Oct. 8, 1968 O. J. DUNDR 3,404,886

BULLET DEFLECTING DEVICE

Filed May 13, 1965 2 Sheets-Sheet 1

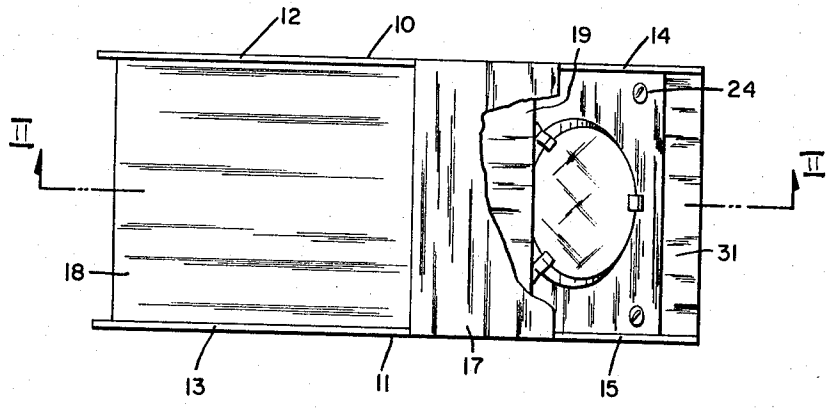


Fig - 1

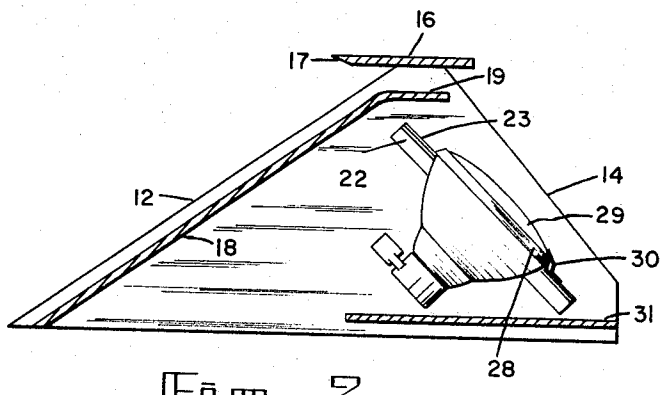


Fig - 2

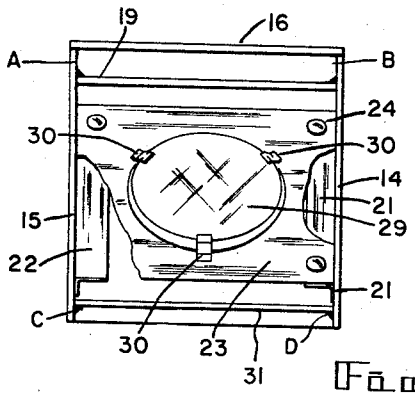


Fig - 3

INVENTOR.
Otto J. Dundr
BY John F Brezina
His Attorney

Oct. 8, 1968 O. J. DUNDR 3,404,886

BULLET DEFLECTING DEVICE

Filed May 13, 1965 2 Sheets-Sheet 2

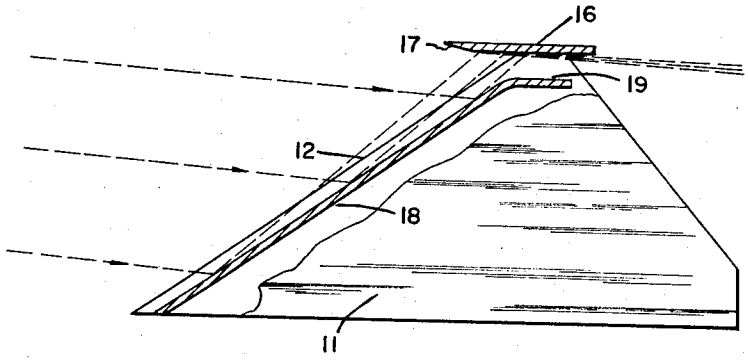


Fig. 4

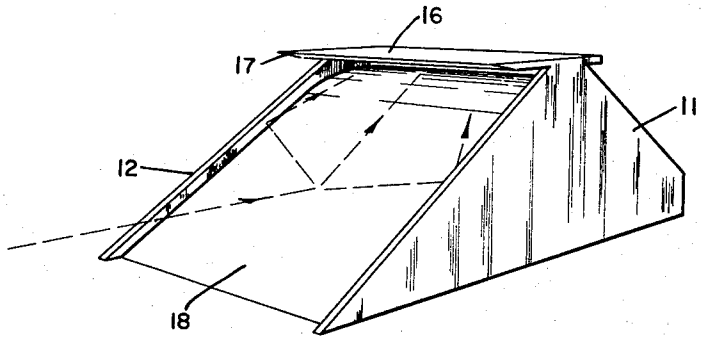


Fig. 5

INVENTOR.
Otto J. Dundr
BY
John F Brezina
His attorney

United States Patent Office 3,404,886 Patented Oct. 8, 1968

3,404,886

BULLET DEFLECTING DEVICE

Otto J. Dundr, La Grange, Ill., assignor to Shooting Equipment, Inc., Chicago, Ill., a corporation of Illinois

Filed May 13, 1965, Ser. No. 455,496
4 Claims. (Cl. 273—102.4)

ABSTRACT OF THE DISCLOSURE

A bullet deflecting device including a first plate having a sharp forward edge and positioned in a first plane intersecting a shooting region from which bullets are fired, a second plate in a plane inclined with respect to the first plane and intersecting the first plane along a line spaced rearwardly from the sharp edge of the first plate, and a third plate extending rearwardly from the rearward edge of the second plate in parallel relation to the first plate to define a channel through which bullets and bullet fragments pass. The deflector plates are supported by a pair of side plates and a light may be supported behind the second deflector plate for illumination of a region behind the device.

This invention relates to bullet and missile deflectors for shooting ranges and which mount and guard lighting units which illuminate shooting ranges and targets.

In presently known shooting ranges, there exists the problems of the deflection of bullets and bullet fragments which ricochet and bounce to scatter over a wide area and also cause breakage and damage of lights illuminating the back-stop and targets and which often bounce into ceilings and adjacent areas with danger of injury to persons.

It is an object of my invention to provide a portable securable bullet deflecting device and light guard which includes an inclined primary deflecting plate, partially guarding a light means, and a second upper guard and deflecting plate which is mounted to project over and above the primary deflector plate and which is spaced above the upper portion of the primary deflector plate to provide an outlet passage for the bullets deflected upwardly and then horizontally below said upper deflector plate and through said outlet passage toward a back-stop, and which provides an effective shield and mounting means within it for illuminating light units.

A further object is to provide a bullet deflecting device and guard for light means as recited in the preceding paragraph and in which the upper deflecting plate is beveled and positioned above and forwardly of the upper portion of the lower deflecting plate and adapted to deflect and direct bullets substantially horizontally into an area behind said device and above a light means mounted in said device.

Other and further important objects of my invention will be apparent from the following description and claims.

On the drawings

FIG. 1 is a top plan view of my bullet deflecting device and guard with parts broken away.

FIG. 2 is a cross section taken on a vertical plane, indicated by line II—II of FIG. 1.

FIG. 3 is an elevation thereof looking at the right hand side of FIG. 1.

FIG. 4 is a partial side elevation thereof with parts broken away to show the deflecting members.

FIG. 5 is a perspective view thereof.

As shown on the drawings

Numerals **10** and **11** designate rigid metal side walls or supports which are of substantially trapezoidal shape

which extend substantially vertically. Said walls **10** and **11** have downwardly inclined forward edges **12** and **13** and downwardly and rearwardly inclined edges **14** and **15** as shown in the drawings. A transversely extending upper metal deflector plate **16** having a beveled forward edge **17** is secured, preferably by welding, to the upper edges of side walls **10** and **11**, as indicated in FIGS. 2 and 4.

An inclined metal lower bullet deflecting plate **18** is secured, preferably by welding along its lateral edges to the inside faces of the metal side walls **10** and **11** a short distance below the inclined upper edges **12** and **13**. The upper portion of said inclined lower deflector plate is bent to substantially a horizontal plane to form an upper bent portion **19** which is spaced below the upper deflector plate **16** to provide a transverse slot or opening **20**, as shown. It will be noted that the deflector plate **16** forms a first plate in a horizontal plane which intersects a shooting region from which the bullets are fired, the sharp beveled edge **17** being generally transverse to the line of travel of the bullets. The plate **18** forms a second deflector plate in a second plane inclined with respect to the horizontal plane of the plate **16** and intersecting the plane of the plate **16** along the line parallel to and spaced rearwardly from the edge **17**. The acute angle between the planes of the plates **16** and **18** is, of course, sufficiently small as to prevent splatter fragments of bullets impinging thereagainst from traveling to the shooting region. The bent portion **19** forms a third deflector plate which is parallel to the plate **16** and which is joined to and extends rearwardly from the rearward edge of the plate **18**. The plate **19** cooperates with the plate **16** in defining a relatively narrow slot for passage of bullets and splatter fragments rearwardly therethrough. It is also noted that the horizontal distance between the edge **17** and the line of intersection of the planes of the plates **16** and **18** is relatively small in relation to the horizontal dimension of the plate **18**.

Mounted on the opposed inner faces of side walls **10** and **11** below the inclined edges **14** and **15** are a pair of elongated inclined metal brackets **21** and **22**, each of which have a pair of spaced apart holes formed therein. A metal mounting plate **23**, which has suitably spaced holes formed therein, is secured by screws **24** which extend through said holes and engage the correspondingly spaced holes in the two brackets **21** and **22**.

Said brackets are preferably secured by welding to the inner faces of side walls **10** and **11**. Plate **23** has an enlarged hole therein of a size to receive a light socket-carrying reflector **26** and which has the usual switch and wires (not shown) to connect same with a power source. The hole for the reflector is of a size to hold the front of the reflector **26** forwardly and above the plate **23**, with its rim **28** and lens **29** above it. A plurality of angular securing clips **30** are suitably secured to hold said reflector and rim **28** and the light, said clips being removable in mounted position to permit removal of said reflector.

A transverse metal reinforcing and connecting metal plate **31** has its opposite parallel edges secured, preferably by welding, to the opposed faces of metal side walls **10** and **11**, said plate being shown in FIGS. 1, 2 and 3.

My invention provides the novel advantages and accomplishments recited in the objects of this invention and provides a novel deflecting device guard for illuminating lights for areas containing back-stops, targets, and the like.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter and it is contemplated that various changes may be made in the embodiment of

the invention herein specifically described without departing from the spirit and scope of the invention as claimed hereinafter, and it is contemplated that various changes may be made in the embodiment of the invention herein specifically described without departing from or sacrificing any of the advantages of the invention or any features thereof, and nothing herein shall be construed as limitations upon the invention, its concept or structural embodiment as to the whole or any part thereof except as defined in the appended claims.

I claim:

1. In a bullet deflecting device for use in shooting ranges having generally planar surfaces defined by the surfaces of floors, walls and ceilings generally parallel to the line of flight of bullets, a first deflector plate, means for supporting said first deflector plate in a first plane generally parallel to and in spaced relation to said one of said planar surfaces, said first deflector plate having a forward sharp edge generally transverse to said line of flight, a second deflector plate, means for supporting said second deflector plate with a forward edge thereof being disposed adjacent said one of said planar surfaces and being disposed forwardly with respect to said sharp edge, said second deflector plate being in a second plane intersecting said first plane along a line generally parallel and spaced rearwardly from said sharp edge of said first deflector plate, said second deflector plate having a rearward edge spaced rearwardly from said bevelled edge and spaced from said first plane, and a third deflector plate joined to and extending rearwardly from said rearward edge of said second deflector plate in parallel relation to said first plane to cooperate with said first deflector plate in defining a relatively narrow slot for passage of bullets and splatter fragments rearwardly therethrough.

2. In a bullet deflecting device as defined in claim 1, the distance between said first and third deflector plates and the distance between said rearward edge of said second deflector plate and said sharp edge of said first deflector plate being both relatively small in relation to the dimension of said second plate in a direction parallel to said line of flight.

3. In a bullet deflecting device as defined in claim 1, light means, and means mounting said light means behind said second deflector plate to direct light rearwardly from said device.

4. In a bullet deflecting device as defined in claim 1, a pair of side plates secured to opposite side edges of said first, second and third deflector plates and having edge portions projecting forwardly from the side edges of said second deflector plate to edges spaced forwardly a short distance from and parallel to said second plane.

References Cited

UNITED STATES PATENTS

2,772,092 11/1956 Nikoden ---------- 273—102.4

FOREIGN PATENTS

815,467 6/1959 Great Britain.

ANTON O. OECHSLE, *Primary Examiner.*

M. R. PAGE, *Assistant Examiner.*