HUNTING BLIND CONSTRUCTION AND ADJUSTABLE SEAT

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ABSTRACT OF THE DISCLOSURE

A hunting blind of substantially circular construction having integrally formed upper and lower sections, the lower section being of greater interior circumference than the upper section, said blind having a construction that provides both comfort and adequate concealment with ease of entry and exit, and includes means for effectively heating the blind, a pivoted cover, foothold supports, a circular shelf and an orbital seat that may be selectively adjusted in height and pivoted to permit scanning of the entire horizon.

This invention relates to hunting blinds and more particularly to the type of blind that at least partly sets within the ground.

Duck blinds of the kind to which this invention particularly relates are traditionally made from wooden barrels, steel drums or concrete tanks. They are usually con- fining and uncomfortable, and it is generally impossible for the hunter to scan the entire horizon while seated or to move into proper position for taking shots in any direction.

The present invention has been conceived on the principle of building the blind around the hunter, the shape of the blind as well as the location of various features being ideally suited for the hunter’s convenience. In this connection the invention comprises a substantially circular shell made of water impervious material having integrally formed upper and lower sections, the lower section having a greater interior circumference than the upper section. The shell construction, it will be seen, offers maximum concealment for the user, the opening being as small as possible, and yet the lower section provides ample room with uncluttered footing for swing shots in any direction. Moreover, the blind construction may be made of material which insures long service with minimum maintenance, and may include a removable lid that can be raised and swiveled to various positions for those who desire additional overhead cover while hunting. The shape of the blind, together with a special construction for an orbital seat that may be vertically adjusted, provides adequate leg room with a back rest to accommodate both large and small individuals. The orbital mounting of the seat allows the hunter to scan the entire horizon and to take those birds which come from behind as well as from the front and sides. For the less agile hunter, the blind is constructed with integral footholds which provide an easy entry and exit from the blind; and the blind may be heated without sacrifice of space or interference with the hunter’s movement.

One object of the invention, therefore, is to provide a hunting blind that may be economically manufactured but which will afford adequate concealment and optimum comfort to the hunter.

Another object is to provide a hunting blind of the kind described having foothold supports for easy entry and exit from the blind and yet so constructed that the supports will not interfere with the movements of the hunter.

Another object is to provide a hunting blind of the kind described having a novel shelf arrangement that may be easily and inexpensively mounted within the lower section of the blind and which will provide storage for all necessary clothing, food and the like.

A further object of the invention is to provide simple and effective means for heating the blind with substantial uniformity in the region of the hunter’s legs.

A further object of the invention is to provide a novel seat construction that can be vertically adjusted and used with a blind of the kind described, allowing the hunter to pivot and scan the entire horizon and to move into any position necessary to shoot in any direction.

A still further object of the invention is to provide a novel seat construction of the kind described including a pivotal mounting having means for adjusting the vertical alignment of the pivot axis.

Other objects of this invention will become apparent in view of the drawings and the following detailed description.

In the drawings forming a part of this application and in which like parts are identified by like reference numerals throughout the same,

FIG. 1 is a perspective view of a hunting blind constructed in a preferred manner contemplated by this invention, one side of the blind being broken away to show the interior thereof;

FIG. 2 is a plan view of the hunting blind, a portion thereof having been broken away substantially on the broken line 2—2 of FIG. 1;

FIG. 3 is an elevation of the hunting blind with its overhead cover positioned directly over the blind;

FIG. 4 is a substantially vertical section taken through the seat and platform of the hunting blind;

FIG. 5 is a detail and plan view of a portion of the seat bracket with the seat supporting member removed;

FIG. 6 is a transverse section of the seat supporting member taken on line 6—6 of FIG. 4; and

FIG. 7 is an exploded perspective view of the seat assembly.

Referring to FIGS. 1 through 3, there is shown a hunting blind 10 comprising a substantially circular shell made of water impervious material, such as a rigid molded plastic. Blind 10 essentially comprises upper and lower sections 11 and 12, respectively, and an intermediate neck portion 13. Lower section 12 is formed with a substantially greater circumference than upper section 11, the lower section being sufficiently large to provide ample leg room and shelf space for storage of food and clothing. Upper section 11, on the other hand is of a much smaller circumference to insure adequate concealment of the hunter.

In the preferred construction shown, section 11 extends upward and slightly outward from neck portion 13 toward an integrally formed upper flange 14. Section 11 is also formed with a pair of integral footholds 15 and 16, each being defined by a wall projection that extends abruptly outward relative to the circular wall portion of the section. The interior surface of section 11, it will be seen, provides a comfortable backrest for the hunter no matter which direction he may be facing. The footholds, on the other hand, facilitate both entry to and exit from the blind without interfering with the hunter’s movements, especially while shooting.

Section 12 is preferably constructed with a downward taper from neck portion 13, terminating in a flanged collar 12a which encircles a platform 17. The downward taper provides adequate foot space within the blind for the hunter while forming an exterior surface that will be vertically loaded when buried in the ground. This latter feature helps maintain the blind in the ground in opposition to buoyant forces.
Platform 17 may be made of heavy gauge plywood or plastic materials and bonded to the collar by means of an epoxy resin. The platform should be such that the joint between the platform and shell is fluid-tight to prevent ground water from leaking into the blind.

Hunting blind 10 may also comprise a cover 18 which may be selectively positioned at various heights above and over, or to one side, relative to the upper opening of sections 19 and 20. Particularly, cover 18 is supported from one edge by a shaft 19, and the shaft is rotatably received and mounted within a sleeve 20 secured between upper flange 14 and neck portion 13. In a preferred construction, sleeve 20 is formed with a vertical passageway that communicates with the interior of the blind. This will permit cleaning and also avoids the collection of debris within the sleeve.

A plurality of spaced openings formed in shaft 19 along its length, together with a pin member 21, provide means for selectively adjusting the height of cover 18. This is accomplished simply by raising cover 18, inserting pin 21 in the lowermost opening that is exposed above sleeve 20, and then allowing the pin to come to rest upon flange 14, or an extension of sleeve 20. Thus, the selection and pinning of a particular opening on shaft 19 determines the height at which the cover is supported above the collar. Of course, cover 18 may be altogether removed to allow cover 18 itself to rest upon flange 14. It is contemplated that the cover would be so positioned to keep the interior of the blind dry and free of fauna when not in use.

Blind 10 further includes a ring-like storage shelf 22. The shelf is substantially circular having an integral depending flange 22a that may be secured to the inner surface of section 12. Shelf 22 also comprises an integral upturned flange 22b which functions as a barrier to retain articles of food and clothing upon the shelf. This construction is not only useful but it may be economically manufactured and quickly assembled to section 12 by means of an epoxy resin.

Hunting blind 10 is further provided with a seat 25 formed with shelf pockets 25a on opposite sides of a seating area 25b. Seat 25 is mounted to the end of an elongate member 26 that is supported adjustable in a pivoted bracket 27 having a gun rest platform 27a. Bracket 27 is fitted with a bearing sleeve 28 that pivots on a spindle 29.

Referring to FIG. 4, it will be seen that the pivot axis of spindle 29 is offset relative to the seating area 25b of seat 25. Thus, as the seat rotates, the hunter's position remains essentially the same in a distance relationship from the interior walls of sections 11 and 12. The hunter is thereby enabled to take shots in any direction with equal ease, and yet he is concealed from birds approaching both from the rear and sides.

It is essentially contemplated that spindle 29 should be mounted to the platform in a manner that allows universal adjustment of the pivot axis. This feature is particularly desirable since ground swelling and the motion of a hunter in the blind will often produce movement of the blind; and if the spindle axis cannot be adjusted relative to the platform, the seat may become inclined and uncomfortable.

Universal adjustment of the pivot axis is accomplished by using a ball and socket attachment to platform 17. Such an attachment is provided by securing spindle 29 to a ball plate 29a having a semicircular surface received within a complementary concave surface of a socket plate 30. As shown in FIG. 4, plate 30 is mounted within a recess of platform 17 and secured thereto by a plurality of bolts 31. A second set of bolt connections 32 are utilized to secure the convex surface of ball plate 29a within the concave surface of socket plate 30. Loosening screws 33 allows the spherical surface of plate 29a to be moved within the socket of plate 30, thereby selectively orienting the pivot axis of spindle 29. Retightening bolts 32 while maintaining the selected relationship of plates 29a and 30 will then set spindle 29 in the preferred position of orientation.

Support member 26 and bracket 27 are uniquely constructed to allow quick vertical adjustment of seat 25. This construction features a pair of stabilizing lugs 35 and 36 mounted to one end of elongate support member 26. Each lug is received between a pair of parallel and spaced surfaces 37a and 37b. There is a portion of a pair of parallel surfaces 37 through bracket 27; and each pair of spaced surfaces cooperates with one of the stabilizing lugs to center the end of elongate member 26 within the passageway. The shape and geometry of the stabilizing lugs, as well as the spacing between each pair of surfaces 37a and 37b, allow the lugs to pass freely in the longitudinal direction in one position of relative orientation. However, a turning or pivotal movement of member 26 relative to the bracket places the surfaces of the lugs into near abutting relation to the parallel surfaces 37a and 37b.

More specifically, lugs 35 and 36 are formed with parallel surfaces 35a and 36a, respectively, the perpendicular distance between these surfaces being substantially the same as, although slightly less than, the perpendicular distance between the parallel and spaced surfaces 37a and 37b. In addition, the geometry of each lug is such that its spaced parallel pin 37a may be extended longitudinally, or in the length direction of member 26, one surface being relatively closer to the lower end of the member than the other surface. This relationship allows the lugs to pass through the passageway defined by the parallel and spaced surfaces 37a and 37b, respectively, so long as the surfaces 35a and 36a are oriented parallel thereto. However, a rotational turning of the lugs, as by pivoting the seat, places the lug surfaces 35a and 36a into close or contacting relationship with the spaced parallel surfaces 37a and 37b, respectively.

These structural relationships will be more fully appreciated in view of FIG. 4. The broken line or phantom position of the elongate member 26 illustrates the position of the stabilizing lugs while they are being inserted between surfaces 37a and 37b; the solid line or full view position of the elongate member illustrates a position where the member is centered or stabilized within the passageway 37 by the cooperative relationship of the stabilizing lugs and surfaces of the passageway.

In a preferred construction, spaced surfaces 37a and 37b actually define lower and upper interconnecting passages, the lower passage being substantially vertical and the upper passage being slightly inclined thereto. The inclined passageway facilitates manual adjustment of the seat, allowing lugs 35 and 36 to be more easily mated between the parallel and spaced surfaces of passageway 37.

Means is further provided for supporting and retaining elongate member 26 in various positions. As illustrated, this comprises a plurality of notches 39 formed longitudinally on member 26 and a lip 40 formed on bracket 27, said lip extending at an inclined angle into passageway 37. The shape of notches 39, as well as the inclined angle of lip 40, provide engageable camming surfaces such that a downward pressure on seat 25 further turns the member, placing the surfaces of the stabilizing lugs 35, 36 into very close or contacting relation with surfaces of passageway 37.

Another feature of the invention provides means for heating the blind without obstructing the hunter's movement. This member includes a heat-dissipating plate 41 and a support tray for combustible material 42, both mounted to the rear edge of bracket 27. Plate 41 may be formed with a pair of hooks that removably engage a pair of complementary pins 43 attached to bracket 27. Support tray 42 is positioned directly beneath the heat-dissipating plate 41, and it is adapted for supporting a can of Sterno, or other combustible material. Support tray 42, as shown, is formed with a slot that receives the dovetail fit on a mounting block 44. It will be apparent
that the location of the heating devices is ideally located for warming the blind, especially in the region of the hunter's legs; and yet, because it is mounted upon pivoted bracket 27, it will at no time interfere with the hunter's movement.

Although a preferred embodiment of the invention has been illustrated and described, various modifications and changes may be made without departing from the spirit of the invention or the scope of the attached claims, and each of such modifications and changes is contemplated.

What is claimed is:

1. A hunting blind comprising: a substantially circular shell made of water imperious material having integrally formed upper and lower sections, the lower section having a greater interior circumference than the upper section; a platform secured to the lower end of said lower section; and a seat mounted within said blind and supported on said platform, said seat being pivotally mounted upon an axis that is substantially coaxial with said circular shell and having a seating area for a hunter, said seating area being horizontally offset relative to the axis, the back edge of the seating area being disposed in near proximity to the interior of the upper section; whereby the upper section provides a stationary backrest for said seat at each of several positions into which the seat may be rotated, the lower section of said shell providing leg room for a hunter.

2. The hunting blind of claim 1 and further wherein said upper section is integrally formed with at least one foothold support, said support being defined by a wall projection extending abruptly outward relative to a circular wall portion of said upper section.

3. The hunting blind of claim 1 and further including an interior shelf supported within said lower section, said shelf being substantially coaxial and having an integral depending flange secured in abutting relation to the interior of said lower section.

4. The hunting blind of claim 3 and further wherein said shelf includes an integral upturned flange defining a barrier to retain articles upon said shelf.

5. The hunting blind of claim 1, the upper section of said substantially circular shell having an interior surface that flares outwardly at an angle suitable for a conventional backrest.

6. The hunting blind of claim 1, said upper section being formed with a flange at its upper end, and further comprising a cover; a sleeve member mounted between said flange and the outer surface of said shell; and a shaft rotatably mounted in said sleeve member and axially adjustable therein, the upper end of said shaft being secured to an edge of said cover, whereby said cover may be selectively positioned relative to the upper end of said upper section.

7. The hunting blind of claim 1 and further comprising means for adjustably mounting said heat to said platform to vary the angular direction of said pivot axis.

8. The hunting blind of claim 1 and further comprising means for pivotally mounting said seat to said platform, said mounting means comprising a spindle, a bracket for pivoting said seat upon said spindle, and means for adjustably mounting said spindle to said platform in various angular directions.

9. The hunting blind of claim 8, said means for adjustably mounting said spindle to said platform comprising a ball and socket plate members, one of said members being attached to said platform and the other to said spindle.

10. The hunting blind of claim 8, said spindle being mounted to said platform to provide a pivot axis of support substantially coaxial with said circular shell, said seat having a seating area for a hunter horizontally offset relative to the pivot axis, said bracket including a gun rest positioned on the opposite side of the pivot axis relative to the seating area.

11. The hunting blind of claim 8 and further comprising a heat-dissipating plate mounted to said bracket, and a support for combustible material mounted to said bracket directly beneath said heat-dissipating plate.

12. The hunting blind of claim 8 and further comprising means for adjustably mounting said seat to said bracket to allow selective vertical positioning thereof.

13. The hunting blind of claim 1 and further comprising a seat, means for pivotally mounting said seat to said platform including a bracket that pivots with said seat, a heat-dissipating plate mounted to said bracket in a position beneath said seat, and a support for combustible material mounted to said bracket directly beneath said heat-dissipating plate.

14. In combination with a hunting blind having a support platform, a seat, and means for adjustably mounting said seat to said platform comprising an elongate member having one end thereof secured to said seat, at least one stabilizing lug mounted to the side of said member near the end opposite to said seat; and a bracket having a passageway for receiving the end of said member together with said stabilizing lug, said bracket having substantially parallel and spaced surfaces that define a portion of said passageway and cooperate with said lug to stabilize the end of said member in various positions within the passageway, the shape and geometry of said lug and spacing between said surfaces allowing said lug to pass freely between said surfaces in one position of relative orientation but positionable in close or contacting relationship therewith by turning said member relative to said bracket.

15. The combination of claim 14 and further comprising means for pivotally mounting said bracket to said platform upon a pivot axis offset relative to the seat, said pivot axis being located on the front side of said seat in the region occupied by the feet of a hunter sitting on the seat.

16. An adjustable support comprising: an elongate member having a supporting surface at one end; at least one stabilizing lug mounted to the side of said member near the end opposite to the supporting surface; and a bracket having a passageway for receiving the end of said member together with said stabilizing lug, said bracket having substantially parallel and spaced surfaces that define a portion of said passageway and cooperate with said lug to stabilize said member in various positions within the passageway, the shape and geometry of said lug and spacing between said surfaces allowing said lug to pass freely between said surfaces in one position of relative orientation but positionable in close or contacting relationship therewith by turning said member relative to said bracket.

17. The adjustable support of claim 16 and further comprising means for retaining said elongate member in various positions within and longitudinally of the passageway, each position placing said stabilizing lug in close or contacting relationship with said parallel surfaces.

18. The adjustable support construction of claim 17, said means for retaining said member in various positions within the passageway comprising a plurality of notches formed in said member along the length thereof and a lip formed on said bracket projecting into the passageway thereof, said notches and lip having engageable camming surfaces for turning said member relative to said bracket and placing said lug into close or contacting relationship with the spaced surfaces of said bracket.

19. The adjustable support of claim 16, said elongate member having a pair of stabilizing lugs mounted on op-
posite sides thereof, said bracket having two pairs of substantially parallel and spaced surfaces, each pair receiving one of said stabilizing lugs, respectively.

20. The adjustable support of claim 16, the shape of said lug being defined by parallel surfaces, the perpendicular distance between surfaces being substantially the same but less than the perpendicular distance between the parallel and spaced surfaces of said bracket, and the geometry of said lug such that the spaced parallel surfaces thereon extend generally in the length direction of said elongate member, one surface being relatively closer to the lower end of said member than the other surface.

21. The adjustable support of claim 16, said spaced surfaces defining lower and upper interconnecting passages, the lower passage being substantially vertical, the upper passage being inclined thereto.