Nov. 14, 1944. C. A. WALDMANN 2,362,513

SECTIONAL TARGET

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Fig. 1.

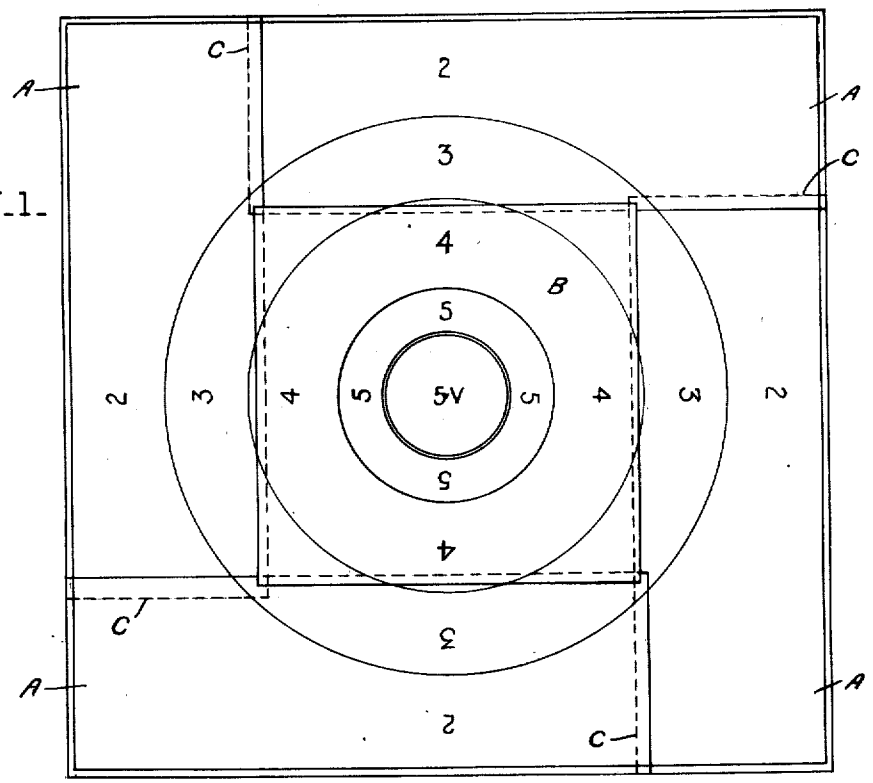
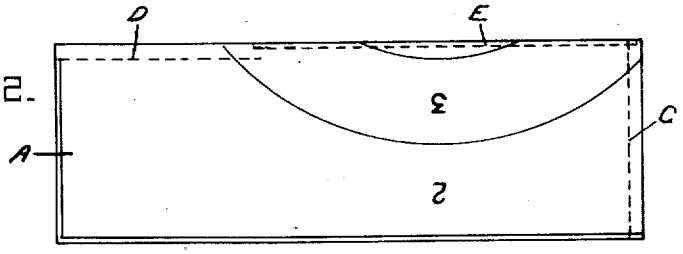


Fig. 2.



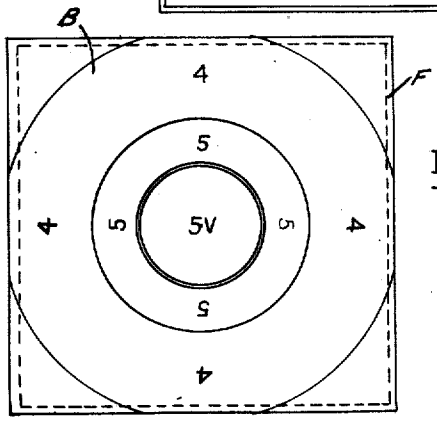


Fig. 3.

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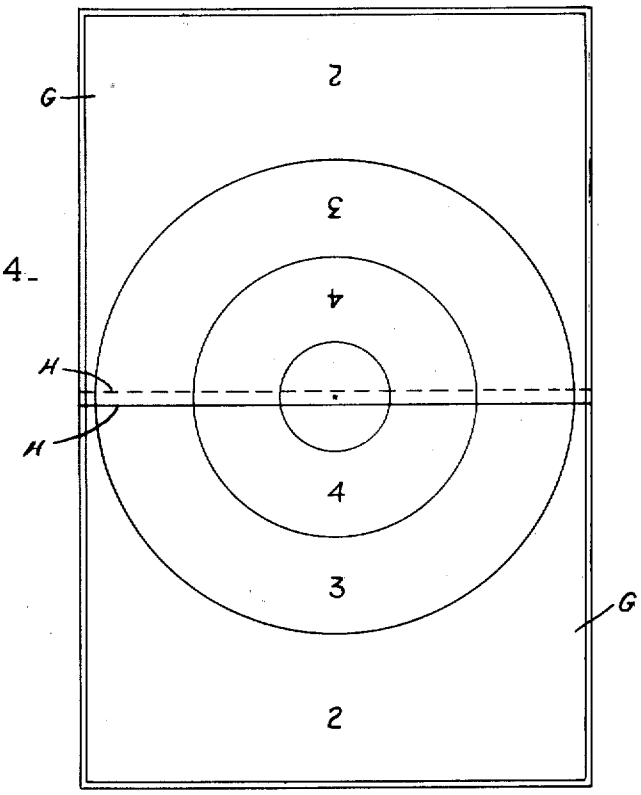
Fig. 4.



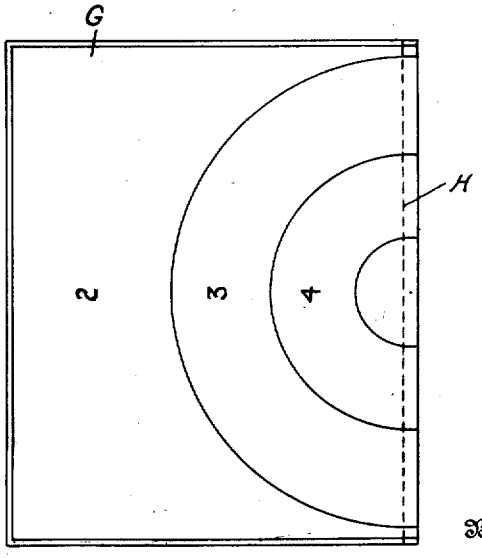


Fig. 5.

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SECTIONAL TARGET

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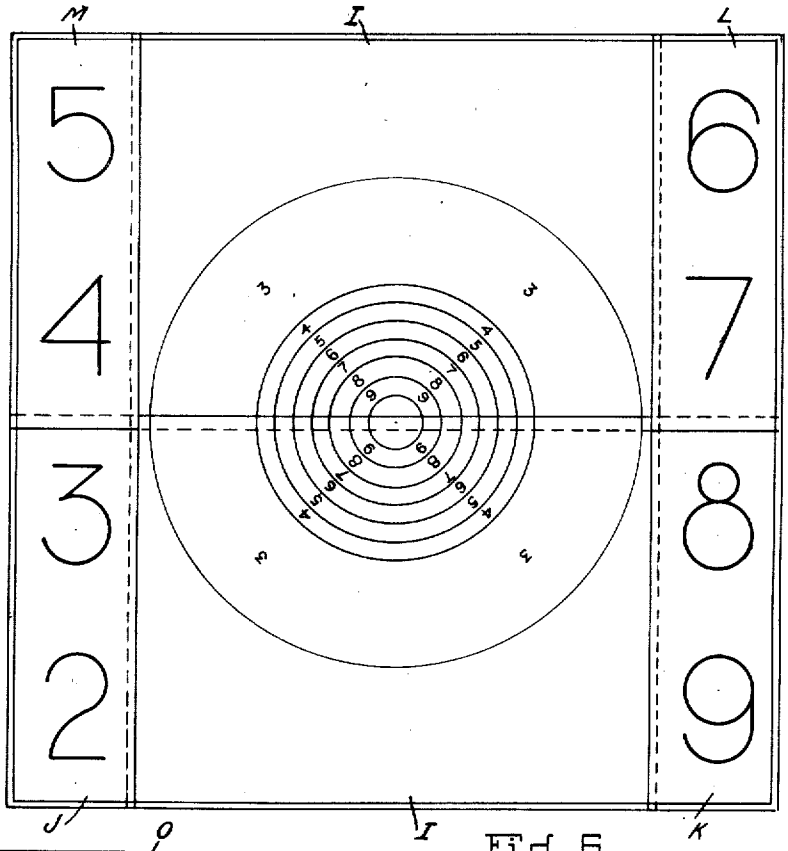

Fig-6-

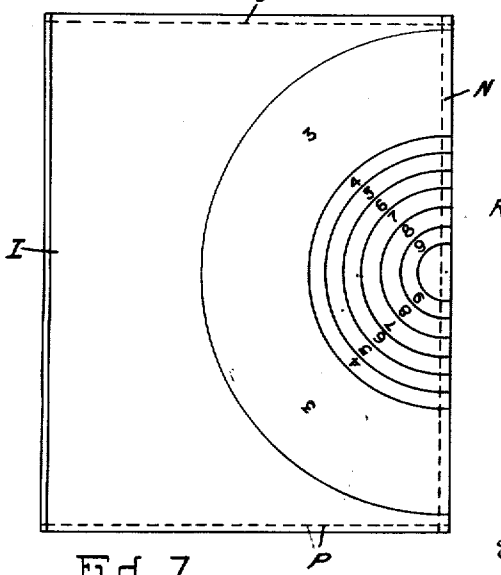

Fig-7-

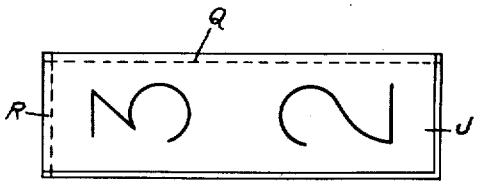

Fig-8-

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SECTIONAL TARGET

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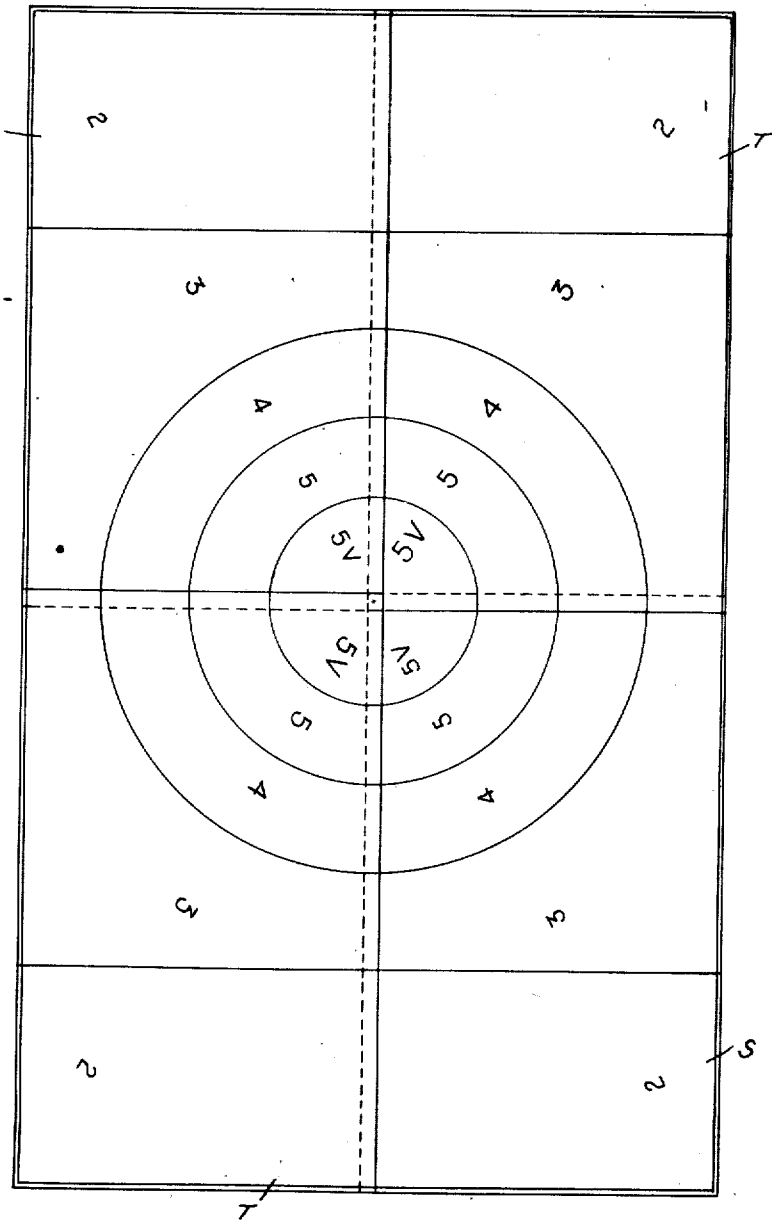
FIG. 9.



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Patented Nov. 14, 1944 2,362,513

UNITED STATES PATENT OFFICE

2,362,513

SECTIONAL TARGET

Carl A. Waldmann, United States Army, Rock Island Arsenal, Ill.

Application June 9, 1942, Serial No. 446,365

2 Claims. (Cl. 273—102)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

The present invention relates to targets for rifle and pistol practice, and more particularly to practice targets whose dimensions exceed the working limits of standard commercial printing presses.

In training personnel in rifle and pistol marksmanship, large practice targets, ranging from 4' x 6' to 6' x 10' in size, are frequently employed. Inasmuch as the largest standard commercial presses are not designed to print sheets in excess of approximately 43" x 63" in size, large targets of the foregoing type cannot be printed in a single operation by the usual commercial printing establishments. It has therefore been the practice, prior to the present invention, to manufacture such large targets on special presses constructed for oversize work. This practice, although resulting in targets of high accuracy, has not been entirely satisfactory because of the limited number of oversize presses available for the work, and because of the excessive cost of constructing special presses therefor. Moreover, large targets are difficult to place in position on the target range in windy weather.

An important object of the present invention resides in the provision of a new and improved composite target adapted to be assembled from a plurality of overlapping sections each of which in the overlapped region contains portions of the complete target design so that the complete design will be the same regardless of which sheet overlaps the other.

Another object is to provide a new and improved large practice target assembly which lends itself to quantity production in standard size printing press equipment.

A further object is a large sectional or composite practice target adapted to be placed in position on the range, with a minimum of difficulty due to wind.

Other objects and advantages will be apparent as the invention is hereinafter more particularly described with reference to the drawings, wherein:

Figure 1 is a front elevational view of a standard rifle target "B" constructed in accordance with the present invention.

Figures 2 and 3 are front elevational views of the two components of the target shown in Figure 1.

Figure 4 is a front elevational view of a standard rifle target "A," constructed in accordance with the present invention.

Figure 5 is a similar view of one component of the target shown in Figure 4.

Figure 6 is a similar view of a standard pistol target "L" in accordance with the present invention.

Figures 7 and 8 are similar views of two components of the target shown in Figure 6.

Figure 9 is a front elevational view of a standard rifle target "C" in accordance with the present invention.

Referring generally to the drawings, the several views illustrate three alternative methods of constructing large practice targets in accordance with the present invention, as applied to four types of large standard targets. In all cases, the resulting target comprises a composite field having target indicia marked thereupon, the field consisting of a plurality of juxtaposed sections forming a continuous rectangular field and marked with portions of the target indicia. The sections of the field are preferably provided with indicia for indicating the relation of each section to adjacent sections. The sections may, if desired, be placed in edge-to-edge relationship, although I prefer to place them in overlapping relationship, in which case the sections may be provided with indicia for indicating the extent of overlap with adjacent overlapping sections. In the embodiments illustrated in the several figures of the drawings, at least two component sections of each target are identical in configuration, dimensions and indicia, whereby said components are interchangeable with each other.

Referring now particularly to Figures 1, 2 and 3, the standard rifle target "B" illustrated therein, as constructed in accordance with the present invention, comprises five component sections. The four peripheral sections (identified by the encircled letter A) are identical while the single central section B consists of a standard target center heretofore employed in repairing a target of this type. The center section, B, is rectangular in configuration, the two dimensions thereof being somewhat less than the diameter of one of the concentric circles forming part of the target indicia. The segments of the two outermost concentric circles printed upon the peripheral section A provide means for aligning the various component sections in mounting the target upon the target support.

As illustrated in Figure 1, the peripheral sections A are first affixed to the target support, for example, consecutively in a counter-clockwise

direction, the extent of the overlap of the sections being indicated by suitable indicia C and D illustrated as broken lines. After the peripheral sections A have been mounted on the target support, the central section B is then affixed in the manner shown, the extent of overlap in this case being indicated by suitable indicia E on the peripheral sections, which may be supplemented, if desired, by additional indicia F on the central component B, either on the obverse or reverse face thereof. Although as set forth above the target sections are assembled consecutively in a counterclockwise direction, it will be clear that since a portion of the complete target design appears in the overlapping regions of all of the sheets the complete target design will still be the same regardless of which sheet overlaps the other and accordingly the assembly could just as well be made in a clockwise direction.

Figures 4 and 5 illustrate an alternative method of constructing a large practice target. According to the scheme illustrated therein, the target is manufactured in two identical components G, the division line between the components passing through the bull's eye and adjacent the center thereof. The two identical components G of the target shown in Figure 4 are provided with suitable indicia H for indicating the extent of the overlap, the indicia being illustrated in the form of a broken line.

A further application of this same alternative is shown in Figures 6, 7 and 8, the procedure being applied, however, to a more complicated target design. In this case, the target of the present invention comprises two identical components I forming the upper and lower central portion of the target, the division line likewise passing through the bull's eye, adjacent the center thereof. The central components I are provided with indicia N, O, and P for indicating the extent of overlap with adjacent central and lateral sections. The lateral components J, K, L and M are similar to component J shown more particularly in Figure 8, except for the numbers appearing thereon. The lateral components are likewise provided with indicia Q and R for indicating the extent of overlap with the adjacent lateral and central sections.

A third alternative method of constructing large practice targets is illustrated in Figure 9. In this case the target is constructed of four components with a horizontal and a vertical division line passing through the central bull's eye, adjacent the center thereof. The target consists of two pairs of identical sections S and T placed in overlapping relationship, each component being provided with suitable indicia (not shown) for indicating the extent of overlap with adjacent sections.

The application of the three alternative types of target construction illustrated in the several figures of the drawings, to a specific form of target depends to a considerable extent upon the complexity of the individual target as well as its overall dimensions. Thus in the case of the target shown in Figure 6, instead of constructing the target of the components indicated thereon, it may be preferable in certain instances, depending on the nature of the printing equipment available, to employ the quartering system illustrated with reference to Figure 9. In this case the target will be constructed of four components, each representing slightly more than one quarter of the target, the excess over the quarter-size providing the overlap. However, in this case, it will be noted that none of the components will be identical because of the numbers appearing in the horizontal margins. The procedure illustrated in Figure 6 utilizes two components I which are identical, and four lateral components, J, K, L and M, which are different. The particular method of construction employed in this case is therefore complicated by the asymmetric nature of the target itself.

One of the advantages of practice targets constructed in accordance with the present invention resides in the comparative ease with which they may be mounted on the target support on windy days when practicing on an outside target range. The components are much smaller than the overall target and therefore are more readily handled in windy weather. A further advantage arises from the fact that the components may be employed in repairing targets which have been partially mutilated by bullet holes during target practice. Thus, for example, the central component of the target shown in Figure 1 may be used as repair center when the central portions have been badly mutilated. The provisions of indicia for indicating the relationship of the individual components to adjacent components facilitates the mounting of the target on the range. Inasmuch as all the components may be designed with dimensions less than 43" x 63", the sections may be printed on standard commercial presses, thereby materially reducing the equipment overhead heretofore required in printing large size practice targets. Other advantages of the present invention will be apparent to those skilled in the art.

In the foregoing detailed description, it will be apparent that many variations may be made without departing from the spirit and scope of the present invention. I, therefore, intend to be limited only in accordance with the following patent claims.

I claim:

1. A device designed to be destroyed in use, such as a target, comprising, a plurality of sheets having indicia thereon and being intended to be assembled in partially overlapped condition, so that the indicia carried by the several sheets together form a given design, that portion of the design which appears in the overlapping region being carried by each of said sheets in the portion thereof which is overlapped or overlapping when the sheets are assembled in overlapped condition, whereby the same design is provided by the combined indicia on the several sheets when the said sheets are assembled in said overlapped condition regardless of which of contiguous sheets overlaps the other.

2. A device designed to be destroyed in use, such as a target, comprising, a plurality of sheets having indicia thereon to form a given design and being intended to be assembled in partially overlapped condition, the amount of the portions of said design on the individual sheets being such that if all were placed together in abutting relationship the design produced would be distorted from that produced when the said sheets are assembled in overlapped condition, due to the presence of an overplus, whereby the same design is provided by the combined indicia on the several sheets when the said sheets are assembled in said overlapped condition regardless of which of contiguous sheets overlaps the other, and means on said sheets for indicating the appropriate extents of individual overlaps.

CARL A. WALDMANN.