July 3, 1962 T. E. CLINE 3,042,240

CAR TOP BOAT LOADER

Filed April 22, 1960 3 Sheets-Sheet 1

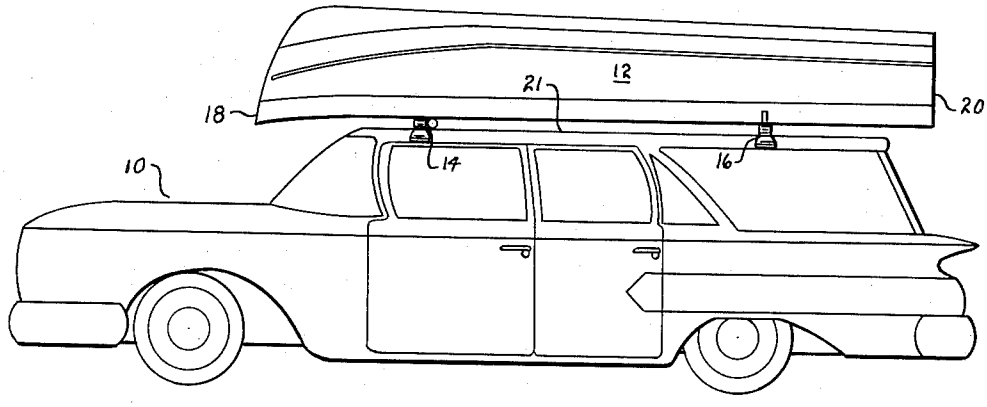


FIG. 1

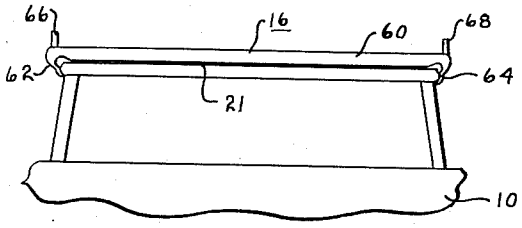


FIG. 2

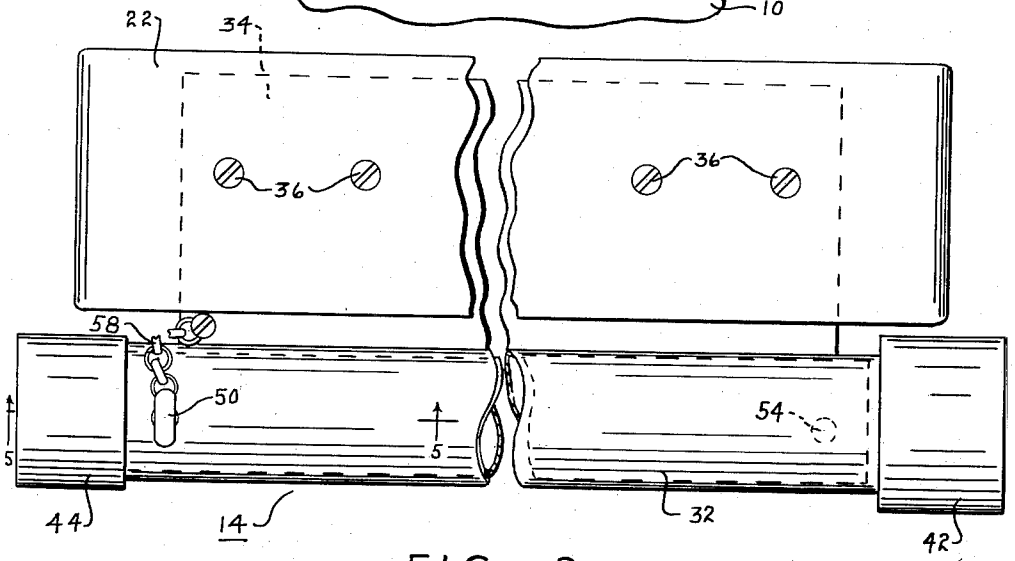


FIG. 3

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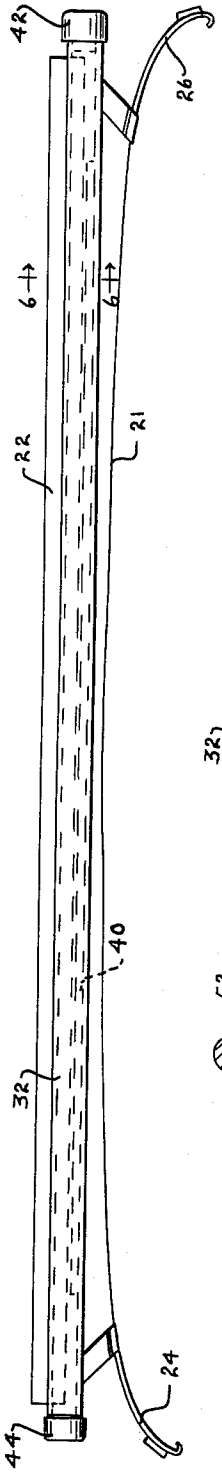


FIG. 4

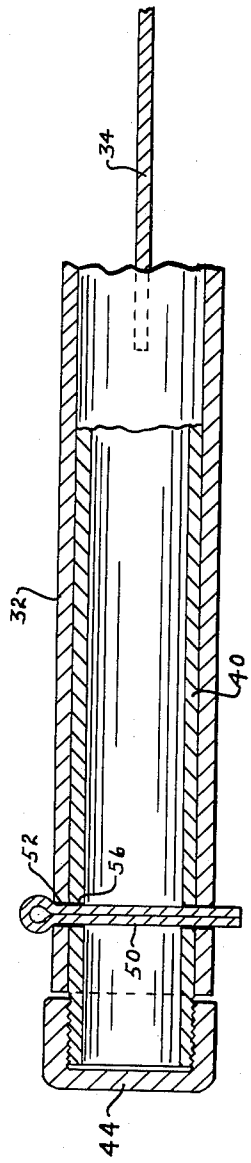


FIG. 5

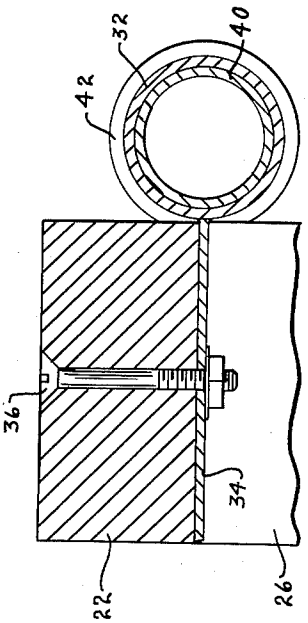


FIG. 6

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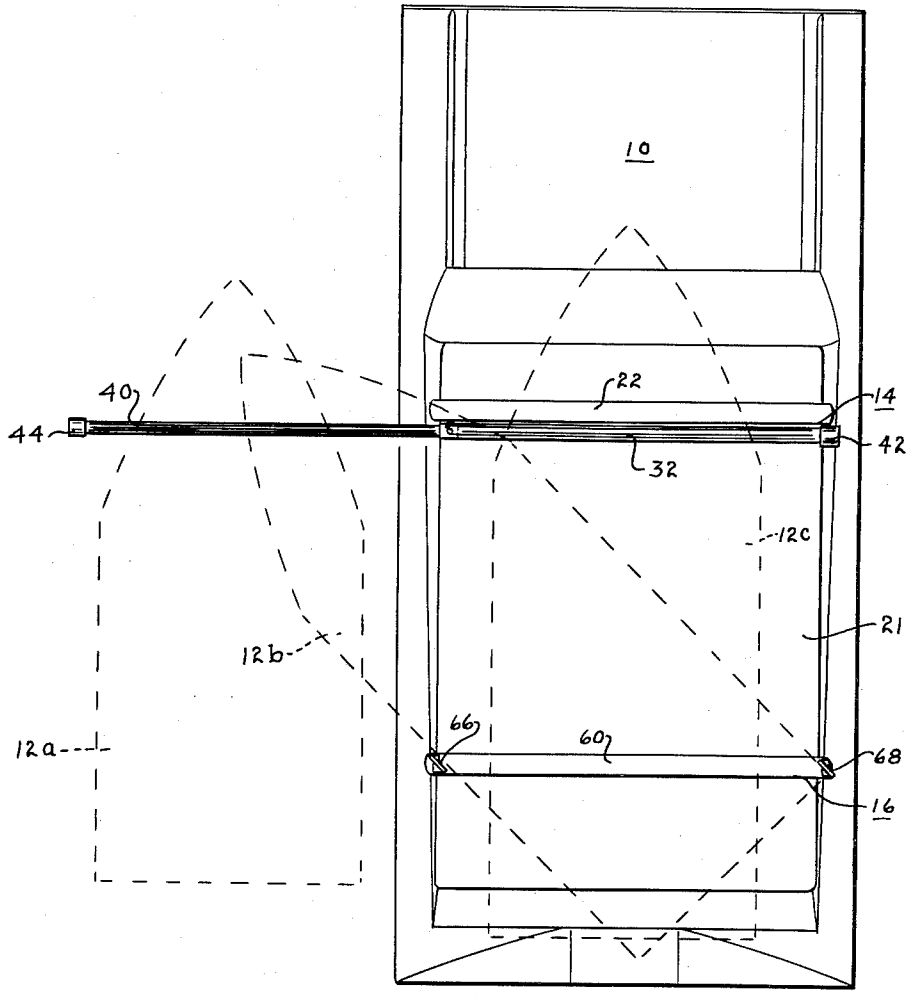


FIG. 7

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3,042,240
CAR TOP BOAT LOADER

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7 Claims. (Cl. 214—450)

The present invention relates to a boat loading apparatus, and more particularly to an apparatus for loading boats and the like onto the top of automobiles, trailers, panel trucks and similar vehicles.

In carrying outboard motor boats, canoes and similar water craft on automobiles, support members are placed across the top of the automobile near the front and rear and are secured to the top with straps or clamps gripping the opposite edges of the top, and the boat or other craft is loaded onto the support members either by lifting the craft bodily and seating it on the support members or by slipping it onto the support members from the rear of the automobile by first lifting one end of the craft onto the rear support member and then lifting the other end and pushing the craft forward until it rests squarely on both members. The craft is then strapped to the top of the automobile directly or to the support members. In either method of loading the craft onto the automobile, at least two persons are required to properly lift and maneuver the craft into the desired position on the support members. Various types of devices have been tried to facilitate loading, such as rollers, skids, slides and winches attached to or mounted on one or both of the support members, but the previous devices have either been cumbersome to use and haul or have contributed little to the convenience of operation of the loading apparatus. It is therefore one of the principal objects of the present invention to provide a relatively simple, easily installed apparatus for loading boats and similar craft onto automobiles, which permits the craft to be loaded onto the top of the vehicle as a one man operation and which retracts completely out of the way when not in use and does not interfere with the use of the cross members for carrying other kinds of articles and materials.

Another object of the invention is to provide a compact, easily operated boat loading apparatus for automobiles, which permits the one loading the boat to lift one end of the craft directly upwardly onto an easily reached projection extending to one side of the vehicle and thereafter to lift the other end of the craft into place on one of the support members on top of the vehicle.

Still another object of the invention is to provide an apparatus of the aforesaid type which can be constructed of either standard or readily available materials and the parts thereof assembled and installed without the use of special tools and equipment and which can readily be attached to the automobile without marring or otherwise injuring the finish of either the vehicle or craft.

A further object of the invention is to provide an apparatus for loading and unloading boats, canoes and similar craft onto and from cars, panel trucks and the like, which is fully attached to the vehicle along with the support members and which is completely operable without the use of any tools or special equipment apart or detached from the apparatus.

Additional objects and advantages of the invention will become apparent from the following description and accompanying drawings, wherein:

FIGURE 1 is a side elevational view of an automobile showing a boat mounted thereon on my boat loading apparatus;

FIGURE 2 is a fragmentary rear elevational view of the automobile shown in FIGURE 1, showing another view of my boat loading apparatus;

FIGURE 3 is an enlarged fragmentary plan view of

a part of the present apparatus showing it removed from the automobile;

FIGURE 4 is an elevational view of a part of the present apparatus showing it in its retracted position on top of an automobile;

FIGURE 5 is a fragmentary cross sectional view of a part of the apparatus, taken on line 5—5 of FIGURE 3;

FIGURE 6 is a vertical cross sectional view of a part of the apparatus, taken on line 6—6 of FIGURE 4; and

FIGURE 7 is a top plan view of an automobile with the present apparatus mounted thereon in its extended position, showing in broken lines a boat in various stages of the loading and unloading operations.

Referring more specifically to the drawings, numeral 10 designates a station wagon, 12 an outboard motor boat mounted thereon, and 14 and 16 the two principal portions of my boat loading and unloading apparatus secured to the edge of the vehicle top. The station wagon and boat are for the purpose of the present description considered as conventional and of well known construction, and merely illustrate one model or type of vehicle and craft which can be used in connection with the present apparatus. The boat which is shown in inverted position with bow 18 to the front and the transom 20 to the rear, would normally be firmly strapped or otherwise secured to the top of the car direct, or to fixtures or supports of the present apparatus which in turn are secured to the top or sides of the car.

Portion 14 of the present apparatus is normally positioned near the front of the automobile top 21 and consists of support member 22 of wood or metal extending across the top and secured to the sides of the top or gutter at the edge of the top by fixtures 24 and 26 permanently attached to the ends of member 22 and removably attached to the automobile by suitable clamps or the like (not shown). The particular construction of the fixtures and clamps is not important to the present invention so long as they are capable of attaching member 22 rigidly to the top of the car. A number of well known and widely used types of fixtures and clamps are suitable for the present invention and hence will not be described in detail herein.

A tubular metal member 32 of approximately the same length as member 22 is positioned along one side of member 22 and below the top thereof and is secured to member 22 by a metal plate 34 welded along one of its longitudinal edges to the side of tubular member 32 and extending throughout most of the length of member 32. Plate 34 is attached to the underside of member 22 by a plurality of spaced bolts 36 extending through holes in member 22 and plate 34, forming a rigid portion which can be mounted on and removed from the top of the car as an integral unit. Telescopically mounted in tubular member 32 is a smaller tubular metal member 40 of substantially the same length as member 32 and adapted to be extended lengthwise therefrom, as seen in FIGURE 7, to a point greater than the width of the boat to be mounted on the automobile. Opposite ends of tubular members 32 and 40 are closed by caps 42 and 44, threadedly secured to the respective tubular members. FIGURE 4 shows member 40 in its fully retracted position where it is maintained except when a boat or other craft is being loaded on or removed from the automobile and FIGURE 7 shows member 40 in its fully extended position for loading and unloading the boat.

Inasmuch as the present apparatus is designed to permit member 22 to be used for supporting various other kinds of material and equipment, an important feature of the invention is the positioning of member 32 completely below the upper surface of member 22 both in its extended and retracted positions. This construction provides a

smooth unobstructed rigid surface for such material as camping equipment, lumber, panels or racks for carrying miscellaneous articles of varying sizes and shapes. Member 40 in its extended position can be used advantageously in the loading of many of these other types of materials and equipment and after the loading operation has been completed and the materials strapped or otherwise secured in place, it can be pushed inwardly into its fully retracted position without any interference from the load on the support members. Members 32 and 40 likewise do not interfere with the positioning and securing of the load in place on the support members.

While member 40 is being used in the loading and unloading operations, it is held in its extended position by a pin 50 extending downwardly through aligned holes 52 and 54 in members 32 and 40, respectively, and after member 40 has been pushed into its fully retracted position the pin is seated in aligned holes 52 and 56 in members 32 and 40, respectively. The pin is preferably attached to some part of portion 14, such as plate 34, by a suitable chain 58 extending through the loop in the head of the pin.

Portion 16 consists of a support member 60 similar to support member 22 and fixtures 62 and 64 having clamps for removably attaching portion 16 to the edges of the top or to the gutter along each side thereof. The two fixtures are secured to the respective ends of member 60 and are adapted to be firmly attached to the automobile to form a rigid support for the boat or other equipment or materials loaded onto the present apparatus. In order to facilitate positioning of the boat in place on support member 60 during the loading operation and to assist in retaining it in position during transit, lugs 66 and 68 are secured to the ends of member 60. The two lugs are positioned at an angle in substantial alignment with the sides of the boat while the boat is in an intermediate position in the loading operation. This angularity of the two lugs permits the lugs to be spaced as close as possible to the sides of the boat after it has been fully loaded in position on support members 22 and 60.

In using the present apparatus to load a boat, telescopic member 40 is pulled outwardly to its fully extended position and locked in this position by placing pin 50 in holes 52 and 54. The boat is placed in its inverted position on the ground with the bow forward and beneath member 40. The bow is lifted and placed on member 40 as illustrated by numeral 12*a* and the rear end is then lifted and placed on member 60 between lugs 66 and 68 as illustrated by numeral 12*b*. Thereafter the bow of the boat can easily be moved from member 40 by sliding it along member 22 until it is in the position designated by numeral 12*c*. The boat is then strapped or otherwise secured in place on members 22 and 60 and member 40 is returned to its fully retracted position and locked in place by seating pin 50 in holes 52 and 56. The boat is unloaded by merely reversing the foregoing operation.

Although only one embodiment of the loading apparatus has been described in detail herein, various changes and modifications may be made without departing from the scope of the present invention.

I claim:

1. An apparatus for loading boats and other articles onto the top of an automobile and the like, comprising a horizontal support member of a length substantially the same as the width of the automobile top, a fixture secured to each end of said member for attaching said member in fixed position to the automobile, a tubular member of substantially the same length as said support member attached to said support member along one side thereof and positioned below the top of said support member, a means closing one end of said tubular member, a second tubular member telescopically disposed in said first tubular member and having an extended position beyond the side of the automobile and a retracted position substantially fully within said first tubular member, means for locking said second tubular member selectively in its extended and retracted positions, a second support member of substantially the same length as said first support member, fixtures secured to each end of said second support member for attaching said second support member in fixed position to the automobile, and a lug secured to each end of and projecting above said second mentioned support member, the inwardly facing surface of said lugs being parallel with each other and extending toward the side to which said second tubular member extends.

2. An apparatus for loading boats and other articles onto the top of an automobile and the like, comprising a horizontal support member of a length substantially the same as the width of the automobile top, a fixture secured to each end of said member for attaching said member in fixed position to the automobile, a tubular member of substantially the same length as said support member attached to said support member along one side thereof and positioned below the top of said support member, an elongated member telescopically disposed in said tubular member and having an extended position beyond the side of the automobile and a retracted position substantially fully within said first tubular member, a second support member of substantially the same length as said first support member, fixtures secured to each end of said second support member for attaching said second support member in fixed position to the automobile, and a lug secured to each end of and projecting above said second mentioned support member.

3. An apparatus for loading boats and other articles onto the top of an automobile and the like, comprising a horizontal support member of a length substantially the same as the width of the automobile top, a fixture secured to each end of said member for attaching said member in fixed position to the automobile, a hollow member attached to said support member along one side thereof and positioned below the top of said support member, an elongated member telescopically disposed in said hollow member and having an extended position beyond the side of the automobile and a retracted position substantially fully within said hollow member, a second support member of substantially the same length as said first support member, and fixtures secured to each end of said second support member for attaching said second support member in fixed position to the automobile.

4. In an apparatus for loading boats and other articles onto the top of an automobile and the like: a horizontal support member of a length substantially the same as the width of the automobile top, a fixture secured to each end of said member for attaching said member in fixed position to the automobile, a tubular member of substantially the same length as said support member attached to said support member along one side thereof and positioned below the top of said support member, an elongated member telescopically disposed in said tubular member and having an extended position beyond the side of the automobile and a retracted position substantially fully within said first tubular member, and means for locking said second tubular member selectively in its extended and retracted positions.

5. In an apparatus for loading boats and other articles onto the top of an automobile and the like: a horizontal support member of a length substantially the same as the width of the automobile top, a fixture secured to each end of said member for attaching said member in fixed position to the automobile, a hollow member attached to said support member along one side thereof and positioned below the top of said support member, and an elongated member telescopically disposed in said hollow member and having an extended position beyond the side of the automobile and a retracted position substantially fully within said hollow member.

6. An apparatus for loading boats and other articles onto the top of an automobile and the like, comprising a

horizontal support member fixedly secured to the automobile top, an annular member attached to said support member along one side thereof and positioned below the top of said support member, an elongated member disposed in said member and having an extended position beyond the side of the automobile and a retracted position, a second support member of substantially the same length as said first support member fixedly secured to the automobile top, and a lug secured to each end of and projecting above said second mentioned support member.

7. In an apparatus for loading boats and other articles onto the top of an automobile and the like: a horizontal

support member fixedly secured to the automobile top, an annular member attached to said support member along one side thereof and positioned below the top of said support member, and an elongated member disposed in said member and having an extended position beyond the side of the automobile and a retracted position.

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