

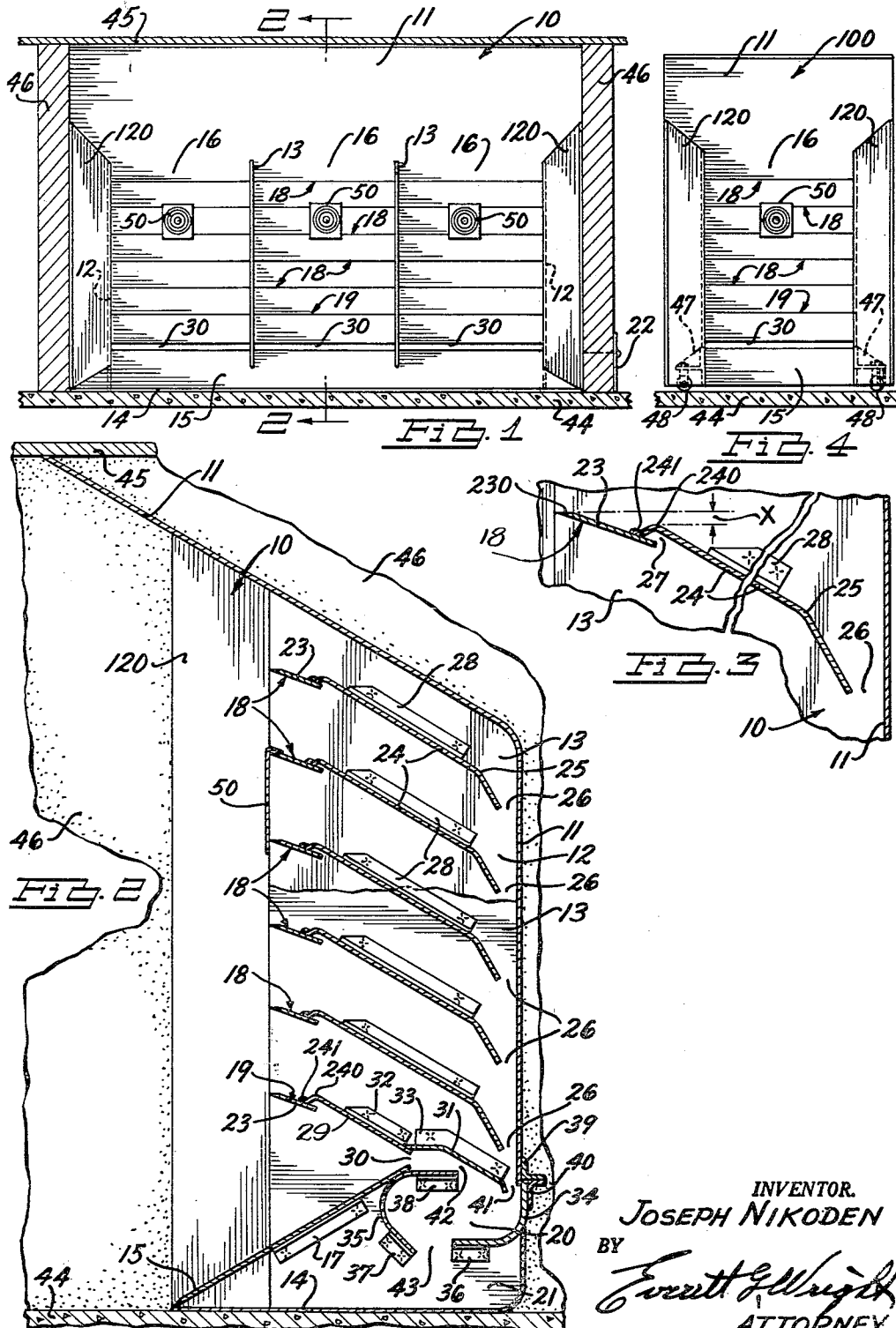
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BULLET TRAPS

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BULLET TRAPS

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1 Claim. (Cl. 273—102.4)

This invention relates to bullet traps and in particular to bullet traps for use in pistol and rifle ranges.

The primary object of the invention is to provide an inexpensive yet positively safe bullet trap wherein bullets shot anywhere into the target area are directed to a bullet spending chamber, and when the velocity of the bullets is spent, the spent bullets drop into a reservoir or receptacle for recovery and disposal.

Another object of the invention is to provide in a bullet traps means for preventing back splatter of small bullet fragments which occasionally occurs and, though not fatal, back splatter oftentimes causes serious eye or facial injuries.

Other objects of the invention will become apparent by reference to the following detailed description taken in connection with the accompanying drawing, in which:

Fig. 1 is a front elevational view of a built-in bullet trap of the type employed in police and club pistol ranges.

Fig. 2 is a vertical cross sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged fragmentary view of a bullet deflector showing in detail anti-splatter trap construction preferably incorporated therein.

Fig. 4 is a front elevational view of a portable bullet trap embodying the invention.

Referring now to the drawing wherein like numerals refer to like and corresponding parts throughout the several views, the built-in type bullet trap disclosed in Figs. 1 to 3 inclusive for illustrative purposes comprises a housing 10 preferably composed of a back and canopy plate 11, side plates 12, partition plates 13, a bottom plate 14 and a bottom deflector plate 15, all welded or otherwise secured together. The side plates 12 are flared to provide side deflectors 120, and the canopy and bottom deflector plates 11 and 15 respectively are disposed at such angles that they serve to direct bullets fired thereagainst into the central or target areas 16 of the bullet trap housing 10.

To provide a plurality of target areas 16, the central area of the bullet trap housing 10 is divided into a plurality of spaces by the partition plates 13 which are welded at their top, rear and bottom to the back and canopy plate 11 and to the bottom plate 14. The rear portion of the bottom deflector plate 15 is secured to the side plates 12 and the partitions 13 by suitable angles 17.

Transversely disposed in each target area 16 are a plurality of preferably evenly spaced deflector elements 18 and a lower deflector element 19 formed as hereinafter described in detail. The deflector elements 18 and 19 deflect bullets diagonally downwardly toward the rear of the housing 10 and then sharply downwardly against the back plate 11 in such a manner as to cause a bullet fired into the target area to travel downwardly along the back plate 11 to the bullet spending chamber 20 wherein the velocity of the bullet is spent and wherefrom the spent bullet drops into a recovery chamber 21. Spent bullets are retrieved from the recovery chamber 21 through a suitable clean-out door 22.

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Each of the deflector elements 18 are preferably formed of two deflector plates, namely, a relatively shallow lead plate 23 and a deep follow plate 24. The follow plate 24 is suitably formed at 25 to direct live bullets to the back wall 11 through the space 26 between the rear edge of the follow plates 24 and along the back wall 11 to the bullet spending chamber 20. The forward edge of the follow plate 24 is preferably bent downwardly at 240 and is welded at 241 to the top of the lead plate 23 forward of its rear edge as shown in Fig. 3 to provide a back splatter trap 27 into which is caught any small bullet fragment that may bounce forwardly as a result of fragmentation or splatter of a bullet fired into the target area. It should be noted that the top corner of the bend 240 of the follow plate 24 is disposed a suitable distance "x" below the beveled leading edge 230 of the lead plate 23 so that no bullets may be fired directly against the said top corner of the bend 240. The beveled leading edge 230 of the lead plate 23 is sufficiently sharp to split a bullet fired thereagainst whereby to prevent a dangerous ricochet of live bullets out of the bullet trap back to the firing line of the range. Each of the deflector elements 18 are secured at their sides to a side plate 12 or a partition 13, as the case may be, by such means as an angle support 28.

The lower deflector element 19 is constructed similar to the deflector elements 18 except that the follow plate 29 thereof is shallow, is not bent at its rear portion, and its rear edge terminates in spaced relationship above the rear edge of the bottom deflector plate 15. This construction leaves a horizontal bullet slot 30 through which bullets fired against either the bottom deflector plate 15 or the lower deflector element 18 will pass. After bullets pass through the horizontal slot 30, a secondary deflector plate 31 disposed rearwardly from the follow plate 29 of the lower deflector element 19 directs them into the bullet spending chamber 20, the said secondary deflector plate 31 forming a portion of the wall of the bullet spending chamber 20. The lower deflector element 19 and the secondary deflector plate 31 are secured to the side plates 12 and the partitions 13, as the case may be, by such means as suitable angles 32 and 33 respectively.

The bullet spending chamber 20 is preferably more or less oval in shape to provide a circuitous path for live bullets entering it, and, in the particular embodiment of the invention disclosed, the bullet spending chamber 20 is formed by the secondary deflector plate 31, a rear spending chamber plate 34 and a front spending chamber plate 35, such plates being transversely disposed across the full width of each of the target areas 16. The spending chamber plates 34 and 35 are secured to the side plates 12 and the partitions 13, as the case may be, by such means as angles 36, 37 and 38. The top tangent portion of the rear spending chamber plate 34 is off-set rearwardly with respect to the bottom of the back plate 11 and is secured in depending relationship therefrom by a pair of transversely disposed angles 39 and 40.

The bullet spending chamber 20 has a rear entrance slot 41 to receive live bullets from the canopy back plate 11 and from all of the deflector elements 18 above the lower deflector element 19. It also has a forward entrance slot 42 at the top thereof to receive live bullets from the lower deflector element 19 and the bottom deflector plate 15 as they carom off the secondary deflector plate 31 disposed rearwardly from the lower deflector element 19. The bullet spending chamber 20 is also provided with a bottom spent bullet outlet 43 disposed between the rear and front spending chamber plates 34 and 35 respectively.

Bullets fired anywhere into the target areas 16, or against the canopy portion of the canopy and back plate 11, or against the side deflectors 120 or bottom deflector plate

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15, all find their way to the bullet spending chamber 20 wherein their velocity is spent and they then gravitate through the bottom spent bullet outlet 43 to the bullet recovery chamber 21. Fragments from bullet splatter that normally would follow deflector plates back to the firing line of the range equipped with a bullet trap embodying the invention are retained in the splatter traps 27. Although not shown, and not necessary in a range room having a high ceiling, a splatter trap may be placed transversely across the canopy portion of the canopy and back plate 11.

In the particular installation shown in Fig. 1, the housing 10 is the full width of the range room and extends from the floor 44 to the ceiling 45 and between the masonry walls 46. Obviously, the bullet trap need not be built in, and may be used either indoors or outdoors.

Suitable targets 50 may be hung or clipped onto the lead plate 23 of any of the deflector elements 18, or, the targets 50 may be supported by other customary means, not shown.

Shown in Fig. 4 is an alternate embodiment of the invention which is like and similar to the embodiment of the invention disclosed in Figs. 1-3 inclusive except that it has a single target area 16, its housing 100 does not extend from the floor to the ceiling, and it is supported on a plurality of brackets 47 mounted on casters 48 for portability.

Although but one embodiment and one modification of the invention has been shown and described in detail, it is obvious that many changes may be made in the size, shape, arrangement and detail of the various elements of the invention without departing from the spirit and scope thereof as defined by the appended claim.

I claim:

A bullet trap comprising peripheral deflector plates at 35

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the two sides and the bottom of a target area disposed at suitable angles to deflect bullets fired thereagainst to the rear of the target area, a back plate at the rear of the target area connected to side deflector plates, the upper portion of said back plate extending between the two side deflector plates defining the top of said target area and providing a canopy thereover disposed at a suitable angle to deflect bullets fired thereagainst downwardly along said back plate to a bullet spending chamber, elements forming a bullet spending chamber having one live bullet opening adjacent the lower end of said back plate, a second forwardly disposed live bullet opening and a spent bullet outlet at the bottom thereof, a plurality of spaced deflector elements in said target area having a knife-like front edge and disposed to deflect bullets entering the target area to said back plate and therealong to said bullet spending chamber, the lowermost deflector element and the lower deflector plate converging to direct live bullets into the forwardly disposed live bullet opening of the bullet spending chamber, each said spaced deflector element including a splatter trap formed thereacross presenting a smooth pass for bullets entering the target area.

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