Oct. 18, 1938. R. E. REARDON 2,133,308

MEMOGRAPH TARGET

Filed Aug. 5, 1937

Fig. 1

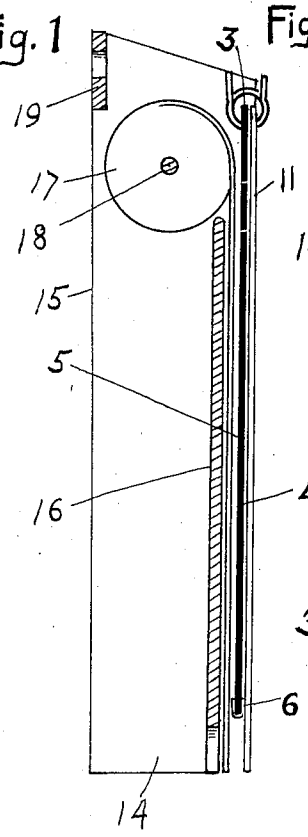



Fig. 2

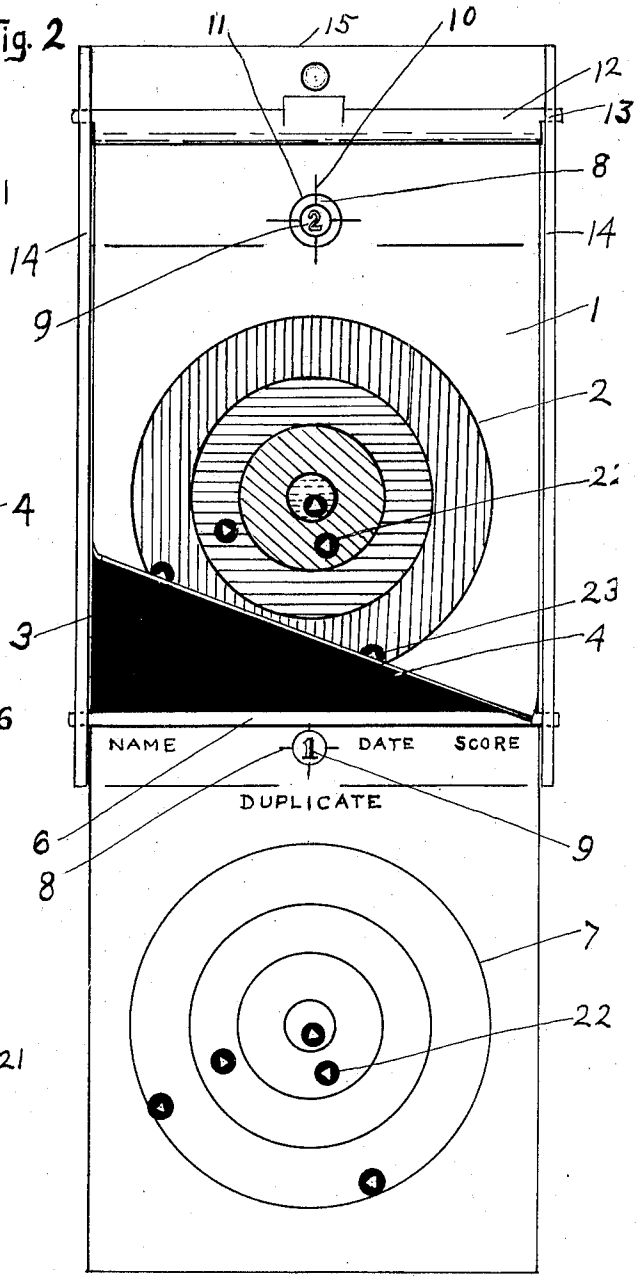



Fig. 3

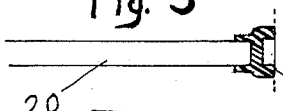



Fig. 4



Inventor

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# UNITED STATES PATENT OFFICE

2,133,308

## MEMOGRAPH TARGET

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8 Claims. (Cl. 273—102.1)

My invention relates to improvements in targets and particularly to printed targets of sheet material designed for use with nonpiercing projectiles, such as rubber or wooden or composition balls or bullets, arrows or the like, that are suitable for the purpose. The object of my invention is to provide a memo target for the temporary and, if desired, permanent recording of hits made thereon by projectiles. I provide a target which automatically registers and marks hits made by non-piercing projectiles upon its face, retains the markings as long as desired, and affords means for their instant removal to present a clean target face, while preserving a record of each hit upon a duplicate recording or memo target that is readily replaceable, thus affording a means of preserving for reference a copy of each target score made. My target has also, in addition to economy and convenience of operation, the advantage of being commercially producible at low cost. As in keeping with the nature of my target, I further provide, as especially suitable for use with it, an arrow projectile which marks the target in a distinctive way that identifies the shooter, so that the individual scores made by a number of shooters using the target at the same time are visibly distinguishable from each other by the marking made by each on the target face. This I accomplish by means of an arrow having a head molded as a stamp or seal that will mark the target in a shot identifying manner.

I attain the object of my invention by the construction illustrated in the accompanying drawing, in which:

Figure 1 is a vertical section of the target, showing the several layers of sheet material of which it is comprised.

Figure 2 is a facial plan of the target as shown in Figure 1, but showing the target as with hit marks thereon and a lower corner raised to illustrate hit erasure procedure, also depicting the memo or duplicate score target as pulled down preparatory to tearing it off for preservation of the score recorded.

Figure 3 is a side elevation of a target-marking, shooter-identifying, seal headed arrow, designed to mark the target as shown in Figure 2.

Figure 4 is a facial plan of the head of the arrow shown in Figure 3. In the drawing similar numerals refer to similar parts.

The target face 1 is a sheet of tracing linen or the like, or paper, Cellophane or other suitable material that is translucent, flexible, and preferably non-resilient, on which is printed or otherwise depicted a target design 2 of regulation type, or any other design deemed desirable, preferably with the several divisions of different scoring value finished in light color pastel shades, so that a black mark will show distinctly on same. If the regulation target face is used, the bull's-eye may be in a light shade or in outline only.

Beneath the target face sheet 1 is a sheet 3 of linen, paper, or other suitable material of dark color, the front surface 4 of which is coated with any suitable compound or substance of slightly adhesive, non-hardening nature that will adhere to a contacting surface yet peel off same, such as a compound of rubber or the like, gum and heavy oil. The rear side 5 of said dark sheet 3 is coated with a composition such as used on the carbon transfer sheets in common use, and binding the bottom edge of said dark sheet 3 is a cross bar 6 of tin or pasteboard with ends inserted loosely in side frame, which serves to keep the sheet in place and facilitates handling of it. Beneath the dark sheet 3 is a sheet of paper on which is printed a duplicate target 7, having on its margin positioning marks 8, and a serial number, as 9, if desired, this duplicate or memo target 7 being positioned to coincide with the face target 1 by means of said marks 8 on memo target 7 and marks 10 at the edge of a register opening 11 in the target face sheet 1 and dark sheet 3. The said three sheets: the face target sheet 1, the adhesive-carbon sheet 3, and the duplicate or memo target sheet 7, loosely superposed and secured together in part so as to maintain relative position to each other, constitute essentially my complete target, because the unit thus assembled may be placed against a wall and fired at. But in the embodiment of my idea herein presented, the backing and ready means of replacing the memo target are provided. The sheets 1 and 3 are bound together at the top by a long tubular spring clip 12 which has its ends journalled in recesses 13 in the sides 14 of a box frame 15 of light wood, pasteboard or metal, so that these sheets hang down across the face board 16 of said box frame 15, which thus constitutes a back board and also a sounding board to enhance the effect of projectile impact, and supports the duplicate target 7 which descends from a roll 17 of same that is mounted in the upper part of box frame 15 between the sides 14 of it by means of a roller 18 journalled in said sides. An apertured hanger bar 19 across the sides 14 at the back permits the target to be hung on a nail on a wall. As a desirable acecssory of my target I include and show in Figures 3 and 4 an arrow 20 which has a head 21 that may be molded of hard rubber or other

suitable substance to form a seal or stamp, as indicated in Figure 4, of any design desired, so that each impact of these arrow heads upon the target will leave an imprint that will identify the shooter by the design he uses, thus differentiating the individual scores if several shooters fire upon one target.

The operation of my memograph target is obviously simple. Having set it up, say, by hanging it on a wall, a projectile, say, one of the seal headed arrows shown in Figures 3 and 4, is fired at the target from a suitable distance. Impact of the arrow head on the translucent face target 1 forces that facial sheet back against the front side of the dark adhesive-carbon sheet 3, making an adherent contact with that surface of same which is visible on the face of said target 1, and simultaneously forces the rear or carbon face of dark sheet 3 back into contact with the memo or duplicate target 7, against the backboard 16, thus marking the shot, as 22, on both the face target and the duplicate target, in whatever shot identifying design is used on the seal head of the arrow projectile, as, for instance, the triangle shown in the hits depicted upon the target face 1 in Figure 2, as 22. Other projectiles of non-piercing nature may, of course, also be used to mark the target. The score being completed, the facial target 1 is gripped by thumb and finger at the lower edge and lifted to break its adhesive contact with dark sheet 3 at the points of shot impact, the shot markings instantly disappearing as sheets 1 and 3 separate as at 23, thus restoring the face target 1 to normal clear condition. The duplicate, memo target sheet 7 may then be gripped at bottom edge, pulled down until the following target from roll 17 descends into proper position, as indicated by registering of positioning marks 8 on the target sheet 7 with the marks 10 of the register opening 11 in face target sheet 1, and then torn off to preserve as a record of the score made. The name of shooter, etc., may be filled in, if desired, in the space provided for same on the margin of memo target 7.

The preferred embodiment of my invention is shown herein but it will of course, be recognized that other embodiments are practicable within the spirit of the invention.

In a simplified modification of my target, the target sheet may have its reverse side made effectively adhesive by a coating of suitable compound, such as a clear, non-hardening, waxy varnish, or the like, and the adjoining face of the dark back sheet remain uncoated, with a smooth surface to which the target sheet will adhere where forced against it by missile impact, yet be readily separable therefrom by sheet separation.

I claim:

1. In a target for non-piercing projectiles, a permanent front target sheet and a replaceable duplicate back target sheet and intermediate sheet means for simultaneously marking by missile impact the front target and the duplicate target, and means for removing the marking from said front target by separating the front and intermediate sheets.

2. In a target for non-piercing projectiles, a face sheet of flexible translucent material having a target design imprinted thereon superposed upon a sheet of material having a dark surface coated with a slightly adhesive substance, and means for binding said sheets together in part.

3. In a target for non-piercing projectiles, a face sheet of flexible translucent material having a target design imprinted thereon in light shades of color and superposed upon a back sheet of dark colored material having a slightly adhesive surface and bound in part to same.

4. In a target for non-piercing projectiles, a flexible translucent face sheet having a target design thereon and a duplicate, recording target sheet behind said face target sheet and registering therewith, and a sheet of dark material, coated on one side with a slightly adhesive substance and on the reverse with carbon transfer substance, intermediate said face target sheet and said duplicate target sheet, and means for holding said sheets superposed.

5. In a target for non-piercing projectiles, a facial sheet of flexible translucent material having a target design thereon superposed upon a sheet of dark material, a coating of slightly adhesive, non-hardening substance upon one of the adjoining surfaces of said facial sheet and dark sheet, a coating of carbon transfer substance on the reverse of said dark sheet, a target carrier having means to hold said sheets together in part upon its face, and a roll of duplicate targets mounted on said carrier to pass between the reverse of said dark sheet and the face of said carrier.

6. In a target for non-piercing projectiles, a face sheet of flexible translucent material having a target design imprinted thereon superposed loosely upon a back sheet of material having a dark surface, a coating of slightly adhesive substance upon one of the opposed surfaces of said face and back sheets, and means for binding said sheets together in part.

7. In a target for non-piercing projectiles, a face sheet of flexible translucent material having a target design imprinted thereon in light shades of color and superposed upon a back sheet of dark colored material, a detachably adhesive surface upon one of the opposed faces of said front and back sheets, and means for binding said sheets together in part.

8. In a target for non-piercing projectiles, a flexible translucent target sheet and a dark back sheet bound together in part and in loose superposition in part, and means intermediate of the contacting surfaces of said sheets whereby they detachably adhere to each other when forced together by projectile impact.

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