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PORTABLE TARGET STAND

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This invention relates to a composite target and, in combination therewith, a portable knockdown stand and wherein both the target and stand are of unique form and construction for compatibly united usage.

A general object of the present invention is to provide a target and oriented stand combination which is simple in construction, compact and convenient for expedient carrying and handling, is steady and reliable when set up for use, even on a windy day, and which satisfactorily serves the ends and purposes for which it is adaptably used.

A further and significant object is to improve upon and update prior art targets and stands, for example, the outmoded easel-type folding stand and target disclosed in the McBride Patent 429,942 of June 10, 1890, and the adjustable clip retained sheet material target disclosed in Clark 3,080,166 of Mar. 5, 1963. To the ends desired, the herein disclosed adaptation comprises a sturdy, leg-supported frame which is unique in that it provides coacting channel members which define an efficient receiver in which the insertable and removable target is rigidly pocketed, whereby to facilitate target handling steps. Manifestly a flimsy paper or equivalent target is objectionable on windy days. Hence, the target herein revealed comprises a solid backing panel and wherein a paper or similar sheet material printed target is spread upon, affixed to, and reliably backed up by the panel.

In carrying out the present invention a pair of pointed ground penetrating legs are screwed into adapter nuts which are fixed to the underneath side of the web of a channel-type horizontal frame member and are accordingly readily appreciable and removable. When removed these legs can be and are neatly stored on the rearward side of the target's frame. The means for accomplishing this novel result permits the legs to be crisscrossed and available stored within the outer marginal limits of the frame where they are out of the way and make for ready handling and transporting.

More specifically, a horizontal angle iron is mounted on the upper open end portions of the vertical frame members and spans the space between said frame members. It is so located and arranged that it not only rigidifies the overall frame but assists in supporting means which, in turn, assists in storing the aforementioned legs.

Further, and in keeping with the concept, novel members are used to rack and store the crossed legs. Briefly, individual sleeves of a pair of like sleeves are diagonally anchored at left and right corners of the frame and are properly angled or canted. These sleeves serve to enclose and shield the pointed ends of the legs when the latter are stored. The bores of the sleeves coverage upwardly and are lined up with threaded holes in cooperating oblique angled nuts, one fixed in the lefthand upper corner of the frame and the other one fixed in the upper righthand corner. With the sleeves and nuts oriented as shown the upper screw-threaded ends of the crossed legs are screwed into their respective nuts. Accordingly, the legs can be stored neatly and protectively out of the way.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a view in perspective of the improved portable target and stand combination set up and ready for use;

FIGURE 2 is a view on an enlarged scale taken on the plane of the horizontal section line 2-2 of FIGURE 1;

FIGURE 3 is a view in elevation showing the rearward side of the dismantled stand with the target still in place and with the detachable legs stored in an out-of-the-way position on said rearward side;

FIGURE 4 is a fragmentary perspective view of one upper corner portion of the frame showing how the screw-threaded end of one leg is screwed into a fixedly angled or canted retaining nut provided therefor;

FIGURE 5 is likewise a fragmentary perspective view with parts appearing in section and elevation showing one of the canted sleeves and how it functions to protectively enclose the pointed end of the cooperating leg; and

FIGURE 6 is a fragmentary perspective view based on FIG. 5 and which shows, in addition to the sleeve, the underlying fixed nut which is provided as an adapter for the screw-threaded upper end of one of the detachable legs.

The aforementioned frame, which is preferably but not necessarily, rectangular in configuration is denoted by the numeral 8. The changeable or insertable and removable target, construed as a unit, is denoted by the numeral 10. The legs which are of duplicate construction are denoted by the numeral 12. Each leg comprises a rigid rod whose lower ground-penetrating end is pointed as at 14. The upper end is screw-threaded at 16 (FIG. 4).

The frame 8 is characterized by three similarly constructed channel irons, the bottom or horizontal channel iron being denoted at 18 and the two complementary vertical channel irons at 20. The lower end portions of the channel irons 20 are appropriately mitered and joined with cooperating mitered end portions of the bottom channel iron 18 as denoted generally at 22. The channel of the bottom frame member or channel iron 18 opens upwardly and communicates with the channel portions of the two vertical channel irons 20. Accordingly, the several channels provide a receiver and holder for the bodily insertable and removable target means 10. It will be noted, too, that the upper ends of the channels in the members 20 are unobstructedly open to permit insertion and removal of the target. The frame also includes an upwardly disposed rearwardly positioned angle iron 24 (FIG. 4). The depending or vertical flange 26 is fixed to the cooperating flange 28 and the upper horizontal flange 30 is flush with the upper open ends of the channel irons 20. This angle iron 24 spans the space between the frame members 20 and results in providing a four-part rigid frame.

The rearwardly facing respective lefthand and righthand end portions of the angle iron 24 serve to support the canted or oblique angled leg retaining nut one of which is denoted at the left by the numeral 32 and the other one at the right at 34. These nuts are referred to, FIG. 3, as being located at the upper left corner and upper right corner. As more clearly shown in FIG. 4 each nut is welded or otherwise affixed in place as denoted generally at 36 so that the predetermined canted position of the nut is had. With further reference to FIG. 3 the sleeve or collar which is located in the lower lefthand corner on the rearward side of the frame is denoted by the numeral 38 and the duplicate sleeve, which is located in the lower righthand corner is denoted by the numeral 40. When properly mounted the two sleeves converge upwardly and the bores thereof are axially aligned with the screw-threaded holes in their companion or cooperating nuts. This is to say, the bore 42 (FIG. 5) in the sleeve 38 is lined up with the screw-threaded hole 44 in the nut 34. The reverse is true with respect to the sleeve 40 in that the

bore (not detailed) is lined up with the screw-threaded hole provided therefor in the coinciding nut 32. It is evident that the legs 12 are not only corresponding in construction they are each of a predetermined length that they can be fittingly anchored and stored in the out-of-the-way position shown in FIG. 3. To accomplish this satisfactorily the median portions of the legs are crossed as denoted at 46 (FIG. 3). By crossing the legs and screwing the screw-threaded ends into the respective nuts 32 and 34 and positioning the pointed ends in the respectively cooperating sleeves or collars the desired compact and convenient storage and ready-to-carry result is attained.

With respect now to FIGS. 5 and 6 it will be noted that the web 48 of the lower frame member or channel iron 18 is provided at its respective ends with adapter nuts one at the left as denoted at 50 (FIG. 1) and the other one at the right as denoted at 52. These nuts are welded or otherwise affixed flatwise to the web in the manner illustrated, for example, in FIG. 6. These nuts 50 and 52 serve to permit the screw-threaded upper ends of the legs to be screwed in place and aptly held in coplanar spaced apart ready-to-use parallel relation.

It will be evident that when the overall target is being used the upper screw-threaded ends of the legs 12 are joined with their intended anchoring nuts 50 and 52. When the legs are not in use they are unscrewed from said nuts 50 and 52 and stored in crossed relation in the manner illustrated in FIGURE 3.

It is further to be noted that the angle iron 24 when mounted in the manner shown and described is out of the way of the upper open ends of the frame members 20 whereby to facilitate the necessary step of inserting and removing the changeable target 10. The target is such in shape and dimensions that it can be fitted snugly but removably into the receiving and retaining channels of the U-shaped frame. Instead of using a flexible chart a composite chart, as is common practice, is employed and comprises a rigid or solid backing panel 54. The panel shown is rectangular, flat-faced and reversible and is customarily made from rigid cardboard or equivalent firm stock. While it is possible to have a target sheet on both sides it is usually sufficient to provide but a single target sheet as at 56. This is conformable to and sheet is spread upon and glued or otherwise fastened to the backing panel. As a matter of fact the target 56 can be temporarily or detachably mounted on the backing panel if such is the preferred mode of use.

With the portable knockdown target stand arranged and set up for use as illustrated in FIG. 1 and with the components 54 and 56 of the target assembled and with the target in place in the holder or frame the overall structure is adapted for ready and reliable use.

The manner in which the legs 12 are detached and stored in an out-of-the-way position will be evident by considering FIG. 3 generally and the details of construction more specifically in FIGS. 4, 5 and 6. A more extended description is thought to be unnecessary.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A target and portable knockdown stand comprising, in combination, a frame embodying channel-irons joined in planar cooperating relationship, the channel portions thereof communicatively cooperating and providing a track-like receiver and holder, an insertable and removable composite target, said target comprising a solid backing panel with a standard paper target superimposed upon and affixed to a front surface thereof, said target being fitted into said holder, a pair of frame erecting and

supporting legs, means on a bottom marginal portion of said frame for detachably joining the legs to said frame in planar spaced apart parallel relationship, and means on a rearward side of said channel-irons for removably storing the legs in criss-crossed relationship when they are not in use.

2. The structure defined in claim 1, and wherein said storing means comprises a pair of open-ended sleeves affixed to the respective lower corner portions of said frame, and a pair of nuts affixed to the respective upper corner portions, said sleeves being canted and disposed in upwardly converging relationship, and said nuts also being fixedly canted, whereby the nut in the upper righthand corner coincides for use with the sleeve in the lower lefthand corner and contrawise the nut in the upper lefthand corner coincides for use with the sleeve in the lower righthand corner.

3. A target and portable knockdown stand combination, said stand comprising, a horizontal upwardly opening channel-iron, a pair of coplanar spaced parallel vertical channel-irons having lower ends affixed to respective outer ends of said horizontal channel-iron and defining a substantially U-shaped receiving and holding frame for a target, the respective channel portions of said channel-irons being in unobstructed communication with each other, a horizontal angle-iron bridging the space between upper open end portions of said vertical channel-irons and having a vertical bottom flange affixed to rearward flanges embodied in the vertical channel-irons and also having a rearwardly projecting horizontal top flange, a first pair of nuts affixed to the bottom side of said horizontal channel-iron at the respective outer end portions, and a pair of duplicate interchangeable depending frame-erecting and supporting legs having free lower pointed ground-penetrating ends and upper screw-threaded ends removably screwed into their respectively cooperating nuts, and target means comprising a rigid flat-faced panel fitted slidably and removably in the oriented communicating channel portions of said channel-irons, and a sheet material target superimposed upon and cooperatively attached to a front face of said panel.

4. The structure defined in claim 3 and, in combination, means on the rearwardly facing side of said frame for supporting and maintaining said legs in criss-crossed relationship when they are not in use comprising a pair of open-ended sleeves affixed to the respective lower corner portions of said frame, and a pair of nuts affixed to the respective upper corner portions of said frame, said sleeves being canted and disposed in upwardly converging relationship, and said nuts also being fixedly canted, whereby the nut in the upper righthand corner coincides for use with the sleeve in the lower lefthand corner and contrawise the nut in the upper lefthand corner coincides for use with the sleeve in the lower righthand corner, the screw-threaded upper ends of said legs adapted to screw into their respectively cooperable nuts, and the pointed lower ends of said legs being adapted to protectively telescope into the bores of their respectively cooperable sleeves.

5. A portable knockdown stand for a rigid target comprising a horizontal upwardly opening channel-iron, a pair of coplanar spaced parallel vertical channel-irons at right angles to and having lower ends affixed to respective outer ends of said horizontal channel-iron and defining a target receiving and holding frame, said frame being U-shaped in elevation, a horizontal angle-iron bridging the space between upper open end portions of said vertical channel-irons and having a vertical bottom flange affixed to rearward flanges of the vertical channel-irons and a rearwardly projecting horizontal top flange, a first pair of nuts affixed to the bottom side of the horizontal channel-iron at the respective outer end portions, and a pair of depending frame-erecting and supporting legs having lower pointed ground-penetrating ends and upper screw-threaded ends, the latter removably screwed into their

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respectively cooperating nuts, a pair of canted sleeves affixed to the respective lefthand and righthand corner portions of said frame and converging upwardly with their bores axially aligned with the alternate upper left and right corner portions of said frame, and a pair of nuts also canted and affixed to the left and right end portions of the vertical flange of said angle iron, aligned with the bore of the sleeve in the lower lefthand corner.

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