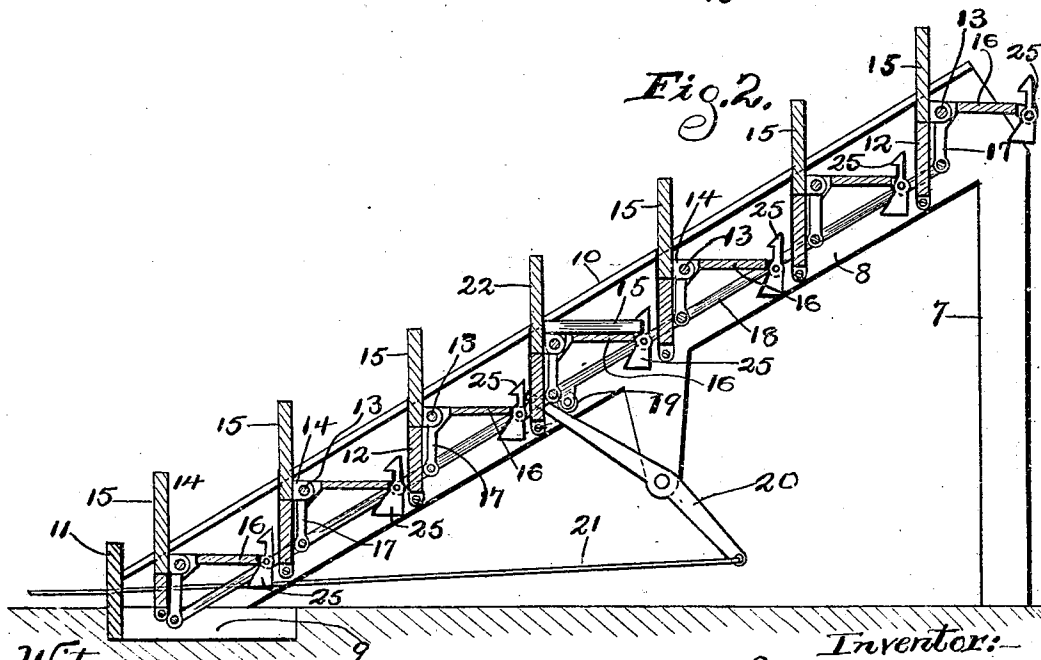
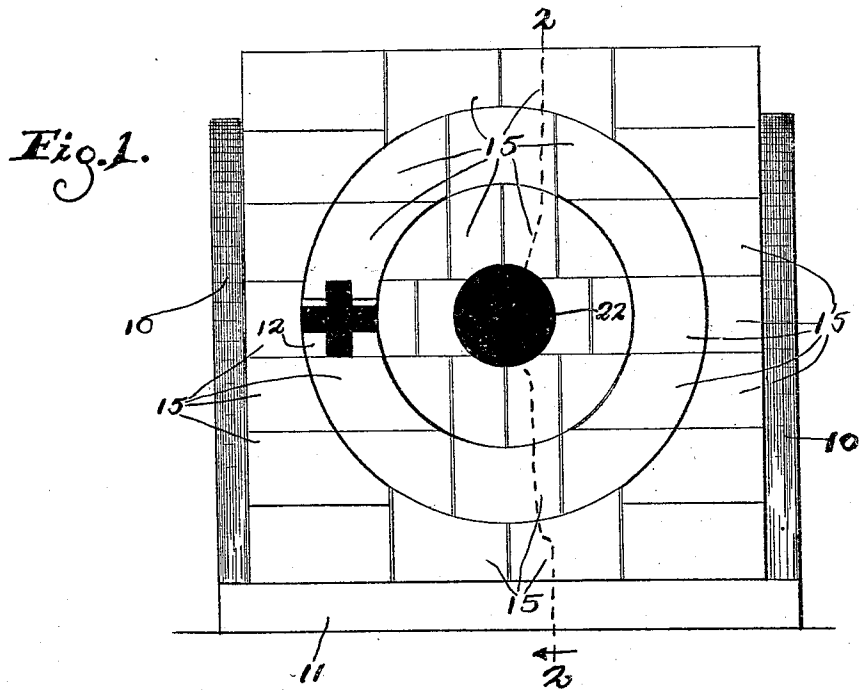


J. J. METZGER.
 TARGET.
 APPLICATION FILED APR. 2, 1908.

951,377.

Patented Mar. 8, 1910.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

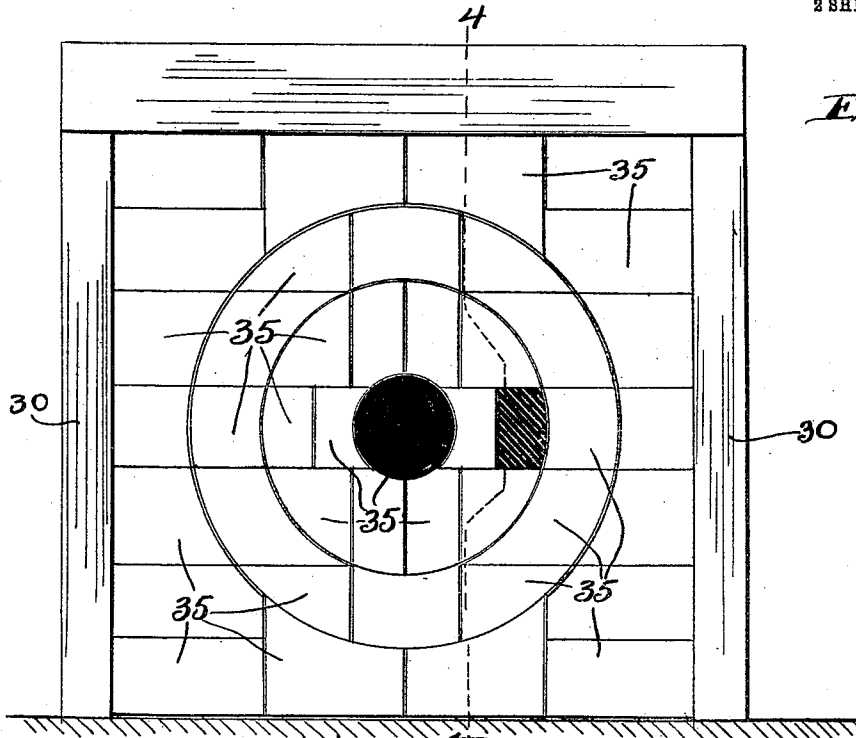


Fig. 3.

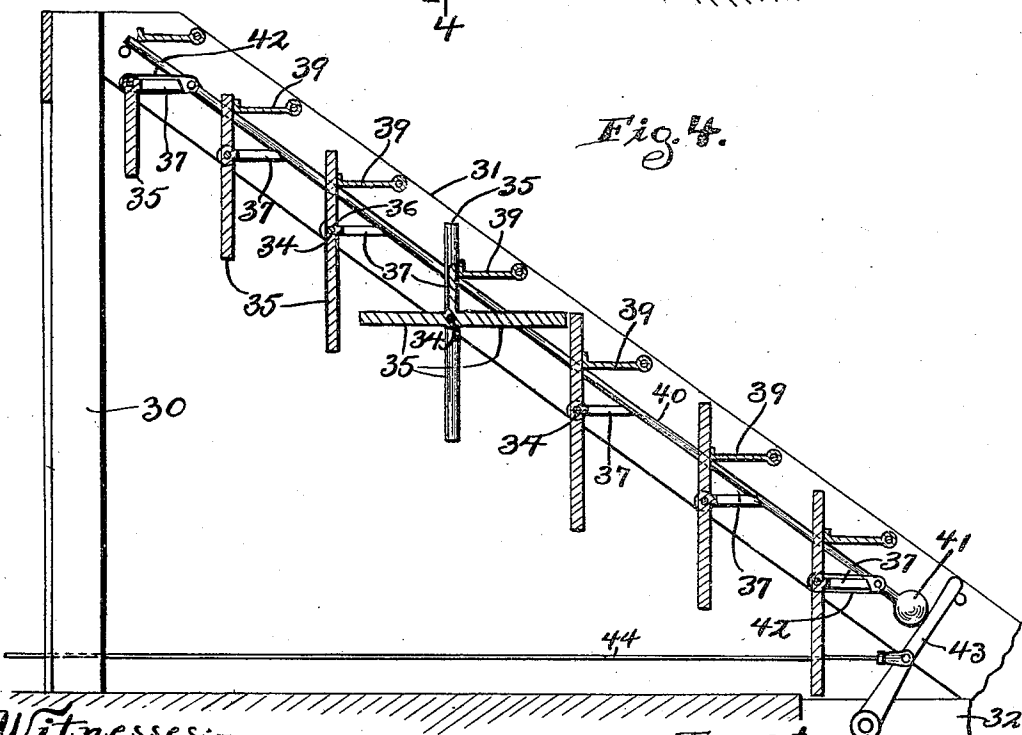


Fig. 4.

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UNITED STATES PATENT OFFICE.

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TARGET.

951,377.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JACOB J. METZGER, a citizen of the United States of America, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Targets; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention relates to targets and particularly to targets for long range rifle shooting. As the target is a considerable distance from the marksman, the latter is unable to observe what portion of the target has been hit, or whether or not the target has been hit at all, and practically the only successful means for informing the marksman of the effect of the shot is by signals operated by an observer stationed near the target. In military shoots or tournaments the signalmen are located in pits in front of the targets and when the latter have been hit inform the marksman by suitable signals of the effect of the shots. This method is very unsatisfactory for several reasons, for, not only are the men in the pits in danger of being injured by flying fragments, but as there are usually a large number of targets side by side, and a large number of men shooting at the same time, each individual observer or signalman will be unable to know whether or not his particular target is being shot at, and as he is located below and in front of the target and must view the target at an angle, he is not always able to ascertain whether or not his target has been hit and frequently a target may be hit and the marksman will receive no signal.

One of the objects of the present invention is to provide a target of such a construction that the marksman will be able to observe from the shooting position whether or not the target has been hit or what particular part of the target has been hit, and thus do away with the necessity of signalmen.

A further object is to provide a target which is so constructed that it can not get out of order or be injured by the impact of the bullets and no matter where a bullet strikes the target, the effect of the shot can be readily seen.

In carrying out my invention I provide a target consisting of sections which are pref-

erably arranged in different planes in such a manner that when the target is viewed from the front they appear to be in the same vertical plane. The different sections are hinged or pivotally supported so that when one has been struck by a bullet it will be thrown down or out of its normal position presenting to view on the background a suitable indicator which is visible from the point from which the shooting is done and by which the marksman can tell immediately where the bullet hit.

The sections are so arranged that they overlap a slight amount so that the portions of the sections near their pivotal supports are protected by the targets in front, in this instance, the pivotal support of each section being overlapped by the section immediately in front. With this arrangement, it will be impossible for the bullets to injure any portion of the targets, particularly the pivotal supports, and no matter where the section is hit it will be sure to fall. The portion of the target in each vertical plane is also divided into sections and the sections of each plane are so formed with respect to one another and with respect to the sections in the other planes that when the target is viewed from the front or when the visible portions of the sections are projected on a vertical plane, they form true circles concentric about the center or bull's eye, and the effect is exactly the same as when the marksman shoots at an ordinary target. If a section of the bull's eye is hit it will completely disappear from view. If a section in the inner circle is hit it will disappear presenting to view a background having a distinctive color which shows its location and if a section in any other circle or outside of the outermost circle is struck there will be presented to view some other color or figure of a nature depending on the location of the section, the background of the different sections in each group or within each circle being the same in color or design and being different from the background of the sections of any other group or circle. Suitable means which may be operated from any point is provided for raising or restoring to normal position any of the sections which were hit and thrown from normal position.

In carrying out my invention any preferred form, construction and arrangements of parts may be employed, but in the embodiment of my invention shown in the

drawings, the target sections in the different vertical planes are successively arranged at different heights, the foremost sections being the lowest, and the sections are arranged to swing backward when struck.

My invention may be further briefly summarized as consisting in certain novel details of construction and combinations and arrangement of parts which will be described in the specification and set forth in the appended claims.

For a better understanding of my invention reference is had to the accompanying drawings, in which—

Figure 1 is a front elevation of a target constructed in accordance with my invention, one of the sections being down or swung out of normal position and showing the background or indicator. Fig. 2 is a vertical sectional view of same. Fig. 3 is a front elevation of a modified form of my target, showing a target section swung back. Fig. 4 is a section on line 4—4, Fig. 3.

In the form shown in Figs. 1 and 2 of the drawings the support for the target proper comprises two frame members, each of which consists of a vertical member 7 located at the rear of the target and an inclined member 8, one end of which is supported by the member 7 and the other end rests on a base plate 9. Each of the members 8 has a guard flange 10. A baseboard 11 is preferably arranged across the frame at the front thereof. Extending from side to side of the supporting frame are a number of stationary target supporting members or cross bars 12 which are arranged in different vertical planes at successively increasing heights, the different supporting members slightly overlapping one another. Also extending across the frame and arranged adjacent to the members 12 are rods 13 on which the target sections are pivotally mounted, each rod 13 being slightly above and at the rear of one of the supporting members 12. Normally resting upon the top of each cross member 12 and in the same plane thereof and pivotally supported upon the corresponding cross rod 13 by means of ears 14 through which the cross rod extends are a series of target sections 15 which are preferably made from hard steel so as to withstand the shock of the bullets. It will be seen that the sections of each series or all of the sections on each cross rod have independent movement on the rod; that the sections of each series are normally in a vertical plane, and all the series of sections are in different vertical planes and are supported at gradually increasing heights from the front group or series. The positions of the series of sections are such that the lower portion of each section or the portion adjacent the pivotal support is protected or overlapped by the section immediately in front, while the foremost sections

at the bottom of the target are protected by the base board 11 which extends across the front of the supporting frame. Also pivotally mounted on each cross rod 13 and normally located in a horizontal position at the rear of the sections on that rod is a support 16, each end of which is provided with a downwardly extending arm 17. The purpose of these supports is to form a buffer for the sections when they have been struck and thrown down by the bullets and also to afford means for resetting or restoring them to normal position. In this instance, the sections can be raised or restored to normal position from the point at which the shooting is done or from any other position, regardless of what section or sections are down. Any suitable means may be provided for accomplishing this or for raising the supports, but in this instance it is accomplished by the following mechanism. The downwardly extending arms 17 are connected by a reciprocable rod or bar 18 provided on its lower side with the roller 19. Pivotally mounted on one of the frames of the target is a lever 20 to one end of which is connected a wire or cable 21 which extends along the ground to any desired point from which it is desired to do the resetting. The opposite end of the lever 20 engages the roller in such a manner that when the wire or cable 21 is pulled forward the lever will shift the rod 18 and simultaneously swing upward all the supports 16 and any target sections which may have been resting thereon. On the supports 16, behind each target section is arranged a gravity latch 25 which engages the target section when it is thrown back and down and prevents any rebound of the section. When the supports are raised up to reset the section which has been thrown down the latch will automatically release the section and allow it to be restored to its normal position.

The center or the bull's eye of the target is shown at 22 and is formed in this case by the visible portion of the middle section of the middle series, the face of this section being painted or otherwise marked so that it can be readily seen at a distance. Although the general outline of the target when viewed from the front or when projected upon a vertical plane is square the different sections in each group are so formed with respect to each other and with respect to the sections in the other groups that the projecting or visible portions of the sections form circles concentric with respect to each other about the center of the target, so that when the target is viewed from the front not only does it appear to be in a vertical plane, but it presents the same view as the ordinary flat target, and the circles provide an easy means for determining the score made by the marksman. In this instance, besides the

bull's eye section there are series of sections within the inner circle, a series of sections between the inner and an outer circle and a series of sections on the outside of the outer circle.

In order that the effect of the shot may be observed from the point from which the shooting is done and the marksman score determined from a distance, the background of each section in the inner circle, of each section between the inner and outer circles, and of each section beyond the outer circle will have some distinctive color or design which will indicate its location, the background of each section being formed by a portion of the cross member 12 and lower portion of the section immediately behind. For example, behind the various sections within the inner circle the portions of the cross members 12 and the lower portions of the proper target sections may be painted a bright red; the portions of the cross members 12 and the lower portions of the sections at the rear of the sections between the inner and outer circles may be painted with a black cross; and the background of the sections on the outside of the outer circle may be of some other color and design such as black which can be readily seen and distinguished. In Figs. 1 and 2 one of the sections between the inner and outer circles is shown as down or at the rear, presenting to view the black cross which is the distinctive color and design for all sections between the inner and outer circles.

It will be seen from the foregoing description that the bullets cannot injure the target no matter where they strike, but whenever the target is struck a section must fall and the sections are so arranged that they will fall freely and cannot interfere with each other. In case a bullet strikes between two sections both will probably be thrown down but the score can be determined in the same way as when a bullet strikes on one of the dividing circles of the ordinary target.

In the form shown in Figs. 3 and 4 the construction of the target is practically reversed, the frame being arranged to slope from the front to the back and the target sections are mounted so that they will swing back and up. The frame for the target comprises two side pieces, each of which consists of a vertical member 30 located at the front of the target and an inclined member 31, one end of which is supported by a vertical member 30 and the other end rests on a base plate 32 at the rear of the target. Extending from side to side of the frame are a plurality of shafts or rods 34 which are arranged in different vertical planes at successively increasing heights. On each of said rods or shafts 34 are mounted a plurality of target sections each of which consists of a rigid plate 35 having a bore 36 which extends

transversely through said plate at a point above the center line to form a journal therefor. On the rear face of each of the target sections is arranged a rigid arm 37. When a target section is struck by a bullet it will swing back to a horizontal position, and in order to hold the target section in this position until the score is recorded a latch is provided which engages with the rigid arm 37. These latches are constructed as follows:— Behind each series of sections is arranged a plate 39 which extends from side to side of the frame and is pivotally supported on the sides of the frame so that it is free to swing up. When a target section 35 is struck by a bullet it will swing back and the rigid arm 37 thereon will raise the latch plate 39 and pass in front thereof, which will prevent the target section from swinging down. A rod 40 is supported on links 42 beneath the plates 39 so that when the rod is moved it will swing up lifting the said latch-plates 39 and freeing any target section which is held up thereby. On the base-plate 32 is mounted a lever 43 to which is secured an operating cable or wire 44. By pulling on the wire the lever 43 is brought forward shifting the rod 40 upwardly and thereby lifting the latch-plates 39. The rod 40 is provided with a weight 41 so that it will return to its normal position when the lever 43 is released.

I do not desire to be confined to the exact details shown but aim in my claims to cover all modifications which do not involve a departure from the spirit and scope of my invention.

What I claim is,—

1. In a target, a supporting frame, a plurality of target supporting members extending across said frame, said members being arranged in different vertical planes and at different heights, and a plurality of pivotally mounted target sections resting on said members, each of said sections being adapted to swing backward so as to expose an indicator which shows its position.

2. In a target, a plurality of movable overlapping target sections arranged in different vertical planes, and adapted to swing backward to expose a background, the background for the sections within a certain area having a design different from the background for the sections within a different area.

3. In a target, a pair of side frames, a plurality of target supporting members extending between said frames, said members being arranged in different vertical planes and at different heights, a rod extending between said side frames above and to the rear of each supporting member, a plurality of target sections pivotally mounted on said rods and arranged to rest on said supporting members when in their vertical positions, a combined bumper and resetting device

pivottally mounted on each rod and arranged to support the target sections when thrown down and means for actuating said bumper and resetting devices so as to restore the target sections to their normal positions after they have been displaced.

4. In a target a pair of side frames, a plurality of target supporting members extending between said frames, said members being arranged in different vertical planes and at different heights, a rod extending between said side frames above and to the rear of each supporting member, a plurality of target sections pivottally supported on said rods and arranged to rest on said supporting members when in a vertical position, a combined bumper and resetting device mounted in the rear of each supporting member arranged to support the target section when thrown down and means for actuating said bumper and resetting devices simultaneously so as to restore the target sections to their normal positions after they have been displaced.

5. In a target a pair of frames, a plurality of target supporting members extending between the said frames, said members being arranged in different vertical planes and at different heights, a plurality of target sections arranged to rest on said supporting members, each target section having a greater height than the vertical distance between the supporting member on which it

rests and the supporting member next above, each target section being provided with hinge-forming lugs arranged on the rear thereof intermediate of the upper and lower ends and a series of rods supported by said side frames and passing through the lugs on the target section and forming a pivotal support therefor, substantially as described and for the purpose set forth.

6. In a target a pair of side frames, a plurality of target supporting members extending between said frames, said members being arranged in different vertical planes and at different heights, a plurality of target sections, each target section being hung at a point intermediate of its ends from one of said supporting members, an arm arranged on the rear end of each target section, a plurality of latches supported in proximity to said target sections and arranged to engage the arms on said target sections when the said target sections are moved back by the impact of the bullets and means for disengaging the latches from the arms on said target sections.

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

JACOB J. METZGER.

Witnesses:

VICTOR C. LYNCH.
N. L. McDONNELL.