

Feb. 9, 1937.

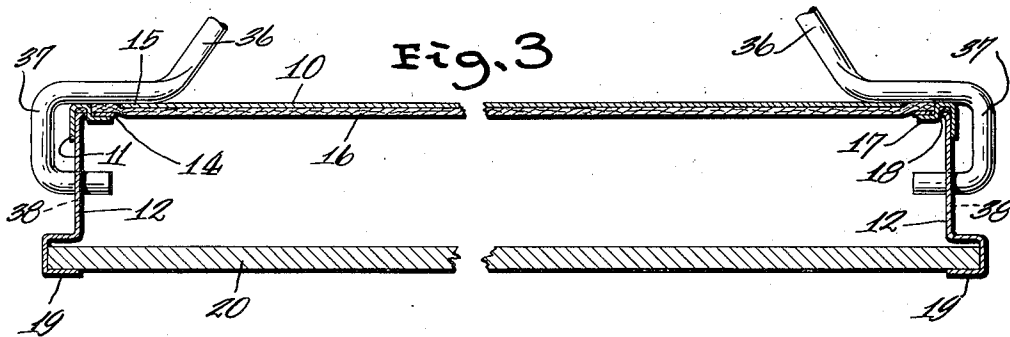
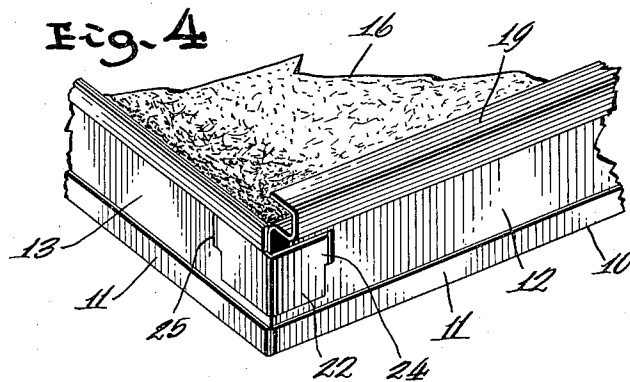
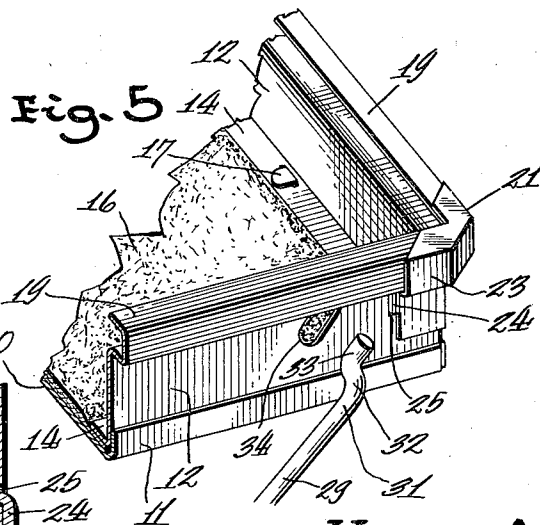
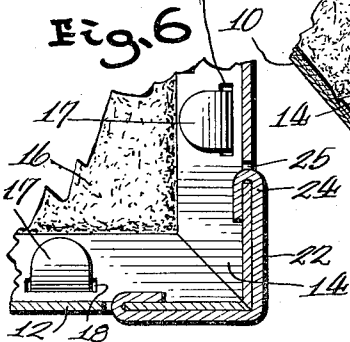
H. A. DOUGLAS

2,069,822

TARGET STRUCTURE

Filed Sept. 26, 1934

2 Sheets-Sheet 2



Harry A. Douglas
INVENTOR

By *Freeman & Weidman*
ATTORNEYS

UNITED STATES PATENT OFFICE

2,069,822

TARGET STRUCTURE

Harry A. Douglas, Bronson, Mich.

Application September 26, 1934, Serial No. 745,553

7 Claims. (Cl. 124—15)

This invention relates to target structures, and has for an object the provision of a new and improved structure of this character.

In the drawings accompanying this specification and forming a part of this application, I have shown, for purposes of illustration, one embodiment which my invention may assume, and in the drawings:

Figure 1 is a perspective view of a target structure, showing the same partially broken away to better disclose the interior construction, and also showing convertible supporting means therefor, positioned to support said target structure from below;

Figure 2 is a fragmentary perspective view of the target structure, showing the supporting means in position to support the target structure from above;

Figure 3 is an enlarged horizontal sectional view of the target structure, portions of the supporting means being broken away to better accommodate the view to the sheet;

Figure 4 is an enlarged fragmentary perspective view of one corner portion of said target structure;

Figure 5 is a view similar to Figure 4, but disclosing another corner portion of said target structure; while

Figure 6 is a fragmentary, enlarged horizontal sectional view of the corner portion disclosed in Figure 4.

As shown in the drawings, the invention comprises a portable target apparatus, including a box-like receptacle, made up of suitable material, such as sheet steel, including a rectangular back-plate 10 having an angular flange 11 turned up on each of its marginal edges, and inserted within the pan-shaped member thus provided are four wall sections, three of which are similar, designated by the numeral 12, the remaining wall section 13 being slightly different in form. Each of the wall sections 12 and 13 is provided with an inwardly turned flange 14 extending substantially parallel to the portion 15 of the back-plate 10 within the flange 11, and interposed between the flange 11 of the back-plate 10 and the flanges 14 of the wall sections 12 and 13 are the marginal edges of a cushioning sheet 16, of any suitable material, preferably felt, which extends over the portion 15 of the back-plate 10, and suitable fastening means are provided for securing the back-plate 10 and the flanges 14 of the wall sections 12 and 13 together. In the preferred embodiment, the fastening means take the form of tongues 17 struck up from the back-plate 10, ex-

tending through the marginal edges of the cushioning sheet 16, and through perforations 18 in the flanges 14 of the wall sections 12 and 13, and are bent over to firmly secure these parts together.

Each of the wall sections 12 at the end opposite to the flange 14 is formed with an outwardly offset channel formation 19, opening inwardly toward each other, and forming guide channels for the reception of the edges of a target piece 20, the channel formation being omitted from the wall section 13 to permit the target piece 20 to be freely inserted, or withdrawn for replacement. The corner portions of the target structure are secured together through the medium of fasteners 21 and 22, the fasteners 21 each having an offset portion 23 to fit over the adjacent channel formation 19 and having a strap portion integral therewith, each end 24 of which extends through a suitably located aperture 25 in each of the adjacent wall sections and are bent over to firmly secure the wall sections together at the corners. The fasteners 22 are the same except that the offset portions 23 are omitted for obvious reasons.

The construction of the target piece 20 is of importance, since it is a purpose of this invention to do away with the necessity of employing heavy back-up material in the target structure, and also to recover the missiles for use again, naturally involving prevention of deformation thereof through striking the target.

Accordingly the target piece is made of material having a predetermined resistance to impact, either through the type of material employed, or through the thickness of ordinary shock absorbing material, proportionate to the predetermined or known power of the missile projecting device. In any given instance, the maximum power of the missile projecting device and the proportionate resistance of the target piece may be determined by experiment, so that at a given distance, a missile may be projected at the target piece 20, and its force entirely spent by passage thereof through the target piece 20, without deformation, so that the missile may drop into the receptacle in the rear thereof and recovered for further use.

In case of use with a low powered missile projecting device, the target piece may be made of heavy cardboard, and when used with relatively high powered projectors, may comprise highly resistant fiber board, the degree of resistance depending upon the power developed by the missile projecting device.

For mounting the target for use, I provide a convertible mounting means readily adapted to support the target from below, or convertible to hang the target in the manner of a picture, when desirable. In accomplishing my purpose, I provide a stand 26 comprising a looped length of wire having a broad base portion 27, bent inwardly as at 28 to provide the feet and legs of a tripod arrangement hereinafter again referred to, the side leg members 29 thereof being offset as at 30. Each of the ends 31 of the legs of the stand 26 is provided with an inturned portion 32 terminating in a parallel portion 33, and opposite wall sections 12 are each provided with an inclined slot 34 for the reception of the inturned portion 32 and parallel portion 33, it being evident that the same may be inserted or withdrawn only in one position, permitting the stand, however, to be swung to a position to abut the channel formations 19 which act as stops when the stand is in use, and also permitting the stand to be swung over the back of the target structure and the inwardly bent portion 28 to be snapped over the flange 11 of the back-plate 10 and the stand thus locked in an inoperative position.

To complete the tripod arrangement a prop 35 is provided, comprising a V-shaped wire member 36, the ends of which are bent into hook form with the hooked ends 37 inserted into suitable apertures 38 in the wall sections 12, and held in position by the resiliency of the wire, while the bight portion 39 of the wire member is squeezed together to form a loop 40 insertable into one end of a split tube 41 which provides an extension of the wire member 36 and completes the prop 35.

The supporting means for the target may readily be converted to be hung from a wall fastener, the tube 41 being removable from the looped portion 40 and the wire member 36 detachable by spreading the legs thereof, and these operations being completed, the stand 26 may be swung into locked position as already explained, the wire member 36 reversed in position and the hooked portions 37 reinserted into the apertures 38, the looped wire member 36 then providing means by which the target structure may be hung from a wall fastener in the manner of a picture.

Under these circumstances it will be apparent to those skilled in the art that I have accomplished at least the principal object of my invention. On the other hand, it also will be apparent to those skilled in the art that the disclosure herein is illustrative only, and may be variously and extensively modified, while still retaining part or all of the advantages of my invention, and without departing from my invention, and that my invention in no sense is limited to this or any specific embodiment or disclosure.

I claim:

1. In a target structure, the combination with a target piece proper; supporting means adapted to support said target piece, and comprising: a back-up plate having an angular flange along its margin, and wall sections having one set of edge portions arranged within said flange, and disposed substantially parallel therewith, and each of said edge portions having a flange extending substantially parallel with that part of said plate inwardly of its flange, and certain of the opposite edges of said wall sections having means for supporting said target piece proper; a cushioning member extending over the inner surface of said plate, having its margins interposed between the flanges of said wall sections and said plate; and fastening elements struck up from said plate inwardly of the flange thereof and extending through said cushioning member, through apertures in the flanges of said sections, and bent over to secure said plate, said cushioning member and said flanges together.

2. In a construction of the character described, the combination with a target; convertible apparatus for supporting the said target from beneath or from above, comprising: a stand having a broad base disposable beneath one portion of said target, and a prop disposable beneath another portion thereof, in the manner of a tripod, said prop comprising a bent member having spaced arms, detachably and reversibly connected to said target, and having a looped bight portion, and a split tubular member detachably engageable with said bight portion, and forming an extension of said prop, said stand being movable to an inoperative position, said tubular member being detachable, and said prop being reversible, so as to dispose the bight portion of said prop in position to support said target from above, when said apparatus is converted.

3. In a construction of the character described, the combination with a target having a structural projection thereon; convertible apparatus for supporting the said target from beneath or from above, comprising a stand having a broad base disposable beneath one portion of said target and movably mounted at a point remote from said structural projection and a prop disposable beneath another portion thereof, in the manner of a tripod, said prop comprising a bent member having spaced arms, detachably and reversibly connected to said target, and having a looped bight portion, and a split tubular member detachably engageable with said bight portion, and forming an extension of said prop, said stand being movable to an inoperative position and having offset means engageable with said structural projection to lock the same in said inoperative position, said tubular member being detachable, and said prop being reversible, so as to dispose the bight portion of said prop in position to support said target from above, when said apparatus is converted.

4. In a construction of the character described, the combination with a target; apparatus for supporting the said target in inclined position, comprising a prop means, including a member having divergent arms movably connected to said target and a looped bight portion between said arms, and a split tubular member adapted for the detachable reception of said bight portion, and together with said member forming said prop means.

5. Convertible object supporting means, comprising: a first device swingably connected to said object, and movable to a position to support said object from below, and collapsible to an out-of-the-way position with reference to said object, and a second device swingably connected to said object at a point spaced from the connection of said first device and having a detachable extension, said second device, together with said extension, being cooperable with said first device to provide a support for said object in the manner of a tripod, and said second device having means exposed when said extension is detached, operable to suspend said object in the manner of a picture.

75 for supporting said target piece proper; a cushioning member extending over the inner surface of said plate, having its margins interposed between the flanges of said wall sections and said plate; and fastening elements struck up from said plate inwardly of the flange thereof and extending through said cushioning member, through apertures in the flanges of said sections, and bent over to secure said plate, said cushioning member and said flanges together.

75

5 6. In a target structure, the combination with
a target piece proper; supporting means adapted
to support said target piece, and comprising: a
back-up plate, and wall sections having one set
10 of edge portions connected to said plate, and cer-
tain of the opposite edge portions of said wall
sections formed to provide laterally offset chan-
nels for the reception of said target piece proper;
and a corner member for each corner of said
15 structure, certain of said corner members having
a part embracing the adjacent meeting portions
of said offset channels, and another part angu-
larly disposed about the meeting portions of said
wall sections, and having one end extending
through a perforation in one section and its
opposite end extending through a perforation in
an adjacent section, and each end bent to se-
curing position.

7. In a target structure, the combination with

a target piece proper; supporting means adapt-
ed to support said target piece, and comprising:
a back-up plate having an angular flange along
its margin, and wall sections having one set of
5 edge portions arranged within said flange, and
disposed substantially parallel therewith, and
each of said edge portions having a flange ex-
tending substantially parallel with that part of
said plate inwardly of its flange, and certain of
10 the opposite edges of said wall sections having
means for supporting said target piece proper; a
cushioning member extending over the inner sur-
face of said plate, having its margins interposed
between the flanges of said wall sections and said
15 plate; and fastening elements connecting said
plate and the flanges of said wall sections to-
gether.

HARRY A. DOUGLAS.