May 26, 1970 H. A. SMITH 3,513,605

HUNTING BLIND CONSTRUCTION AND ADJUSTABLE SEAT

Filed April 22, 1968 2 Sheets-Sheet 1

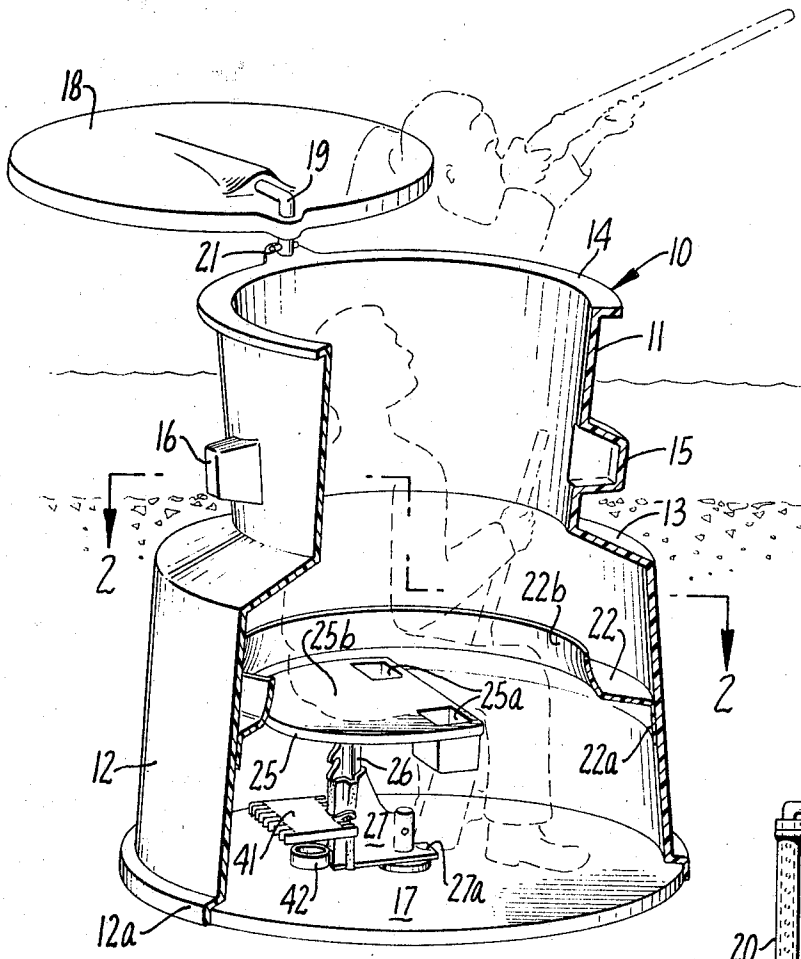


FIG. 1.

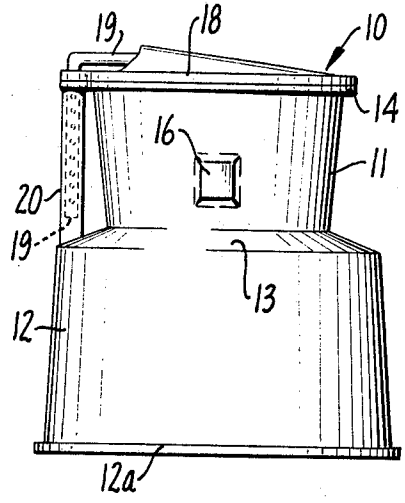


FIG. 3.

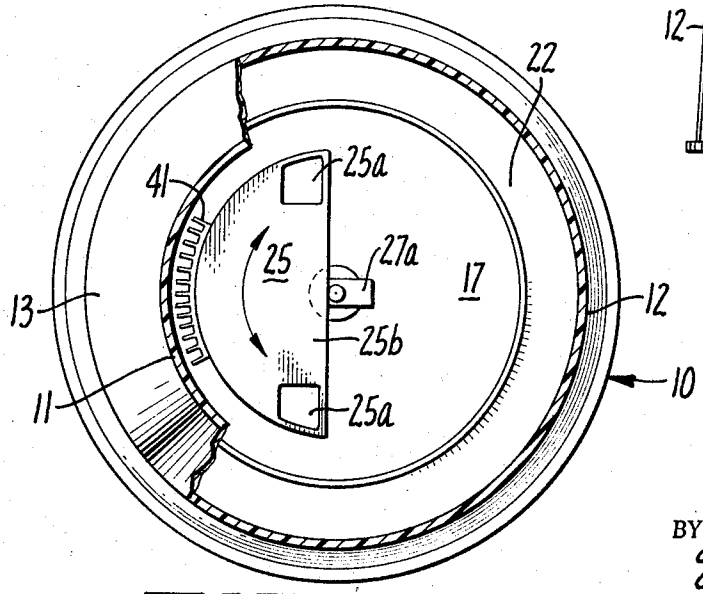


FIG. 2.

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HUNTING BLIND CONSTRUCTION AND ADJUSTABLE SEAT

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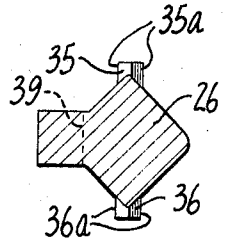


FIG. 6.

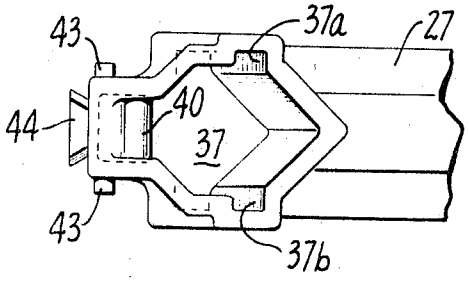


FIG. 5.

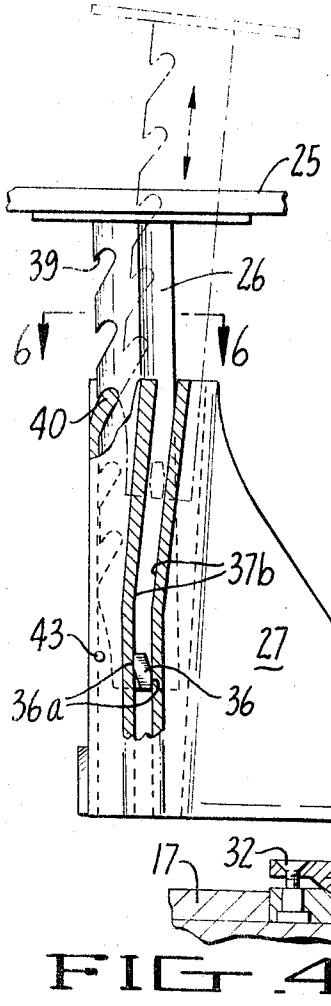


FIG. 4.

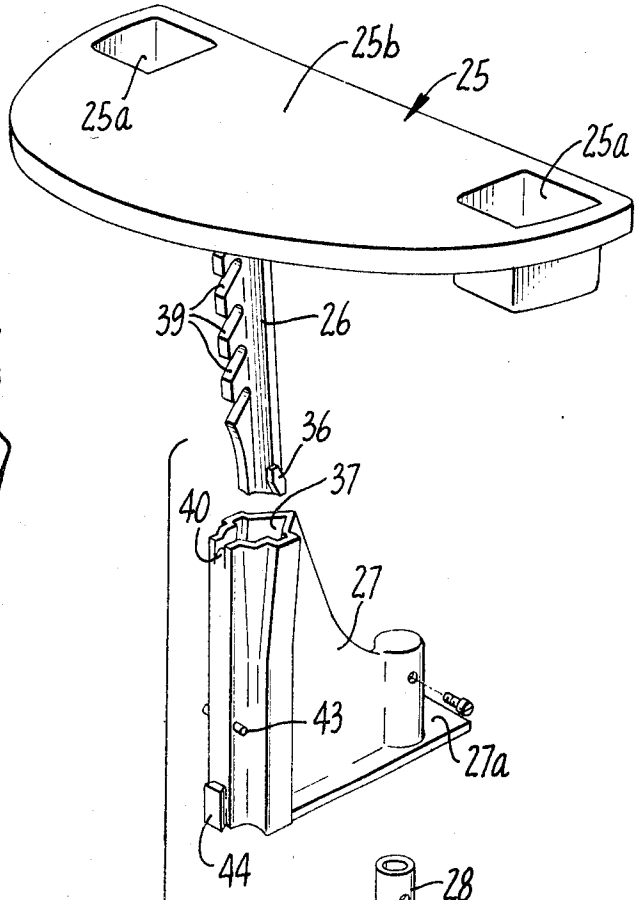


FIG. 7.

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HUNTING BLIND CONSTRUCTION AND ADJUSTABLE SEAT

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U.S. Cl. 52—20 21 Claims

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 confining 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 loaction of various features being ideally suited for the hunter's convenience. In this connection the invention comprises a substatially 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 formed 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.

Another 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 brroken 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 **12***a* 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 construction and seal 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** that may be selectively positioned at various heights above and over, or to one side, relative to the upper opening of section **11**. More 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 quite 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 upper end of section **11**. Of course, pin **21** 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 **22***a* that may be secured to the inner surface of section **12**. Shelf **22** also comprises an integral upturned flange **22***b* 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 shell pockets **25***a* on opposite sides of a seating area **25***b*. Seat **25** is mounted to the end of an elongate member **26** that is supported by and vertically adjustable in a pivoted bracket **27** having a gun rest platform **27***a*. 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 **25***b* 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 especially 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 **29***a* having a semi-spherical convex 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 **29***a* within the concave surface of socket plate **30**. Loosening screws **32** allows the spherical surface of plate **29***a* 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 **29***a* 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 **37***a* or **37***b* that define a portion of a passageway **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 **37***a* and **37***b*, allow the lugs to pass freely in the longitudinal direction in one position of relative orientation. But 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 **37***a* and **37***b*.

More specifically, lugs **35** and **36** are formed with parallel surfaces **35***a* and **36***a*, 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 **37***a* and **37***b*. In addition, the geometry of each lug is such that its spaced parallel surfaces extend substantially vertical, 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 **37***a* and **37***b*, respectively, so long as the surfaces **35***a* and **36***a* are oriented parallel thereto. However, a rotational turning of the lugs, as by pivoting the seat, places the lug surfaces **35***a* and **36***a* into close or contacting relationship with the spaced parallel surfaces **37***a* and **37***b*, 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 **37***a* and **37***b*; 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 **37***a* and **37***b* actually define lower and upper interconnecting passages, the lower passage being substantially vertical and the upper passage being slightly inclined thereto. The inclined passage 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 means comprises 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 impervious 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 pivoted, 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 circular 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 flairs 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 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 being 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.

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U.S. Cl. X.R.

43—1; 52—36; 297—338