June 12, 1956 J. W. TATTER 2,749,969

ADJUSTABLE SEATS HAVING LAZY TONG SUPPORTS

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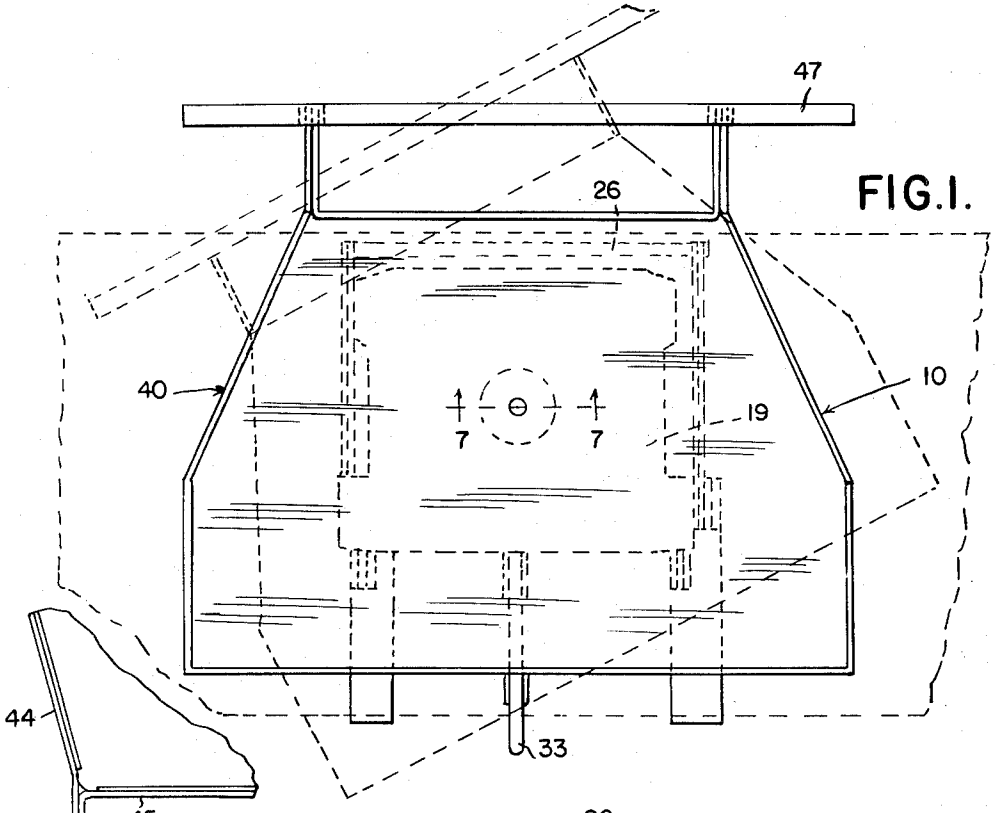


FIG. 1.

FIG. 4.

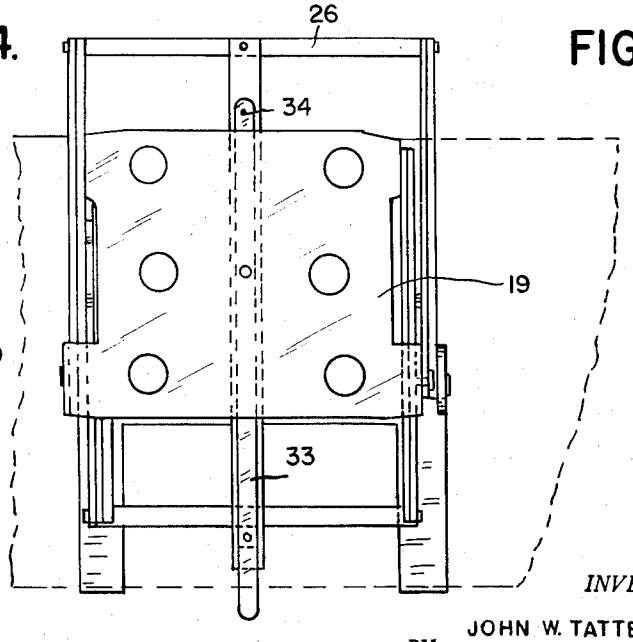


FIG. 2.

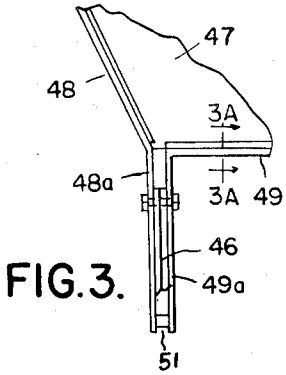


FIG. 3.

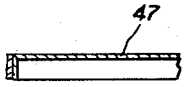


FIG. 3A.

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FIG.5.

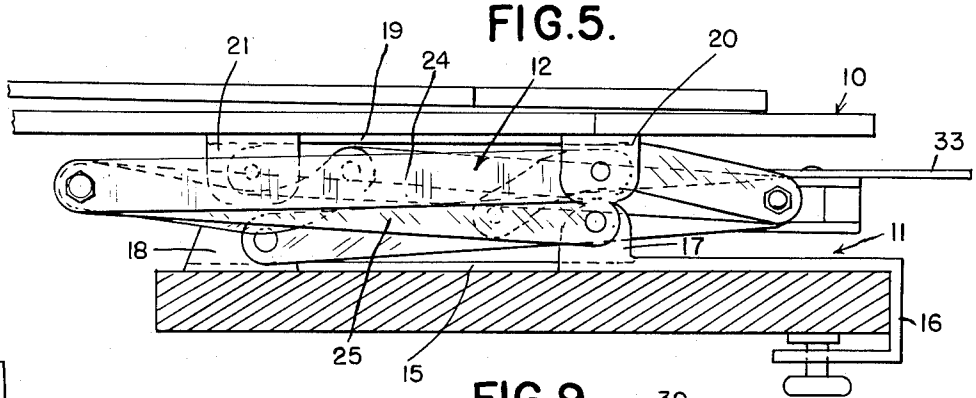


FIG.9.

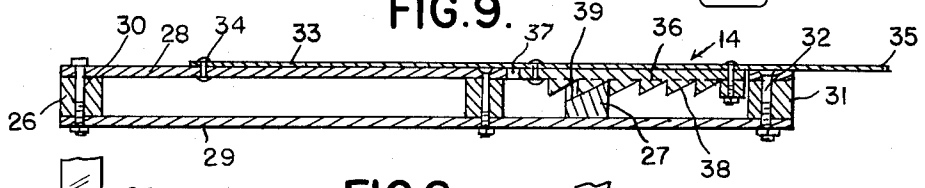


FIG.8.

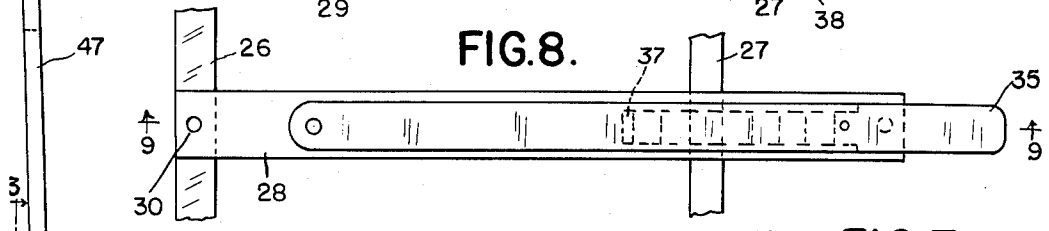


FIG.7.

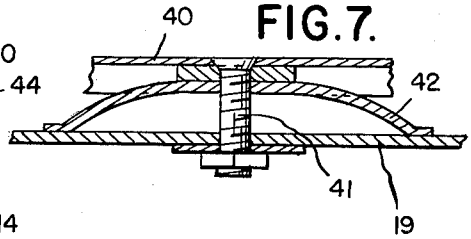
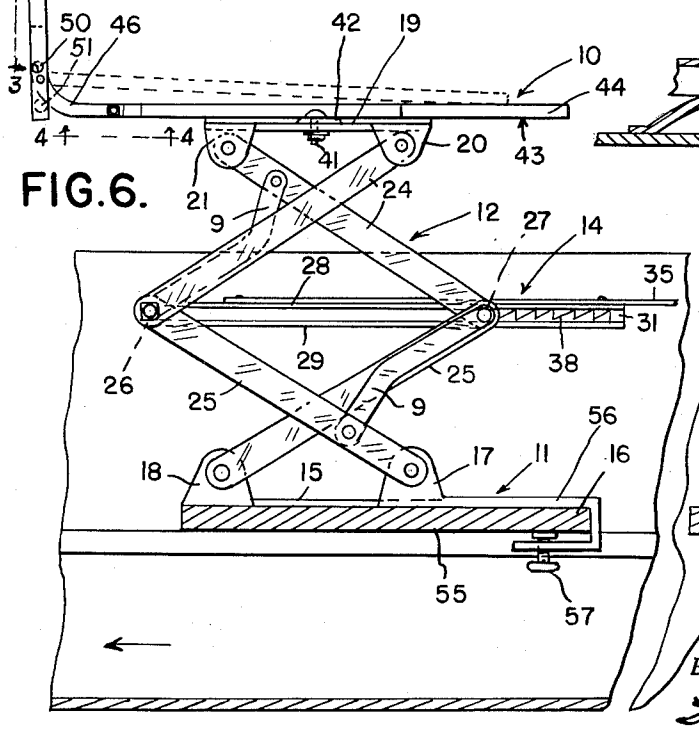


FIG.6.



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ADJUSTABLE SEATS HAVING LAZY TONG SUPPORTS

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7 Claims. (Cl. 155—91)

My invention relates to boat seats and more particularly to an adjustable seat adapted for assembly with a row boat or other similar conveyance.

Many sportsmen, such as fishermen, provide extra row boat seats, chair lifts and other similar devices, in an endeavor to be more comfortable over long periods of time confined to a small boat or the like. While these apparently provide some relief, it is plain to see that such devices are awkward to handle, difficult to adjust, and are in many ways not at all suitable for the purpose intended.

It is an object of my present invention to improve upon these makeshift devices, to make the fisherman or sportsman as comfortable as possible and to provide for ready adjustment of the seat proper by constructing an adjustable seat support of a character permitting quick and ready adjustment of the seat, to firmly anchor same to the conventional transverse row boat seat, and to provide a rugged construction of improved features.

For a more detailed understanding of my invention, reference may be had to the accompanying drawings illustrating a preferred embodiment of my invention in which like characters refer to like parts throughout the several views, and in which

Fig. 1 is a plan view of a seat structure constructed in accordance with my invention.

Fig. 2 is another plan view showing the folding seat removed from its support.

Fig. 3 is a fragmentary elevational view of the back of back portion of the folding seat.

Fig. 3A is a fragmentary detail sectional view taken on line 3A—3A of Fig. 3.

Fig. 4 is a fragmentary bottom plan view of the seat portion of said folding seat.

Fig. 5 is a side elevational view of the collapsed seat structure.

Fig. 6 is a side elevational view of the extended seat structure but on a reduced scale.

Fig. 7 is a detail sectional view taken substantially on the line 7—7 of Fig. 1.

Fig. 8 is a plan detail view of the seat locking means, and

Fig. 9 is a longitudinal sectional view thereof, taken substantially on the line 9—9 of Fig. 8.

The improved seat structure as herein illustrated, consists principally of a base structure **11**, a seat support **10** and a lazy tong means **12** connecting said structures plus a locking means **14** operable to lock the lazy tong means for locking the seat in any selected position.

The base structure comprises a plate **15** carrying a clamp **16** and upstanding front and rear pairs of ears **17** and **18** respectively, said front pair of ears being laterally spaced apart a greater distance than said rear pair of ears. The seat support structure comprises a plate **19** with downwardly projecting front and rear pair of ears **20** and **21** respectively.

Said lazy tong means **12** connecting plates **15** and **19**

comprise a pair of hinged arms **24** and **25** connecting each pair of ears **20—17** and **21—18** (see Figs. 5 and 6). The pairs of arms connecting these plates on one side are identical to the pairs of arms on the other side, and the pairs of arms on each side are oppositely angled (see Fig. 6) and the arms on one side are connected with the arms on the other side by means of cross bars **26** and **27** each of which is coaxially disposed with respect to the axes of the hinges connecting corresponding pairs of arms. The cross bars **26** and **27** are preferably square or rectangular in cross section (see Fig. 9), and a pair of straps **28** and **29** secured to the rear cross bar **26** as at **30** are extended forwardly and straddle the bar **27**, said straps being also fastened to the spacer block **31** as at **32** at the front. A leaf spring **33** is secured to the strap **28** as at **34** and extends forwardly beyond the front extremity of the straps **28** and **29** to form a handle portion **35**. A ratchet **36** is secured to the underside of said leaf spring and projects through the elongated slot **37** in the upper strap **28**, the ratchet teeth **38** are adapted for spring engagement with the cross bar **27**, said cross bar being beveled as at **39** immediately below the ratchet bar.

It will be noted that the lazy tong structure is confined to a straight path movement normal to the plane of the base plate **15** by reason of the equalizing links **9**, one of said links being hinged to bar **26** and to an intermediate portion of arm **24** of the front hinged pair of arms and the other of said links is hinged to bar **26** and to an intermediate portion of arm **25** of the rear hinged pair of arms. The pair of links **9** on each side of the seat structure are disposed in the same vertical plane, and of much shorter length than the arms **24** and **25**, and when the mechanism is collapsed, the links **9** clear each other. Referring to each lazy tong assembly, it will be observed that arms **24** and **25** are disposed in planes laterally offset to either side of the plane of links **9**.

As the lazy tong means is fully extended, the bar **27** is positioned to the rear of the last notch in the ratchet bar, said bars **26** and **27** being as close together as possible. As the seat is lowered, the lazy tong connection collapses and the bars **26** and **27** are progressively moved apart. The lazy tong means is prevented from collapsing as long as the ratchet is in locking engagement with the bar **27**. To release this lock, the leaf spring **33** is raised until the ratchet is lifted out of engagement with the bar **27**, and then pressure exerted downwardly on the seat will collapse the lazy tong structure and the seat may be selectively locked in any desired partly raised position by dropping the ratchet bar in engagement with the cross bar **27**.

A folding seat **40** is pivotally secured to the plate **19** by a bolt **41**, a spring **42** being disposed between the seat **40** and plate **19**, and the seat is permitted to revolve about the bolt **41** so as to be swung in any desired position such as shown by the dotted lines (Fig. 1). The seat frame **43** consists of a U-shaped bar **44** extending about the periphery of the seat proper and projecting to the rear at each rear corner, and a second U-shaped bar **45** forms the rear edge of the seat and the legs thereof are preferably welded to the rearwardly extending portions of the first bar, and same are upwardly curved at the rear (see Fig. 6) forming ears **46**. The seat back **47** has a frame structure consisting of U-shaped bars **48** and **49** which have extensions of ears **48***a* and **49***a* extending downwardly in slightly spaced relation to straddle the ears **46**. The ears of the back and seat proper are hinged together as at **50** and a stop **51** is carried by ears **48***a* and **49***a* to engage the ears **46** to limit the backward movement of the back **47**.

This seat construction is adapted to be detachably secured to a boat seat **55** by means of a clamp **56** and set

screw 57 (see Fig. 6), and the handle designated as projecting from the front of the seat, extends towards the rear of the boat so that the occupant can face towards the rear as is customary in rowing a boat. However, when the structure is mounted in some other type of boat and the occupant wishes to face the front of the boat, the seat can if need be, be swivelled or turned around a full 180 degrees, or the seat may be detached from the boat seat and secured to the opposite or front edge of the boat seat.

It will be apparent to those skilled in the art to which my invention pertains that various changes and modifications may be made therein without departing from the spirit of my invention or from the scope of the appended claims.

I claim:

1. In an adjustable seat for a row boat and other similar conveyance, a base structure and a seat supporting structure, an adjustable connection between said structures comprising a lazy tong mechanism having links laterally spaced to provide for collapsing of all links to dispose same in substantially the same horizontal plane, equalizing links connecting a pivotal connection of some of said links to an intermediate portion of another link to confine the extending motion of said lazy tong mechanism to substantially a straight line normal to the aforesaid horizontal plane, a seat supported on said seat supporting structure, and means for locking said adjustable connection in any one of a plurality of selected extended positions, each of said structures having a pair of forward pivot supports and a pair of rear pivot supports laterally offset from said forward pivot supports, said lazy tong mechanism comprising a pair of hinged arms connecting said forward pivot supports and a second pair of hinged arms connecting said rear pivot supports, said first and second pairs of hinged arms being oppositely collapsed at their hinged joint, said equalizing links comprising one link connecting the hinged joint of the first pair of arms with an intermediate part of one of said second pair of arms and a second link connecting the hinged joint of said second pair of arms with an intermediate part of one of said first pair of arms, said pairs of arms located on opposite sides of said equalizing links and disposed in laterally spaced planes for operation without interference one with another.

2. In an adjustable seat for a row boat and other similar conveyance, a base structure and a seat supporting structure, an adjustable connection between said structure comprising a lazy tong mechanism having links laterally spaced to provide for collapsing of all links to dispose same in substantially the same horizontal plane, equalizing links connecting a pivotal connection of some of said links to an intermediate portion of another link to confine the extending motion of said lazy tong mechanisms to substantially a straight line normal to the aforesaid horizontal plane, a seat supported on said seat supporting structure, and ratchet locking means for locking said adjustable connection in any one of a plurality of selected extended positions, each of said structures having a pair of forward pivot supports and a pair of rear pivot supports laterally offset from said forward pivot supports, said lazy tong mechanism comprising a pair of hinged arms connecting said forward pivot supports and a second pair of hinged arms connecting said rear pivot supports, said first and second pairs of hinged arms being oppositely collapsed at their hinged joint, said equalizing links comprising one link connecting the hinged joint of the first pair of arms with an intermediate part of one of said second pair of arms and a second link connecting the hinged joint of said second pair of arms with an intermediate part of one of said first pair of arms, said pairs of arms located on opposite sides of said equalizing links and disposed in laterally spaced planes for operation without interference one with another, said ratchet locking means being constructed to provide freedom of travel for said lazy tong means in extending motion and to lock same against collapsing motion.

3. In an adjustable seat for a row boat and other similar conveyance, a base structure and a seat supporting structure, an adjustable connection between said structures comprising a lazy tong mechanism having links laterally spaced to provide for collapsing of all links to dispose same in substantially the same horizontal plane, equalizing links connecting a pivotal connection of some of said links to an intermediate portion of another link to confine the extending motion of said lazy tong mechanism to substantially a straight line normal to the aforesaid horizontal plane, a seat supported on said seat supporting structure, and means for locking said adjustable connection in any one of a plurality of selected extended positions, each of said structures having a pair of forward pivot supports and a pair of rear pivot supports laterally offset from said forward pivot supports, said lazy tong mechanism comprising a pair of hinged arms connecting said forward pivot supports and a second pair of hinged arms connecting said rear pivot supports, said first and second pairs of hinged arms being oppositely collapsed at their hinged joint, said equalizing links comprising one link comnnecting the hinged joint of the first pair of arms with an intermediate part of one of said second pair of arms and a second link connecting the hinged joint of said second pair of arms with an intermediate part of one of said first pair of arms, said pairs of arms located on opposite sides of said equalizing links and disposed in laterally spaced planes for operation without interference one with another, said each pair of forward and rear hinged arms connected to a bar axially at said hinged joints, said locking means comprising an arm structure secured to one of said bars and slidably engaged with said other bar, a ratchet carried by said last mentioned arm structure and yieldably hinged therewith, said ratchet selectively engaged with said last bar and yieldingly urged into locking engagement therewith to lock the aforesaid lazy tong mechanism in a predetermined adjusted position.

4. An adjustable seat for a boat and other similar conveyance, comprising a base structure, a seat structure, a lazy tong means connecting said structures comprising a pair of laterally spaced lazy tong mechanisms and transverse bars connecting said mechanisms, and locking means for said lazy tong means comprising an arm rigidly secured to one of said bars and slidably engaged with said other bar, and a spring supported ratchet carried by said arm and yieldingly urged into locking engagement with the last mentioned bar whereby to lock the aforesaid lazy tong means in a predetermined adjusted position.

5. An adjustable seat for a boat and other similar conveyance, comprising a base structure, a seat structure, a lazy tong means connecting said structures comprising a pair of laterally spaced lazy tong mechanisms and transverse bars connecting said mechanisms, and locking means for said lazy tong means comprising an arm rigidly secured to one of said bars and slidably engaged with said other bar, and a spring supported ratchet carried by said arm and yieldingly urged into locking engagement with the last mentioned bar whereby to lock the aforesaid lazy tong means in a predetermined adjusted position, said ratchet locking means being constructed to provide freedom of travel for said lazy tong means in extending motion and to lock same against collapsing motion.

6. An adjustable seat for a boat and other similar conveyance, comprising a base structure, a seat structure, a lazy tong means connecting said structures comprising a pair of laterally spaced lazy tong mechanisms and transverse bars connecting said mechanisms, and locking means for said lazy tong means comprising an arm secured to one of said bars and slidably engaged with said other bar, and a spring supported ratchet carried by said

arm and yieldingly urged into locking engagement with the last mentioned bar whereby to lock the aforesaid lazy tong means in a predetermined adjusted position, said ratchet locking means being constructed to provide freedom of travel for said lazy tong means in extending motion and to lock same against collapsing motion, said seat structure comprising a plate pivotally fastened to the upper extremities of said lazy tong means, a seat portion rotatably carried by said plate, and a back portion hinged to said seat portion, said back portion having a frame structure and a panel fastened to the frame portion, said back frame portion comprising a bar structure framing the periphery of the back panel and terminating in projecting ears laterally spaced apart, said seat portion having a frame structure and a seat panel fastened to the frame structure, said frame structure of said seat portion comprising a bar structure framing the periphery of the seat panel and terminating in projecting ears disposed to lie between the spaced ears of the back portion, and means hinging said ears, and stop means for limiting the backward travel of said back portion of the folding seat portion.

7. In an adjustable seat for a rowboat and other similar conveyance, a base structure and a seat supporting structure, an adjustable connection between said structures comprising a lazy tong mechanism consisting of two pairs of oppositely collapsible hinged links laterally spaced to provide for collapsing of all links to dispose same in substantially the same horizontal plane, equalizing links connected to a pivotal connection of one pair of hinged links and to an intermediate portion of a link of the other pair of hinged links, whereby to confine the extending motion of said lazy tong mechanism to substantially a straight line normal to the aforesaid horizontal plane, a seat supported on said seat supporting structure, and means for locking said adjustable connection in any one of a plurality of selected extended positions.

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