Jan. 12, 1965 P. L. FOSTER 3,165,111

ADJUSTABLE TOP FOR BOATS AND THE LIKE

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Fig. 1

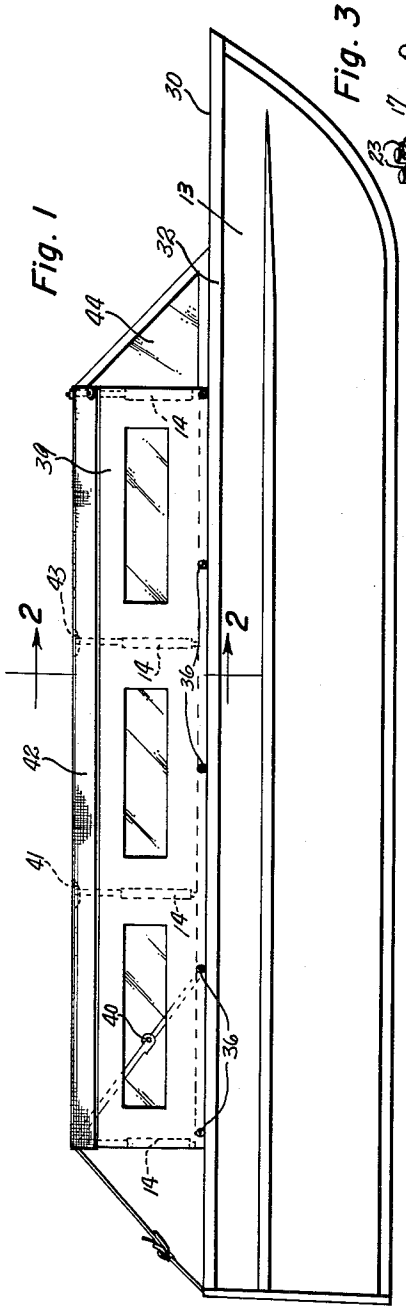


Fig. 3

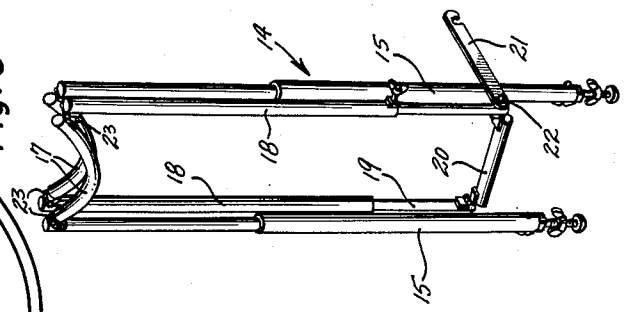
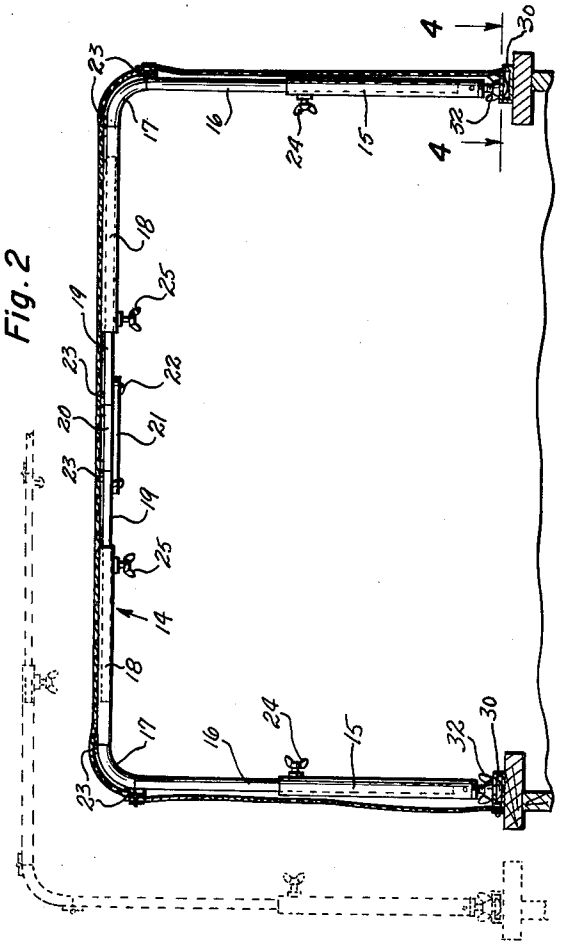


Fig. 2



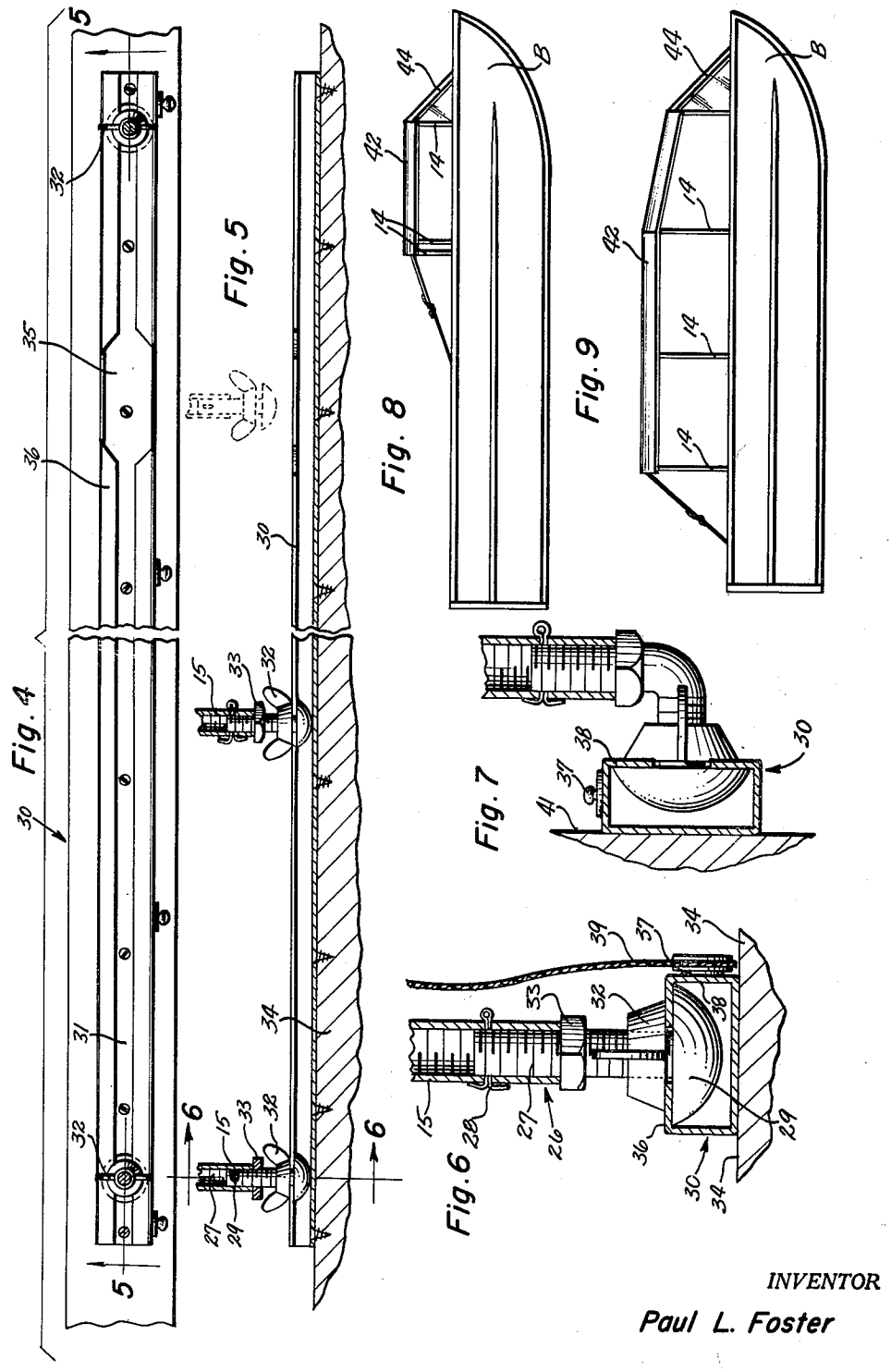
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ADJUSTABLE TOP FOR BOATS AND THE LIKE

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3 Claims. (Cl. 135—6)

This invention relates to motor boats of the open type, although it is not necessarily limited to this type of craft, as it can readily be adapted to any open boat, or for the matter, to any open type of vehicle.

While there are admittedly any number of adjustable tops for boats and the like on the market, they all fall short of the claims made for them. They are usually not adjustable as they may first appear to be, or else they are difficult to install, or otherwise put into place.

It is, therefore, a primary object of this invention to provide an adjustable top for boats and the like that can be extended or reduced in length, width, or height, according to the size of the boat on which it is placed.

Another object of this invention is to provide an adjustable top for boats and the like that can be folded and stored in a minimum of time as well as set up in approximately the same length of time.

Another object of this invention is to provide an adjustable top for boats and the like that can also be installed on open bodied trucks, or any other vehicle, requiring a soft top for protection from the elements.

Another object of this invention is to provide an adjustable top for boats and the like that can be mass produced at a cost of interest to anyone having need for a removable top for his boat or land based vehicle.

Another object of this invention is to provide an adjustable top for boats and the like that will not jam as it is being raised or lowered.

Still another object of this invention is to provide an adjustable top for boats and the like, having a frame from which it is not necessary to remove the canvas top when taking the same off a boat.

Still another object of this invention is to provide an adjustable top for boats and the like that can have side curtains secured to the same without the necessity of making changes to its structure.

Other and further objects and advantages of this adjustable top for boats and the like will be hereinafter described, and the novel features thereof defined in the appended claims.

Referring to the drawing:

FIGURE 1 is a side view of a typical open boat with this invention installed on the same along with side curtains.

FIGURE 2 is a view taken in section on the line 2—2 of FIGURE 1, dash lines showing horizontal and vertical extension of this invention.

FIGURE 3 is a pictorial view of a portion of this invention with the canvas removed and the device in a folded position.

FIGURE 4 is taken in section on line 4——4 or FIGURE 2.

FIGURE 5 is a view taken in section on the line 5—5 of FIGURE 4.

FIGURE 6 is a view taken in section on the line 6—6 of FIGURE 5.

FIGURE 7 is an optional form of construction to replace that shown in FIGURE 6.

FIGURE 8 is a side view of this invention mounted on a small boat but without side curtains.

FIGURE 9 is a side view of still another adaptation of this invention to a small boat.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Having reference now to the drawing in detail, there is generally indicated by the character 14, a typical inverted U-shaped frame embodying a vertically mounted tubular post 15 on each side thereof, in the upper end of which is slidably located tube 16, having its upper end terminate in a hinged right angle tube 17, which in turn is hinged to a horizontally disposed tube 18, that receives the centrally located horizontally disposed telescoping tube 19, which is hinged to a center tube 20. The hinged telescoping tubes 19 are given additional rigidity (other than by the hinges) by means of the lock strap 21, which is swingably secured to the underside of one of the aforesaid telescoping tubes 19 by means of a rivet 22. All of the hinges on this inverted U-shaped frame 14 are noted in the appended drawings by the reference numeral 23, while the thumb screws that hold each tube 16 in one of the vertically mounted tubular posts 15 are noted by the reference numeral 24. Thumb screws 25 lock the horizontally disposed tubes 18 to the telescoping tubes 19 as best shown in FIGURE 2 of the appended drawings.

The lower end of each one of the aforesaid tubular posts 15 is vertically mounted on the deck of the boat by an interesting and novel connection that is fully illustrated in FIGURE 6, where it is seen that a carriage bolt 26 that has its body 27 screwed into the lowermost end of the aforesaid tubular post 15, to which it is doubly by means of a cotter pin 28. The head 29 of the carriage bolt 26, is located inside one of the tracks 30, which is secured to the deck of a boat of a plurality of wood screws (which are not given any reference numbers since they are not an actual part of this invention), or by any other desired means of securement. The track 30, is formed from sheet metal or the like into structural member, having an end viewed configuration of a hollow rectangle with a centrally located rectangular opening 31 in the top portion thereof. The body 27 of the carriage bolt 26 slidably passes upward through the opening 31, as is clearly shown in FIGURE 6 of the appended drawing. A wing nut 32 on the aforesaid carriage bolt 26 locks the bolt 26 and the frame of which it is a part in place on the track 30, while a nut 33 on the same bolt serves as a lock nut to make the connection between tubular post 15 and bolt 26 more secure. The aforesaid track is suitably secured to each side of the deck 34 of the boat that is characterized in the drawings by the reference letter "B." A cut-out 35 is provided in the top 36 of the track 30, for the removal of the head 29 of the carriage bolt 26 and the frame to which it is attached when this invention is disassambled for storage or other reasons.

Commercial obtainable snap fasteners 37 may have one member secured to the outside 38 of the track 30, for the securement of side curtains 39, if it is so desired, to add side curtains to the top if the boat is out in inclement weather. A snap-over center brace 40, can be installed in the manner shown in FIGURE 1 of the appended drawings, if so desired, as it may very well be, if the top is extended the full length of the boat "B."

An optional form of mounting this adjustable top, which consists of two or more of the spaced inverted U-shaped frames 14, consists of placing the aforesaid track 30 on the side 41 of the boat, as one can see on examination of FIGURE 7 of the appended drawings, where the carriage bolt 26 is bent at right angle to the deck of the boat. Boats being built with the idea of having this novel top mounted thereon may very well have their decks or sides grooved to receive the head 29 of the carriage bolt 26 thereby doing away with the need of the aforesaid tracks 30.

Although the construction and erection of the framework of this adjustable top for boats and the like has been described in detail along with alternate forms of construction, and although the side curtains have been

mentioned, nothing has so far been said about the actual top itself, which may be of any desired material such as canvas. The top which is noted in the appended drawing by the reference numeral 42, may be secured to the horizontally disposed portions of the inverted U-shaped frames 14 by means of leather straps 43, which are shown only in FIGURE 1 of the drawing. The windshield 44 may be secured to the top by the same type of snap fasteners that secure the side curtains to the boat. Although not shown in any of the views of the appended drawing, the inverted U-shaped frame can be constructed with two less hinges per frame, though this will naturally cause the frame to take up more room and not be as compact when it is removed from the tracks and folded for storage when not in use, such as during the winter months for boats that are in northern waters.

It is understood that suitable modifications may be made in the structure as disclosed, provided such modifications come within the spirit and scope of the appended claims. Having now therefore fully illustrated and described my invention, what I now claim to be new and desire to protect by Letters Patent is:

1. An adjustable top for boats and the like of the character described, comprising at least two inverted U-shaped frames, each frame of which embodies a pair of spaced vertically mounted tubular posts in the upper end of each one of which is mounted a tube having a right angle tube hinged thereto, a pair of horizontally disposed tubes each having one end hinged to one end of one of said right angle tubes, a pair of telescoping tubes each having one end slidably mounted in the open end of one of said horizontally disposed tubes, a centrally located horizontally disposed tube hingably secured at each end to the two telescoping tubes, a mechanism locking the tubes together at the center thereof, a pair of spaced rails, each one of which has an end viewed configuration of a hollow rectangle, one rail being secured to each side of the deck of the boat and extending from a pre-determined point near the bow of the said boat to a pre-determined point near the stern of the said boat, mechanism removably connecting the said inverted U-shaped frames to the said rails, and a canvas top having removable side curtains placed over the said plurality of inverted U-shaped frames which are mounted in parallel spaced relation along the length of the said rails.

2. An adjustable top for boats and the like of the character described, comprising at least two inverted U-shaped frames, each frame of which embodies a pair of spaced vertically mounted tubular posts in the upper end of each one of which is mounted a tube having a right angle tube hinged thereto, a pair of horizontally disposed tubes each having one end hinged to one end of one of said right angle tubes, a pair of telescoping tubes each having one end slidably mounted in the open end of one of said horizontally disposed tubes, a centrally located horizontally disposed tube hingably secured at each end to the two telescoping tubes, a mechanism in the form of a swingably mounted lock strap secured to the underside of the one of the telescoping tubes thereby providing means of locking the tubes together at the center thereof, a pair of spaced rails, each one of which has an end viewed, configuration of a hollow rectangle, one rail

being secured to each side of the deck of the boat and extending from a pre-determined point near the bow of the said boat to a pre-determined point near the stern of the said boat, mechanism removably connecting the said inverted U-shaped frames to the said rails, and a canvas top having removable side curtains placed over the said plurality of inverted U-shaped frames which are mounted in parallel spaced relation along the length of the said rails.

3. An adjustable top for boats and the like of the character described, comprising at least two inverted U-shaped frames, each frame of which embodies a pair of spaced vertically mounted tubular posts in the upper end of each one of which is mounted a tube having a right angle tube hinged thereto, a pair of horizontally disposed tubes each having one end hinged to one end of one of said right angle tubes, a pair of telescoping tubes each having one end slidably mounted in the open end of one of said horizontally disposed tubes, a centrally located horizontally disposed tube hingably secured at each end to the two telescoping tubes, a mechanism in the form of a swingably mounted lock strap secured to the underside of one of the telescoping tubes thereby providing means of locking the tubes together at the center thereof, a pair of spaced rails, each one of which has an end viewed configuration of a hollow rectangle, one rail being secured to each side of the deck of the boat and extending from a pre-determined point near the bow of the said boat to a pre-determined point near the stern of the said boat, mechanism in the form of a pair of carriage bolts, each one of which has its body screwed into the lowermost end of one of the said tubular posts, to which the said body is locked by means of a cotter pin, and the head of lower end of the body of each carriage bolt projecting downward through a centrally located opening in the horizontally disposed top of each track, the opening extending the full length of each track, a head on the lower end of each said body of each said carriage bolt, the head being inside of the hollow track and a nut screwed on each said body locking the said tubular post thereto, a wing nut screwed on each said body thereby locking the said carriage bolt and structure attached thereto to the track, each said carriage bolt removably connecting the said inverted U-shaped frames to the said rails, and a canvas top having removable side curtains placed over the said plurality of inverted U-shaped frames which are mounted in parallel spaced relation along the length of the said rails.

References Cited by the Examiner

UNITED STATES PATENTS

2,733,953	2/56	Nenadal	135—7.1
2,829,660	4/58	Wester et al.	135—6
2,859,710	11/58	Elsner	248—298
2,960,993	11/60	Holmstrom	135—7.1

OTHER REFERENCES

Publication I: Taylor catalogue, Jan. 20, 1960, 24 pages, only page 14 relied upon. (Copy available in Group 420, Class 135/6.)

HARRISON R. MOSELEY, *Primary Examiner.*