

Nov. 3, 1942.

R. STEVENS
PORTABLE ENCLOSURE
Filed Sept. 18, 1941

2,301,089

3 Sheets-Sheet 1

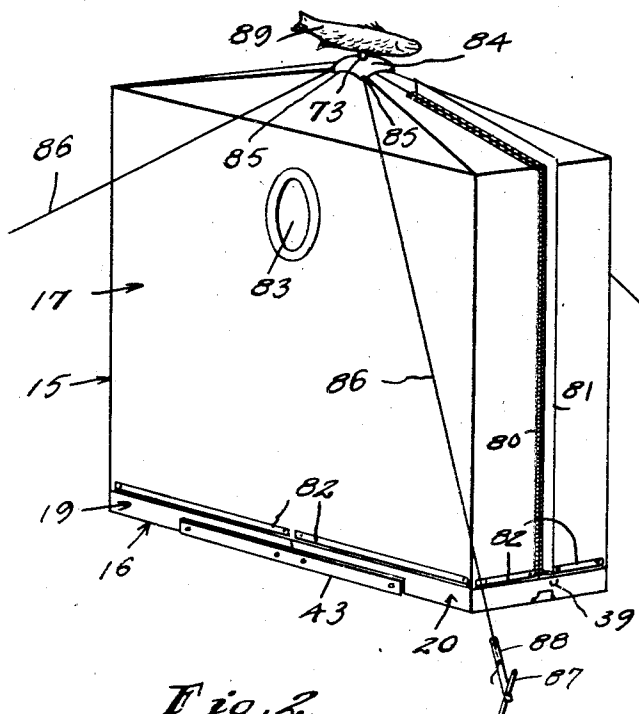


Fig. 1.

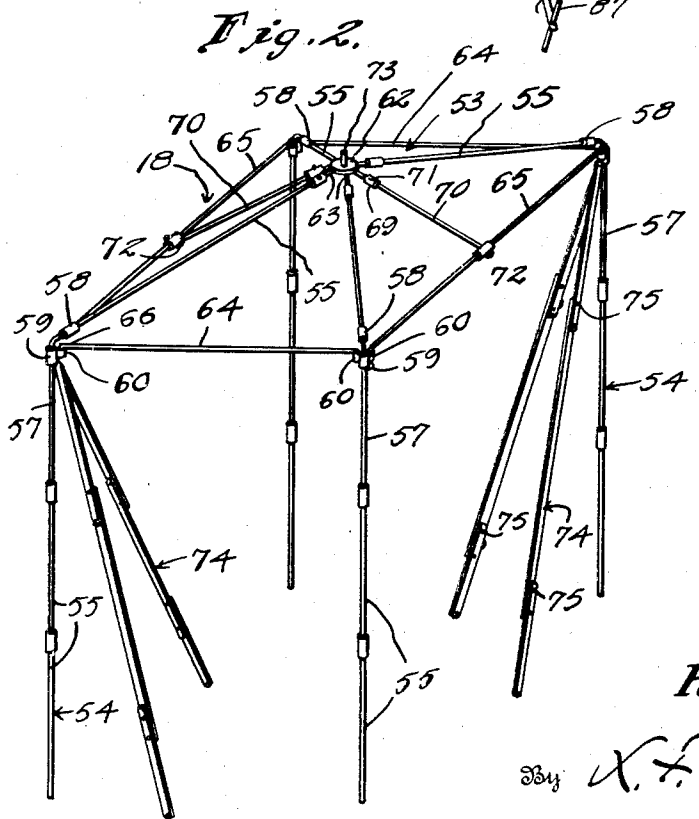
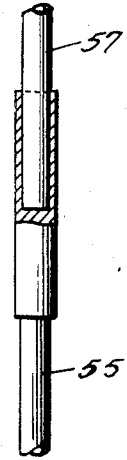


Fig. 2.

Fig. 8.



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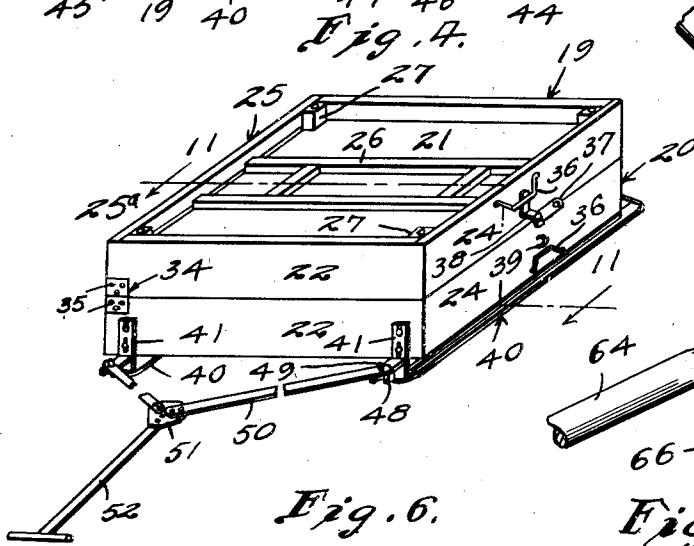
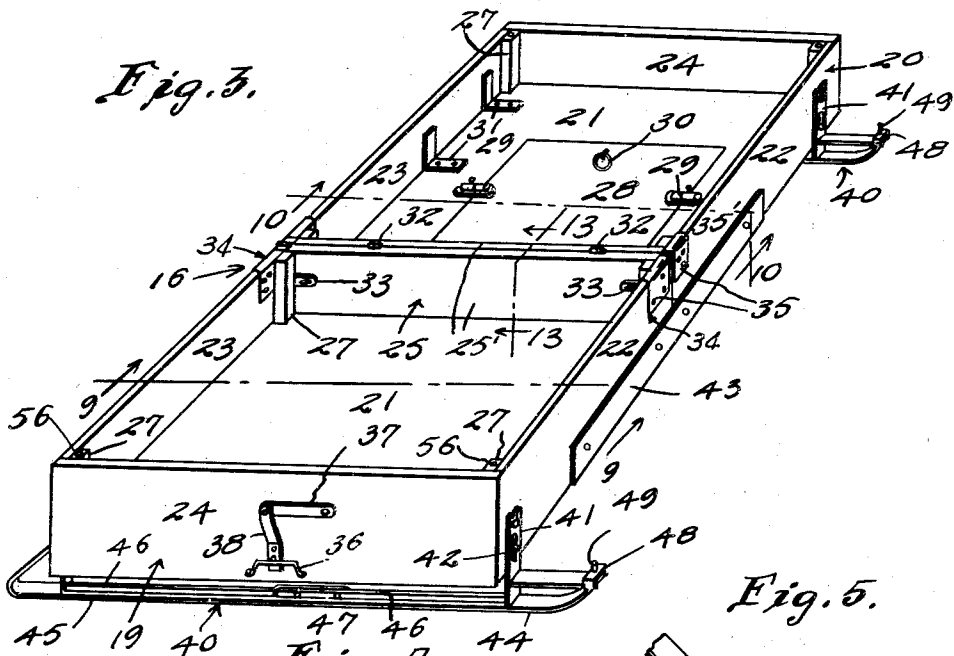


Fig. 5.

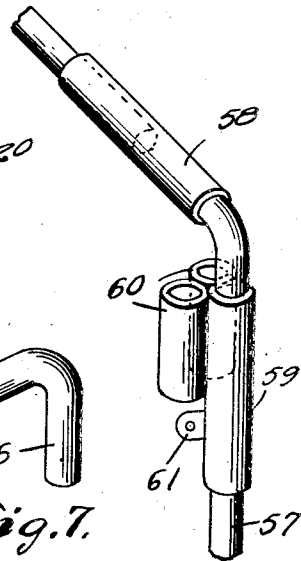
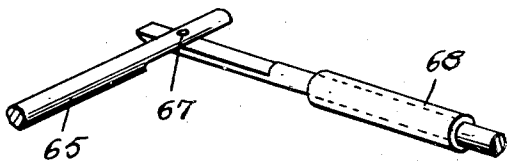


Fig. 6.



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Fig. 9

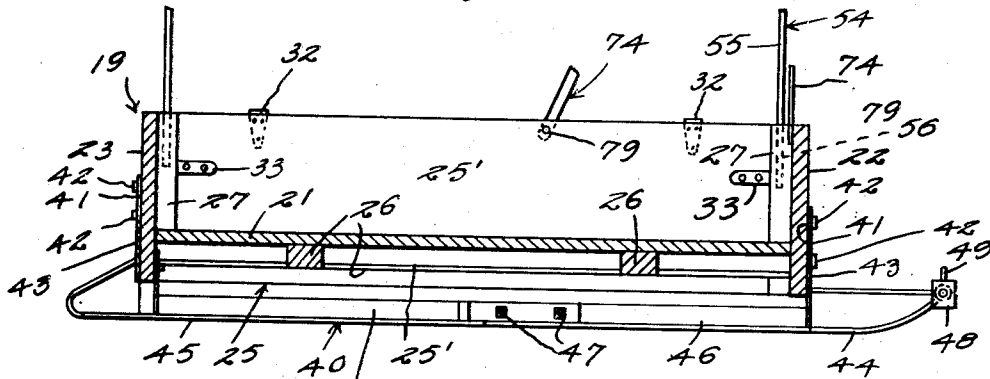


Fig. 10.

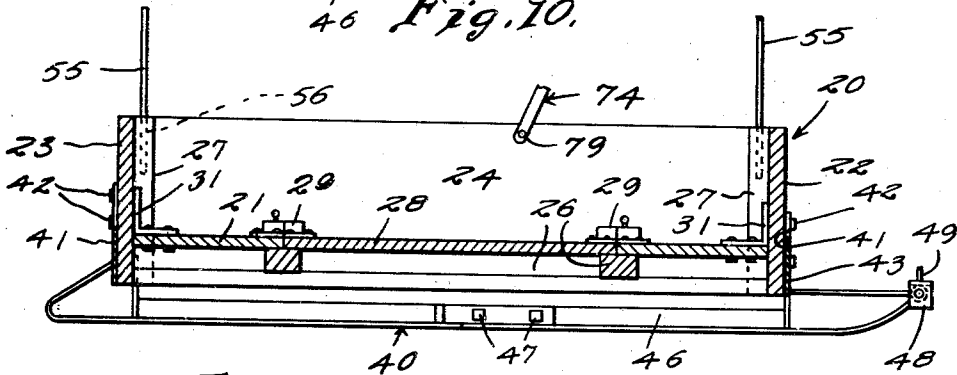


Fig. 11.

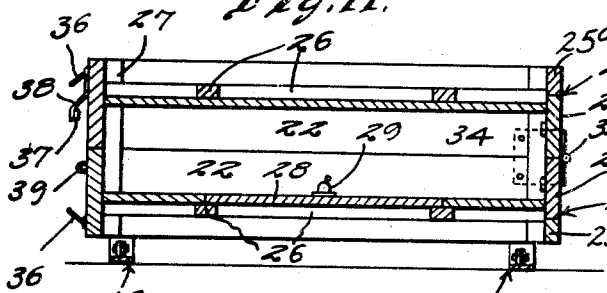


Fig. 12

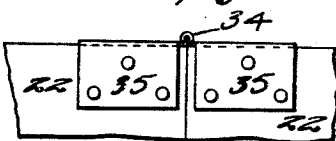


Fig. 13.

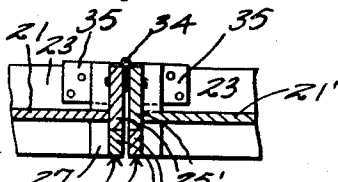
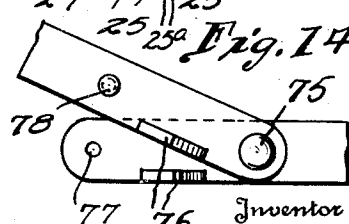


Fig. 14.



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UNITED STATES PATENT OFFICE

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PORTABLE ENCLOSURE

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Application September 18, 1941, Serial No. 411,399

12 Claims. (Cl. 135—3)

This invention relates to a portable shelter or enclosure especially intended and adapted for use by persons engaged in ice spearing and ice fishing, but which is also well adapted for use as a shelter by prospectors, timber cruisers, tourists and campers, trappers, hunters and the like, during seasons when the land is covered with snow or ice and the lakes and rivers are frozen over.

More particularly, it is an aim of the invention to provide a shelter or enclosure having an elevated floor for supporting a tent and tent frame, and which can be readily folded to form a case for containing the tent and its frame for the purpose of transportation or storage.

Still a further aim of the invention is to provide an enclosure or shelter which is adapted to be supported by runners which function as sills to support the floor in an elevated position and to permit the enclosure, while erected, to be readily transported, or which can be attached to the floor, when folded to form a case, for transporting the case containing the tent and frame so that it can be readily drawn through narrow trails.

Still a further aim of the invention is to provide means for pulling the shelter or enclosure, when either erected or folded, including a tongue which can be used for attaching the runners to a draft vehicle, such as an automobile.

Still a further aim of the invention is to provide means whereby a portion of the floor can be removed to afford an opening through which ice fishing and spearing can be accomplished from within the enclosure or shelter.

Other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawings, which illustrate a preferred embodiment thereof, and wherein:

Figure 1 is a perspective view showing the enclosure or shelter erected,

Figure 2 is a perspective view of the tent frame thereof,

Figure 3 is a perspective view showing the floor of the shelter in an extended position,

Figure 4 is a similar view showing the floor folded to form a case,

Figure 5 is a perspective view of a portion of the tent frame,

Figure 6 is a similar view of another portion thereof,

Figure 7 is a similar view of still another part thereof,

Figure 8 is a front elevational view, partly in section of another part of the tent frame,

Figures 9 and 10 are transverse sectional views taken substantially along the planes of the lines 9—9 and 10—10, respectively, of Figure 3,

Figure 11 is a transverse sectional view taken substantially along the plane of the line 11—11 of Figure 4,

Figure 12 is a fragmentary side elevational view of a part of the floor portion of the shelter,

Figure 13 is a longitudinal sectional view taken substantially along the plane of the line 13—13 of Figure 3, and

Figure 14 is a fragmentary side elevational view of a portion of one of the tent frame braces.

Referring more particularly to the drawings, wherein like reference characters designate like or corresponding parts throughout the different views, 15 designates generally the enclosure or shelter in its entirety, and which includes a floor portion, designated generally 16, a tent or covering, designated generally 17, and a tent supporting frame, designated generally 18.

The floor portion 16, as best seen in Figure 3, includes the sections, designated generally 19 and 20. Each of the sections 19 and 20 comprises a bottom 21, side walls 22 and 23, and end walls 24 and 25. The bottoms 21 are spaced upwardly relatively to the bottom edges of the side and end walls, as best seen in Figures 9 to 11, and are provided on their under sides with reinforcing sills 26. The corners formed by the side walls and end walls of each of the sections 19 and 20 contain corner posts 27.

The floor section 20 is provided with a trap door 28 in its bottom 21 which is supported by portions of its sill 26 and which is releasably held in place by means of sliding bolt latches 29, as best seen in Figure 3. A pivotally mounted ring type handle 30 is attached to the removable trap door 28 for removing it to provide an opening in the floor portion 16, for a purpose which will hereinafter be described. A pair of bracket members 31 are mounted on the bottom 21 of section 20 and are provided with upstanding yieldable free ends disposed adjacent the back wall 23 of section 20 and which are adapted to combine therewith for holding the trap door 28 when it is removed from the bottom 21.

The adjacent end walls 25 are hingedly connected as seen at 32 (Figure 3), and said walls 25 include fixed portions 25a and removable portions 25' (Figures 11 and 13) which are disposed between complementary corner posts 27, located in the corners formed by the walls 23 and 25 and 22 and 25. The detachable wall portions 25' are approximately twice as high as fixed portions 25a

and their lower edges extend below the upper surface of floor or bottom part 21 and portions 25' are held in position, as seen in Figure 3, by means of sliding latch bolts 33 which are adapted to engage keepers, not shown, in said aforementioned corner posts 27. It will thus be readily apparent that by retracting the latch bolts 33, when the sections 19 and 20 are in extended positions, as seen in Figure 3, the end wall portions 25' can be lifted upwardly and removed to thus provide an uninterrupted bottom or floor 21 which will extend from end to end of the extended sections 19 and 20. The upper edges of the adjacent, free ends of the complementary front walls 22 and rear walls 23 are connected by means of hinges 34 having leaves 35, as best seen in Figure 12, which are folded to engage over the upper edges of said walls and which are each fastened to opposite sides thereof.

The outer side of the end wall 24, of section 19, as best seen in Figure 3, contains a handle 36 and a hasp 37. The hasp 37 is swingably connected to a bracket 38 which is constructed to prevent the hasp from swinging downwardly past a horizontal position. The other end wall 24 is provided on its outer side with a handle 36 and a staple 39, which is adapted to be engaged by the hasp 37, when the sections are folded, as in Figure 4, for latching the sections together in a conventional manner.

The sections 19 and 20, when extended, as in Figure 3, are adapted to be supported by means of runners 40 having upwardly projecting slotted portions 41 adjacent the ends thereof for receiving detachable fastenings 42 for connecting the runners to the front and rear walls 22 and 23. In order to prevent the intermediate portions of the sections 19 and 20 from swinging downwardly, braces 43 are detachably fastened to the walls 22 and 23 for rigidly holding the sections 19 and 20 in extended positions. The slots of the portions 41 for the upper fastenings 42 open outwardly of the upper edges of said portions 41 so that by loosening the fastenings 42 the runners can be moved downwardly to disengage the upper fastenings from the members 41 so that the runners 40 can be swung outwardly to allow the floor portion 16 to rest on the bottom edges of its side and end walls. With the runners 40 applied, as seen in Figure 3, it will be readily apparent that the floor portion 16 can be transported thereon or may be supported thereby in an elevated position. When the sections 19 and 20 are folded to form a case, as seen in Figure 4, the runner 40, attached to the upper section 19, is removed therefrom and detachably connected to the lower section 20 so that the case can be transported on the runners 40.

Each of the runners 40 is formed of a front section 44 and a rear section 45 which are provided with extending web portions 46 which are adapted to overlap. The web portions of the rear sections 45 are offset at their extended ends to overlap the extended ends of the web portions of the sections 44 and said overlapping portions are adapted to receive fastenings 47 for detachably connecting the runner sections. Said runner sections can be detached, when not in use and stored within the case formed by the folded sections 19 and 20 for storage or transportation in a vehicle.

The forward ends of the runners 40 are provided with swingably mounted yoke shaped members 48 having upwardly projecting studs 49 which are adapted to be attached to draft bars 50.

The draft bars 50 converge relatively to one another and have adjacent ends detachably and adjustably connected to a plate 51 to which is connected a tongue 52 which may be fastened to a motor vehicle for pulling the case or which may be pulled by hand for drawing the case or the extended floor portion 16. The draft bars 50 may be of any desired length and are adjustably mounted relatively to the plate 51 to arrange them for connection to the runners 40 when said runners are attached, as seen in Figure 3, or as seen in Figure 4. The swingably mounted yokes 48 enable the tongue 52 and the draft bars 50 to be swung up and down relatively to the runners 40.

Referring particularly to Figures 2, and 5 to 8, the tent frame 18 includes a roof portion 53 and upright supporting corner posts 54. Each of the upright corner posts 54 is formed of two corresponding rods 55 having sockets in the upper ends thereof. The lower end of the upper rod 55 engages in the socket of the lower rod 55 and the lower rods 55 of each corner post 54 are adapted to fit into a socket 56 which opens upwardly of a corner post 27. The corner posts 27 which are adjacent the end walls 24 are provided with the sockets 56 to receive and support the corner posts 54 of the frame 18. Each of the corner posts 54 also includes a rod 57, the lower end of which extends into the socket of the upper rod 55 of said corner post, as seen in Figures 2 and 8. The rods 57 are bent inwardly, near their upper ends and are provided with sockets 58 at the upper ends thereof. Beneath and adjacent the bend in the rods 57, said rods are provided with collars 59, as best seen in Figure 5, to which are attached perpendicularly disposed sleeves 60. The sleeves 60 are disposed substantially at right angles to one another. Beneath and between the sleeves 60, is disposed an ear 61 which projects outwardly from the inner side of the collar 59. The roof section 53 includes four rods 55 each having an end engaging a socket 58. A crown piece 62 is provided with six radially projecting studs 63, four of which are engaged by the socket ends of the last mentioned rods 55 for connecting the crown piece 62 to the corner posts 54. The corner posts 54 are connected by means of end tie rods 64 and side tie rods 65. The end tie rods 64 connect the corner posts 54 at corresponding ends of the frame 18. Each of the tie rods 64 is provided with downturned ends 66 for engaging the sleeves 60 and corner posts 54 which are disposed at complementary ends of the frame 18. The side tie rods 65 are likewise provided with downturned ends for engaging the sleeves 60 and corner posts 54, at complementary sides of the frame 18 to thus rigidly connect the corner posts. As best seen in Figure 6, the tie rods 65 are each formed of pivotally connected sections having restricted, pivotally connected intermediate portions 67. A sleeve or collar 68 is slidably mounted on each of the tie rods 65 for engaging over the portion 67 for holding said tie rod in an extended position. It will thus be seen that the long tie rods 65 can readily be folded into shorter lengths which can conveniently fit in the case formed by the floor portion 16. The other two studs 63, which are oppositely disposed, are engaged by sockets 69 which are formed on corresponding ends of rods 70. Sockets 69 carry retaining pins 71 which extend therethrough and through the last mentioned studs 63 for detachably securing the rods 70 thereto. The opposite ends of the rods 70 are provided with hook shaped portions 72 which engage under the sleeves 68 and

tie rods 65 to prevent the rods 65 from sagging intermediate of their ends. The crown piece 62 is provided with an upwardly projecting threaded shank 73, for a purpose which will hereinafter become apparent.

A plurality of diagonal braces, each designated generally 74, are employed to brace diagonally opposed corners of the frame 18. The braces 74 are each formed of a plurality of hinged sections which are pivotally connected at points 75, as best seen in Figure 14, and which are provided with abutment portions 76, one part of which is upset and the other part of which is recessed to receive the upset portion, when the sections are swung in one direction toward extended positions, to prevent the sections from being moved past extended positions. The overlapping portions of the brace sections are also provided with studs 77 to engage in recesses 78, when the brace sections are extended, to releasably retain the sections in extended positions. The upper ends of the braces 74 are connected in pairs to the ears 61 of the opposed upright corner members 54, and the braces of each of said pairs project downwardly and outwardly relatively to the member 54, to which they are connected, and are disposed substantially at right angles to one another so that one of the braces 74 of each of the pairs of braces may be fastened at 79 to an outer end wall of a section of the floor portion 16 and the other brace 74 of said pair of braces similarly fastened at 79 to a side wall of the same floor section, as seen in Figures 9 and 10.

With the frame 18 assembled on the extended floor portion 16, the tent or covering 17 may be readily applied over the frame 18 and is shaped to correspond thereto. The covering 17 is provided with a grommet or opening, not shown, at the center of its roof portion through which the threaded shank 73 extends. The tent or covering 17 is provided with an opening in one end thereof which extends from the bottom of said end to and through a portion of the roof of the covering 17, as seen in Figure 1, and which is adapted to be normally closed by means of a conventional slide fastener 80 which is adapted to open from the lower to the upper end thereof and which is normally covered, when in a closed position, by means of a flap 81 forming a part of the tent 17. Strips 82 are detachably secured to the outer sides of the side and outer end walls of the floor sections 19 and 20 and over the bottom edge of the tent 17 for detachably anchoring the bottom edge thereof to the floor portion 16. One of the side walls of the tent 17 is provided with a window 83.

A plate 84 is provided with a central opening to receive the threaded shank 73 and is mounted thereon and above the top of the tent 17. The plate 84 is provided with upturned apertured corners 85 to each of which is secured a guy rope 86 which guy ropes extend outwardly and downwardly and are adapted to be attached at their opposite ends, in a conventional manner, to a tent stake 87. The guy ropes 86 are preferably provided with conventional adjusting slides 88, adjacent their lower ends, by means of which said guy ropes can be adjusted and properly tensioned. The upturned corners 85 permit the stakes 87 to be placed closer to the tent without the guy ropes engaging the edge of the roof portion thereof. An ornament 89 is provided with an internally threaded socket for engaging the upper free end

of the threaded shank 73 for securing the plate 84 thereon.

From the foregoing it will be obvious that the shelter or enclosure 15 can be assembled, as seen in Figure 1, as for example on an ice covered lake and in which a hole has been cut for fishing and with the trap door 23 over the hole, not shown, so that by removing the trap door, as previously described, the occupant of the shelter 15 can engage in ice fishing or spearing and by removing the inner end walls 25' the floor of the portion 16 will have no obstructions between its ends. The slide fastener 80 is preferably so arranged that the hasp carried thereby can engage the staple 39, and be held, as by means of a padlock, not shown, for locking the shelter from the outside, or said hasp, not shown, may be latched from the inside. In Figure 1 the shelter is shown assembled without the runners 40, but it will be readily apparent that these runners could be disposed beneath the ends of the floor portion 16 to provide sills for supporting the floor portion in an elevated position, or could be attached and swung outwardly, as previously described, to permit the floor portion 16 to rest on the ice or other suitable supporting surface. It will also be readily obvious that the runners when mounted beneath the extended floor portion 16 could be employed for transporting the shelter 15, while erected, from place to place, and in order to accomplish this it would only be necessary to detach the guy ropes 86.

All parts of the frame 18 are sufficiently short in length to enable them to be stored within the folded floor sections 19 and 20, and the tent or covering 17 can likewise be folded and packed in the case thus formed by the sections 19 and 20 to provide a compact construction which can be readily conveyed on the runners 40 and either drawn by hand or by a draft vehicle. Likewise, for storage or transportation in another vehicle, the runners 40 can be removed and the runner sections disconnected for storage in the case so that the case, containing the entire shelter or enclosure 15, can be readily stored or transported, as for example in an automobile trunk. It will also be readily obvious that the hasp 37 could be secured to the staple 39 by means of a padlock for locking the case in a closed position.

Various modifications and changes are contemplated and may obviously be resorted to provided they fall within the spirit and scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. In an enclosure of the character described a pair of sections each including a bottom, side walls and end walls, said sections having hinges connecting them to one another and being foldable one upon the other to form a case, and a frame formed of a plurality of detachably connected parts, said frame being provided with depending corner members, and said sections having sockets formed in the corners of the remote ends thereof for releasably engaging the lower ends of said corner members for supporting the frame thereabove, when said sections are in an extended position.

2. In an enclosure as in claim 1, the bottoms of said sections forming the floor of the enclosure, and the bottom of one of said sections being provided with a removable portion for forming an opening through which the occupant of the enclosure can engage in ice spearing or ice fishing.

3. In an enclosure as in claim 1, the bottoms of said sections forming the floor of the enclosure, the adjacent end walls of said sections having hinges for connecting them to one another, and the adjacent ends of the complementary side walls of said sections having hinges for connecting them together to hingedly connect said sections to one another, and said end walls being detachably connected to said sections.

4. In an enclosure as in claim 1, said sections being adapted to be folded to form a case for containing the frame and covering, latch means for latching the sections in a closed position, and handles connected to the outer sides of the remote ends of the sections.

5. In an enclosure as in claim 1, means detachably connected to said sections for retaining them in extended, open positions, and runners detachably fastened to said sections and disposed on the under sides of the remote ends thereof.

6. In an enclosure comprising a tent cover, a tent frame and floor, said floor being formed of sections each provided with upstanding side and end walls, said sections having hinges for connecting them and being foldable to form a case, said frame being formed of a plurality of separable parts and being supported in an upright position on said floor, when assembled, said floor sections when folded one upon the other forming a case for tent cover and frame.

7. In an enclosure as in claim 6, runners detachably connected to said floor for supporting it in an extended position, as a floor, or in a folded position, as a case, and to permit the floor to be transported on said runners in either of said positions.

8. In an enclosure as in claim 6, said supporting frame including upright corner posts, certain of said corner posts being provided with diagonal braces, said braces being detachably connected to the corner posts and to portions of the floor, each of said braces being formed of a plurality of sections having hinges to connect them.

9. In a portable enclosure comprising a tent, a supporting frame for said tent, said supporting frame being formed of separable parts, a tent floor in which said supporting frame is detachably mounted, runners for detachably supporting said tent floor in an elevated position and providing means whereby the enclosure can be moved while assembled, and said tent floor being formed of foldable sections forming a case, when folded, for containing the tent, frame and runners.

10. An enclosure as in claim 9, said tent being provided with an opening extending from the bottom to adjacent the top thereof and provided with closure means.

11. An enclosure as in claim 9, comprising means for detachably fastening the bottom edge of said tent to the floor.

12. In an enclosure as in claim 9, comprising a plate, forming a part of the supporting frame and disposed at the top thereof and on the outer side of the tent, for connecting guy ropes to extend from said plate and to be anchored at their outer ends for retaining the tent and tent frame in an upright position.

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