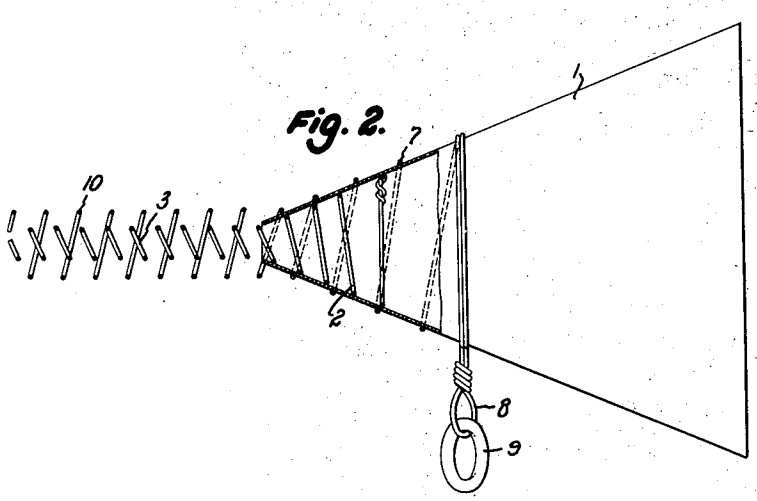


Fig. 3.

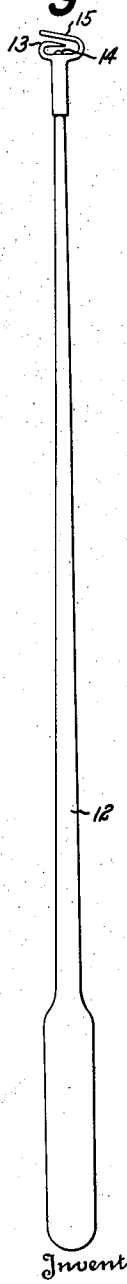
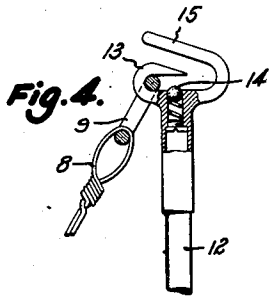


Fig. 4.



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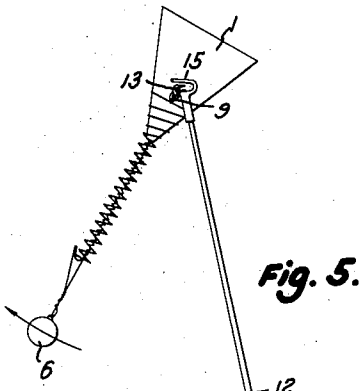


Fig. 5.

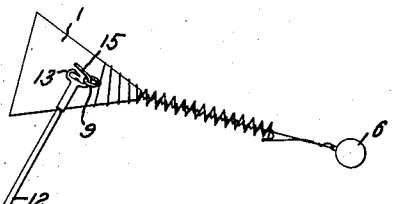


Fig. 6.

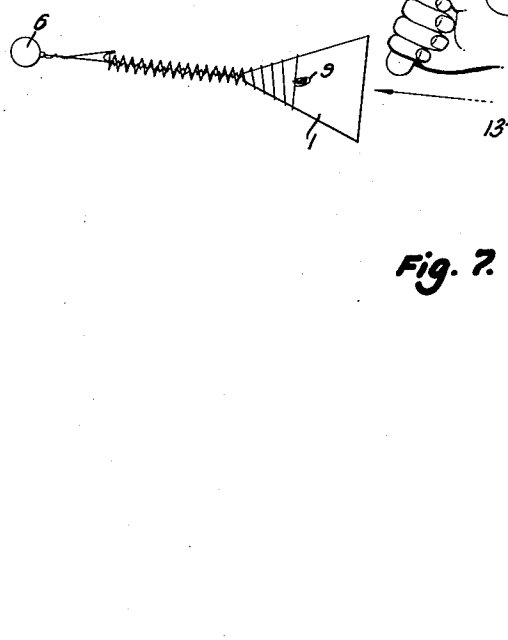


Fig. 7.

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THROWING TOOL

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4 Claims. (Cl. 124—5)

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This invention relates to a hand throwing tool designed and adapted to throw any object or missile such as a flying target having a ring or loop formed of wire or the like of relatively small cross-section adapted to be engaged by the tool.

An object of the invention is to provide a relatively simple and inexpensive throwing tool which is of light weight and occupies relatively little space to serve as a substitute for the relatively heavy, bulky, expensive and complicated machines commonly used for throwing clay pigeons and the like.

An embodiment of the invention is illustrated in the accompanying drawings in which:

Fig. 1 is a front elevation of a target adapted to be thrown by means of the throwing tool.

Fig. 2 is an enlarged front elevation of the right hand portion of the target shown in Fig. 1.

Fig. 3 is a front elevation or plan view of the throwing tool.

Fig. 4 is an enlarged plan view of the head of the throwing tool and a portion of the target.

Figs. 5, 6 and 7 show the three principal positions of the target and throwing tool which occur in throwing the target.

Referring more particularly to Fig. 1, the frangible part of the target consists of the cone 1 suitably made of paper. It may be simply a conical paper drinking cup with the tip cut off to leave a hole at its small end for the insertion of the stem which suitably is formed of resilient metal wire and consists of the conical portion 2 which fits the inside of the small end of the cone 1 and anchors the stem to the cone, the shank portion 3 which is resilient lengthwise due to the fact that it is helicoidal or sinusoidal, the hook 4 and the loop 5 to which the weight 6 is attached. The stem is held tightly to the cone 1 by the spring which consists of the conical portion 7 which fits the outer surface of the small end of the cone, the loop 8 to which is attached the throwing ring 9 and the shank portion 10 which is helicoidal and surrounds the shank portion 3 of the stem and bears against the hook 4. The portion 10 of the spring is normally somewhat longer than the portion 3 of the stem and is compressed between the cone 1 and the hook 4 so as to exert some tension thereon and hold the conical end 2 of the stem tightly in the small end of the cone 1.

The target described above, excepting the cone 1, is designed to be durable and to withstand the shocks to which it is subjected in use as it is thrown, struck by shot and particularly as it falls to the ground. Being made of resilient wire, it

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will withstand such shocks without permanent deformation. It is also designed to be of small size so that a number of targets can be carried in a small space. Since the weight 6 will strike the ground first and with considerable force, it should be of a shape, preferably spherical, such that it will not penertate into the ground.

It is intended that a supply of the targets shall be carried to the place of use, disassembled. One may have for instance several hundred of the paper cones 1 telescoped into each other and occupying a small space and say ten of the stems. At the place of use the weight 6 is detached from the loop 5 by simply squeezing the loop and releasing the hook 11 and opening the loop. The stem is then inserted through the hole in the small end of the cone 1, the spring is slid into place over the stem, compressed and latched against the hook 4 and the weight 6 returned to the loop 5. The target is then ready for use. After it has been thrown and shot at, it is recovered, the cone 1 removed and a new cone substituted, the removed cone being kept as a record.

The target is thrown by means of the casting rod 12 which may be made of flexible wood such as hickory or of metal similar to the shafts of fishing poles or golf clubs. The rod 12 suitably may be 2 to 3 feet in length and is provided with the latch hook which comprises the inner hook 13, the spring pressed ball 14 for releasably holding the ring 9 in place and the outer hook 15 from which the ring 9 is released as the target is thrown.

The manner in which the target is thrown is illustrated in Figs. 5, 6 and 7. In Fig. 5, the ring 9 of the target has been inserted in the inner hook 13 as the casting rod 12 is held in the hand in substantially vertical position or leaning forwardly more or less in the direction in which the target is to be thrown. The casting rod is then swung back to the position shown in Fig. 6 and when its backward motion is stopped, the target, due to its momentum, swings over to the position shown in Fig. 6 and the ring 9 pulls out of the inner hook 13 and is caught by the outer hook 15. The casting rod is then swung forwardly to the position shown in Fig. 7 and stopped and the momentum so applied to the target causes it to be projected forwardly as shown. With a little practice, the target may be thrown quite accurately to any desired distance and in any direction. As it sails through the air, it is clearly visible from all directions because the cone 1 presents substantially the same area when viewed at all angles. The target

may be shot at by any weapon depending upon the skill of the person, e. g. a rifle, shotgun, bow and arrow, etc. I contemplate the use of a small caliber gun such as a .22 caliber rifle and shot cartridges, and to use the target and such a gun to simulate on a small scale and in a restricted space the shooting of clay pigeons with a shotgun.

I appreciate however that the target can be made of any desired size and of variety of materials. It could for instance be made of a size suitable for use as a substitute for clay pigeons and shot at with a shotgun and the cone 1 could be made of frangible material such as glass or ceramic material so that it would be broken by a hit the same as a clay pigeon.

It may be advantageous suitably to color the cones to make them more readily visible in the air and upon the ground. They may for instance be provided with stripes or spots of different colors or colored to contrast with backgrounds such as the green leaves and grass of summer, or the brown colors of winter, or sand or water. It may be desirable also to provide targets of different colors or with distinctive markings for several members of a group playing the game. Another advantageous expedient is to provide the target with a coating which will be knocked off and produce a visible cloud of dust when the target is struck.

The target could of course be thrown by a machine instead of by hand, that is, the casting rod 12 readily could be incorporated into a machine capable of executing the motions described above in connection with Figs. 5, 6 and 7.

The location of the throwing ring 9 may be varied. It should not be located in the stem portion 3 or where the two ends of the target would be balanced. It should be either adjacent the weight end of the target or adjacent the cone end and it must be so located that the swinging movement of the target with respect to the throwing rod will not damage the cone. I have found the location illustrated, i. e. on the outside of and adjacent to the small end of the cone to be satisfactory.

I claim:

1. A throwing tool comprising a handle and a head member, said head member comprising a rod-like U-shaped portion and a rod-like V-shaped portion having their open ends facing each other, one arm of the U-shaped portion and one arm of the V-shaped portion being in alignment and the other arm of the V-shaped portion over-lying and being spaced apart from the other arm of the U-shaped portion.

2. A tool as defined in claim 1 comprising a yielding latch member in alignment with the aligned arms of the U- and V-shaped portions for releasably holding a portion of the target in said U-shaped portion.

3. A throwing tool comprising a handle member and a head member, said head member comprising two opposed rod-like hook-shaped portions lying in the same plane, one arm of each hook-shaped portion being joined end to end to one arm of the other hook-shaped portion and the ends of the other arms of the two hook-shaped portions being laterally spaced apart.

4. A throwing tool comprising a substantially rectilinear handle member and a head member, said head member consisting of an elongated open loop secured to one end of the handle at a point substantially opposite the loop opening and approximately midway between the loop ends, said handle and loop lying in the same plane, the free ends of the loop extending at least to the line of the longitudinal axis of the handle and being spaced apart in the direction of said axis.

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