This invention relates to portable shelter structures or enclosures and especially intended and adapted as a shooting blind for hunters.

The primary object of the invention is to provide a sportsman's blind with a novel frame, simple, durable, inexpensive to construct and light of weight which may be folded into a compact bundle easy to carry, and which may be easily and quickly erected and disassembled.

A further object is to provide a shelter for hunters which is completely enclosed to conceal them from the sight of wild game yet permit the hunters to see out in all directions with ease and without obstructions.

A still further object is to provide a hunting shelter so arranged and constructed as to permit quick opening of the top for unobstructed shooting in any direction.

With the foregoing and other objects and advantages in view which will become apparent in the details of construction and operation as the description proceeds, the invention consists of certain novel features, arrangements and combination of parts, hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention.

In the accompanying drawings:

**FIGURE 1** is a perspective view showing the hunting blind fully assembled with the top cover in closed position;

**FIGURE 2** is the perspective view of FIG. 1 showing the top cover pulled back to give the hunters unobstructed field of view to the sky;

**FIGURE 3** is a perspective view of the framework with the cover removed showing details of the framework construction and operation of the top opening means;

**FIGURE 4** is an enlarged plan view showing a joint of the framework;

**FIGURE 5** is an enlarged side elevation view of the joint of FIG. 3;

**FIGURE 6** is an enlarged elevation view of a step bar attached to the lower portion of each corner post; and

**FIGURES 7 and 8** are enlarged elevation views showing the details of construction and operation of the top releasing mechanism.

Referring more particularly to the drawings, wherein like reference characters designate like or corresponding parts throughout the several views, 10 designates generally the shelter or enclosure in its entirety, and which includes a wrap around side covering, designated generally 20, a top covering, designated generally 30 and a supporting framework, designated generally 40.

The wrap around side covering 20 is preferably constructed of a fabric material such as light weight canvas throughout its major area 21, with upper panels 22 across each end and the back constructed of an open weave netting. Such a netting of appropriate mesh popularly known as mosquito netting, when dyed with various brown and green tints in well known camouflage patterns has the characteristic of permitting a person inside the enclosure and therefore relatively close to the netting to see through it with very little reduction of visibility while from a distance it becomes essentially opaque and effectively hides the occupants of the enclosure from observation. This is particularly effective when the entire cover 20 and top 30 are similarly camouflaged so that occupants of the enclosure and their clothing effectively blend into the camouflage pattern. An access opening 23, preferably of the zipper type is provided in one side wall at any desirable location. It is shown here by way of illustration at a front corner of the enclosure and is of the separable type. When separated the cover can be wrapped around the framework or when zippered it is slipped over from the top. Appropriately spaced tie strings 24 secured to the upper edge of the side cover 20 can be tied to the framework to hold the cover in place when weather conditions require, although normally the fit will cause the upper hem of the cover to overlie the supporting framework and remain in position.

Top cover 30 is also constructed of the same open weave netting as the side panels 22 and is secured as by stitching along one edge 31 to the front side of the side cover 20. End edge portions 32 are free while rear edge portion 33 is provided with a wide hem 34 into which a light weight stiffener rod 35 is inserted and performs a function to be explained later. Resilient or elastic cords 36 are attached at one end to tabs 37 secured to the underside of hem 34 and at their opposite ends to snap type fittings 38 which are snapped over the front cross rail 43 when the covers are placed on the framework.

The framework 40 is preferably formed of light weight stock material and is not limited as to configuration. Four corner posts 41, their lower ends being adapted to be pressed into the earth by applying pressure on step bars 42, are spaced apart by the cross rails 43, 44 and 45. Front rail 43 and back rail 44 are pivotedly joined at each end to a corner post 41, shown in detail in FIGS. 4 and 5 to form front and rear foldable frame units. These frame units are then spaced apart and joined by the removable end cross rails 45.

An interlocking joint is formed between each corner post and its connecting cross rails to provide rigidity to the structure between three essentially perpendicular axes. The interlocking features are the same in each joint but for purposes of description the left front joint is illustrated in enlarged detail in FIGS. 4 and 5 and will be described specifically. Cross rail 45 terminates in two angularly disposed male end portions 46 and 27, either of which may be a continuation of the rail and either or both of which may be separate pieces welded or otherwise fixedly attached to the rail 45. Portion 46 extends downwardly at such an angle to be in parallel and juxtaposed relationship to corner post 41 and portion 47 extends laterally inwardly to be in similar parallel and juxtaposed relationship to cross rail 43. A conforming sleeve socket 48 is secured to post 41 as by welding and receives male end portion 46 when in assembled relationship. A sleeve socket 49, slidable along rail 43, receives male end portion 47 and locks rail 45 in assembled position. Pin 50 pivotally joins post 41 and rail 43.

Normally the top 30 is maintained in a closed position as shown in FIG. 1 by pulling it over against tension of the elastic cord 36 and placing stiffener rod 35 over the outwardly of the releasing plates 51 which extend above the level of the back cross rail 44 a sufficient amount to effectively engage the stiffener rod 35. As shown in enlarged detail in FIGS. 7 and 8 the plate 51 is pivotally attached to the inner side of rail 44 with pin 52 located near an edge of the plate such that rotation of the plate 57 in the angular plane with a substantial projection above the level of rail 44 to no projection. Resilient or elastic cord 53 is secured at one end around post 41 and at the other end to plate 51 at point 54 such that the elastic core 53 normally holds plate 51 projecting above rail 44 to properly engage the stiffener rod 35. Trip line 55 loosely extends between the two plates 51 being attached also at point 54. Pulling trip line 55 rotates both plates 51 against the urging of elastic cords.
3 to a position of no projection thereby releasing top cover 30 to be rapidly whipped off the framework 40 by the action of elastic cords 36.

The sportsman's blind of this invention is of a height to permit sufficient head room for occupants in a sitting position on any appropriate seating devices (not shown). As shown in the preferred embodiment illustrated herein the front corner posts are shorter than the rear corner posts thereby giving a forward slant to the top. This arrangement provides greater clearance in the direction shooting will be most likely to occur and also increases the holding ability of the releasing plates 51. It is to be understood however the principle of this invention encompasses a flat top blind with all corner posts of equal height and netting panels 22 extending entirely around the structure at an appropriate height to permit comfortable viewing by the occupants of the enclosure.

It is further contemplated that a plurality of covers will be provided each with differing camouflage designs to match the terrain where the blind is to be set up. In addition improved weather conditioning may be obtained by using a transparent plastic sheeting in conjunction with the netting or a netting impregnated with an appropriate plastic film.

Although the invention has been described in detail for a certain specific use, it will be understood that its use may be extended to any field wherein it is desired to provide a lightweight, compact, and portable shelter.

What is claimed is:

1. A portable shelter structure comprising, a frame having upright corner posts, cross rails extending between adjacent said posts at the tops thereof, means to interlock said posts and said cross rails in fixed relationship when assembled; a flexible covering having an elongated portion extending laterally around said framework to define sides and another portion extending away from said elongated portion to define a top, said top terminating in a free edge having a hem, a stiffener rod in said hem, securing means on the ends of said elongated portion for fastening said ends together and for maintaining said flexible covering on said framework; releasable hook means on one of said cross rails to engage said stiffener rod and hold said top portion extended across said framework, and resilient means between said stiffener rod and said cross rail opposite said one cross rail to open said top when said hook means is tripped.

2. A portable shelter structure in accordance with claim 1 wherein means to interlock said posts and said cross rails in fixed relationship when assembled, comprises, pivotally joining pairs of corner posts to the cross rail extending therebetween thereby forming two oppositely positioned foldable frame units, a fixed sleeve socket axially aligned with and affixed adjacent the upper end of each said corner post, a slidable sleeve socket slidable along and adjacent each end of and axially aligned with said last mentioned cross rails, said foldable frame units spaced apart by said remaining cross rails, said remaining cross rails terminating at each end with two oppositely disposed male ends and said sleeve socket axially aligned with said fixed and said slidable sleeve sockets when assembled, thereby forming an interlock along three essentially perpendicular axes.

3. A portable shelter structure in accordance with claim 1 wherein means to interlock said posts and said cross rails comprises: a foldable pivot point between the end portion of two oppositely positioned cross rails and the top portion of their associated corner posts, a fixed sleeve socket axially aligned with and affixed adjacent the upper end of each said corner post, a slidable sleeve socket adjacent each end of and axially aligned with said last mentioned cross rails, said remaining cross rails terminating at each end with two angularly disposed male ends for slidable insertion into said fixed and slidable sleeve sockets, thereby forming an interlock between three essentially perpendicular axes.

4. A portable shelter structure in accordance with claim 1 wherein said releasable hook means on said one cross rail comprises spaced apart plate members pivotally attached about off center horizontal axes to said cross rail intermediate the ends thereof, each said plate member being pivotable in a vertical plane from a position below the top edge of said rail to a position projecting a substantial portion of said plate above said rail thereby providing an upwardly extending projection to engage said top stiffener rod and hold said top in extended position, other resilient means normally urging each said plate member to said upwardly extended position, and interconnected flexible pull means attached to each said plate member opposing said other resilient means whereby a manual pull on said interconnected flexible pull means moves all said plate members to said position below the top edge of said one cross rail and releases said top whereby said first resilient means opens said top.

5. A portable shelter structure in accordance with claim 1 wherein said top and an upper portion of said sides of said flexible covering are constructed of an open weave material thereby permitting an occupant of said shelter to be unseen while looking out through said material.

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REINALDO P. MACHADO, Primary Examiner.