# United States Patent

[11] 3,571,836


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[54] **BOAT DOCKING DEVICE**
**2 Claims, 7 Drawing Figs.**


[52] **U.S. Cl.** ..... **14/71,** 114/230
[51] **Int. Cl.** ..... **B65g 11/00**
[50] **Field of Search** ..... 14/71, 72; 114/230; 182/86



[56] **References Cited**
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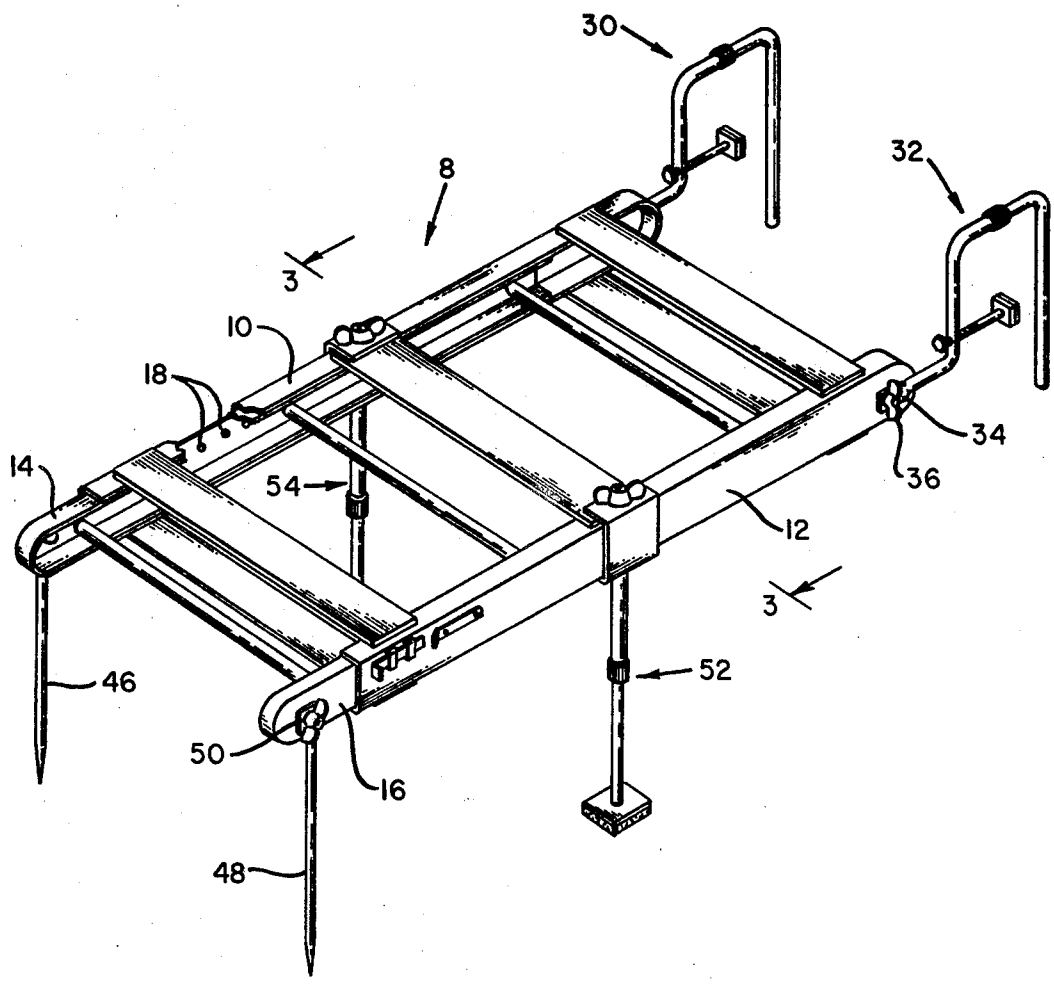
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**ABSTRACT:** A combined boarding ladder and dock for a small boat is provided by means of a telescoping ladder structure having U-shaped clamps at one end and pivoted spikes at the opposite end. The telescoping ladder structure can be locked in any desired degree of extension and the ladder can be swung horizontally from the boat, using the spike structure to engage the ground, providing a portable dock or the ladder can be swung vertically, providing a boarding ladder for the boat. Auxiliary legs are provided which can be clamped to the ladder to steady the ladder against the boat or which can be used as an intermediate supporting member when the ladder is in a horizontal position.

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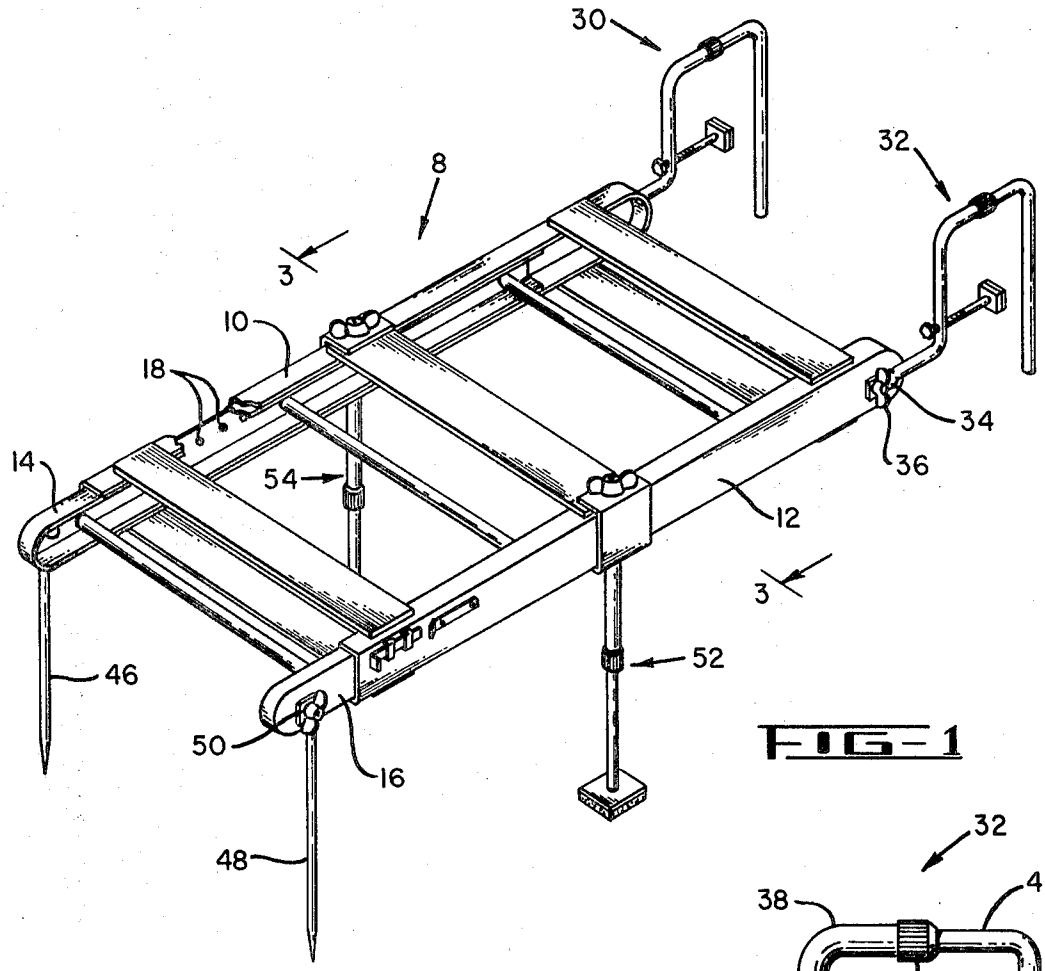



FIG-1

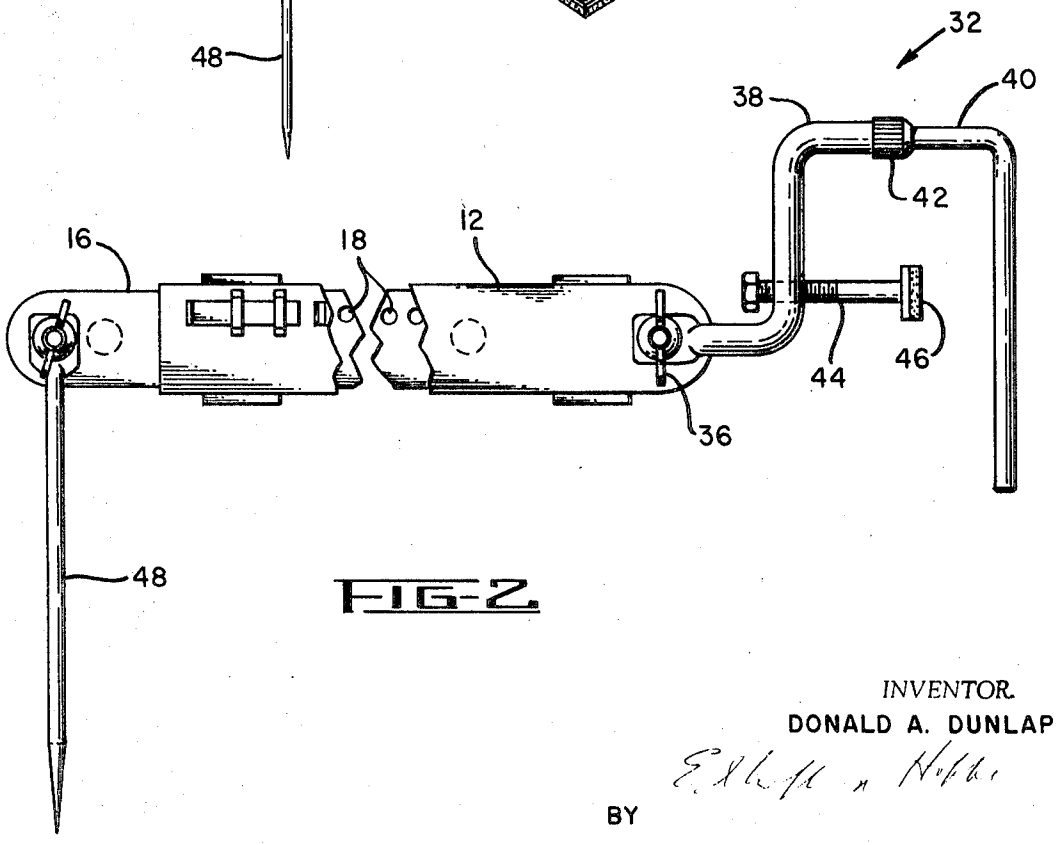



FIG-2

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SHEET 2 OF 2

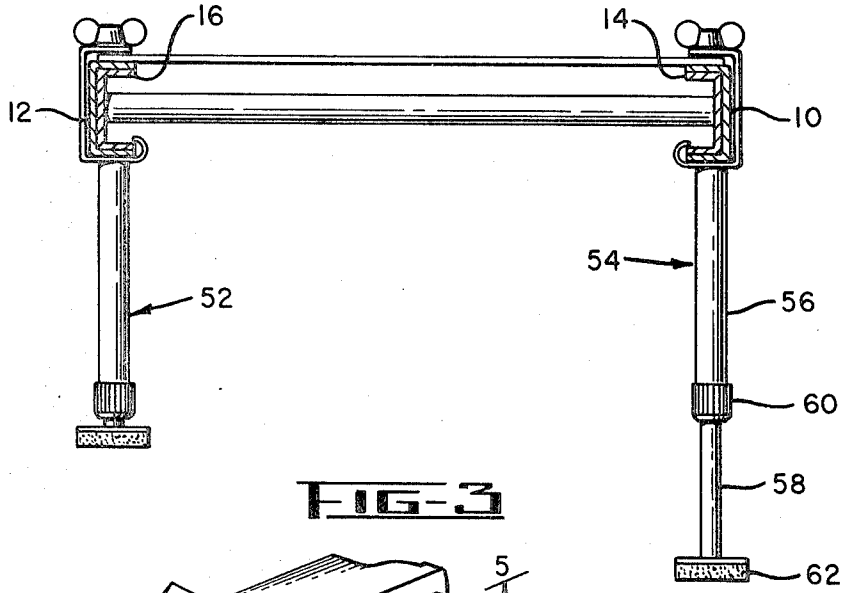



FIG-3

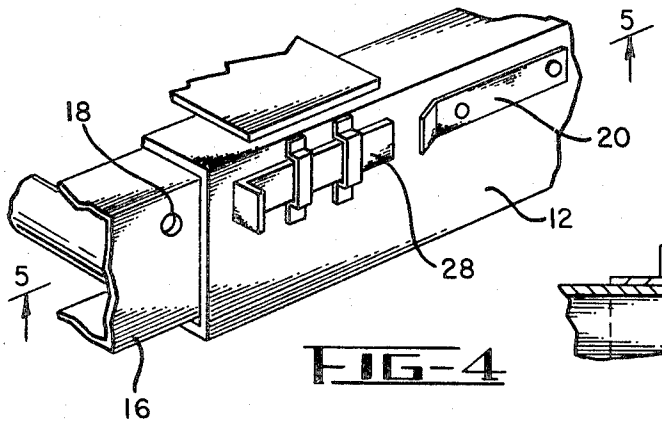



FIG-4

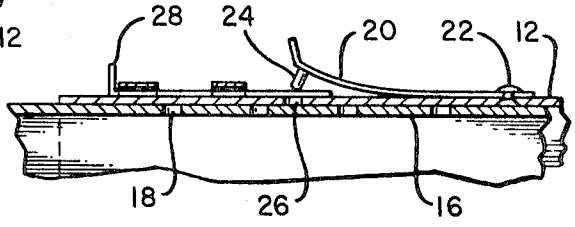



FIG-5

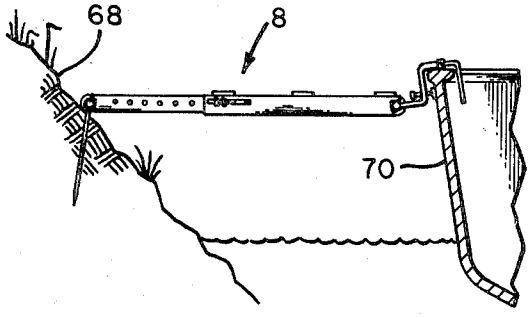



FIG-6

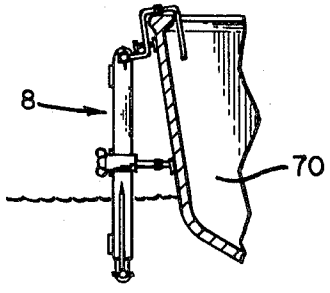



FIG-7

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# BOAT DOCKING DEVICE

## SUMMARY OF THE INVENTION

The present invention provides a simple, lightweight structure adapted for use with small boats. Essentially, it consists of a telescoping ladder wherein the degree of telescoping can be locked to provide a ladder of various lengths. At the boat engaging end of the ladder a pair of U-shaped clamps are provided which are pivoted to the ladder, said clamps being adapted to fasten over the gunwale of a boat and snuggly engage the gunwale. At the terminal end of the ladder a pair of spikes are provided and these may be engaged in soft ground or the like of a bank with the ladder extended in a horizontal position so that a docking structure is provided whereby it is easy to walk from the bank over the dock and into the boat. Alternatively, the ladder can be swung downwardly on the pivoted clamp structure so it is substantially vertical, in which case the spike structure can be folded upwardly to lie flush with the sides of the ladder. In this position, it provides a boarding ladder for the use of swimmers and the like. In addition, a pair of auxiliary legs are provided and these can be clamped at any position along the length of the ladder and may be utilized to provide an intermediate support for the ladder or, when it is used as a boarding ladder, can be extended against the side of the boat to prevent the ladder from swinging inwardly when someone climbs on it. The auxiliary legs are adjustable in length and they can be individually adjusted so that each will bear an equal weight.

## BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings for a part of this application:

FIG. **1** is a perspective view of a structure embodying the present invention;

FIG. **2** is an enlarged side view of the device;

FIG. **3** is a section through the center of the device;

FIG. **4** is a perspective view of a side rail showing the device for locking the ladder at various intermediate positions;

FIG. **5** is a section on the line **5–5** of FIG. **4**;

FIG. **6** is a side view of the device of the present invention showing its use as a dock; and

FIG. **7** is a similar view showing the use of the device of the present invention as a boarding ladder.

## DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings by reference characters, the device of the present invention includes a ladder generally designated **8** having outside side rails **10** and **12** with telescoping inside rails **14** and **16**. Thus an extension ladder is provided as is well known to those skilled in the art which can be extended or retracted by a ratio of almost **2** to **1**. In order to clamp the extension ladder in a desired position, the inner rails are provided with a series of small holes **18** while a spring member **20** is mounted on the outside rail by means of a rivet **22**, the spring member having a pin **24** thereon which is adapted to extend through a small hole **26** in the outside rail and lock the ladder sections in relationship with each other. A sliding lock **28** is also provided and this can be slid under the spring member, as is best seen in FIG. **5**, holding the spring member outwardly so that the pin **24** will not engage any of the holes; the ladder section can now be freely slid back and forth. When the approximate desired degree of adjustment is achieved, member **28** is slid back and the ladder sections moved slightly relative to each other whereupon the pin **24** will fall into one of the holes **18**, locking the structure.

At the boat engaging end of the ladder **8**, clamps generally designated **30** and **32** are provided which are pivotally mounted to the ladder as at **34**. Preferably a thumbscrew **36** is provided on each of the pivoted connections so that the connections can be tightened when a desired position is achieved. The clamps themselves each consist of an outer member **38** and an inner member **40** which telescope and can be locked by the knurled nut **42** in the manner well known to those skilled in the art. Further, a threaded member **44** is provided having a padded end **46** to allow the clamps to be fastened tightly to the boat. Normally, the threaded member **44** would be unscrewed and the member **38** and **40** adjusted to the particular width of gunwale of the boat and the threaded member **44** would then be drawn up, clamping them tightly against the boat as can be seen in FIGS. **6** and **7**.

At the terminal ends of the rails **14** and **16** a pair of spiked members **46** and **48** are mounted on pivots as at **50**.

In accordance with one embodiment of the invention, auxiliary legs generally designated **52** and **54** are provided. Each leg consists of an outside section **56** and a telescoping inner section **58** with a clamping nut **60**. The terminal end is provided with a resilient pad **62**. At the upper end of the leg a C-shaped clamp **64** is provided with a wing nut **66** thereon so that the auxiliary legs can be moved to any position along the length of the ladder and clamped in a desired position. Further, as is best seen in FIG. **3**, the legs can be individually adjusted in case they are used on uneven ground or at the curved portion of a boat wherein it is desired that the auxiliary legs be of different length.

The application of the structure can best be seen in FIGS. **6** and **7**. In FIG. **6** the structure is shown in use as a dock. Here the ladder portion is in a substantially horizontal position. The spikes have been driven into a bank **68**. The opposite end of the ladder has been clamped to the side of a boat **70**. In this position, a stable dock structure is provided for the boat.

In FIG. **7** the device is shown as a boarding ladder and here ladder proper has been drawn to an almost horizontal position and the auxiliary legs utilized to hold the ladder in fixed relationship to the boat. Also, the spikes have been swung around parallel to the ladder so they will be out of the way.

It is believed apparent from the foregoing that I have provided a simple structure for use with small boats which provides an efficient dock structure as well as boarding ladder. The device is inexpensive, lightweight and can be stored in a small place.

I claim:

**1.** A combined ladder and dock for a small boat or the like comprising in combination:

a. a ladder having a pair of telescoping sections, said ladder having a boat engaging end and a terminal end;

b. a pair of U-shaped clamps pivotally mounted on the boat engaging end of the ladder;

c. means for attaching said clamps to the gunwale of a boat;

d. means for locking said telescoping ladder sections in fixed relationship to each other;

e. spike members attached to said terminal end, said spike members being pivoted to the ladder whereby the spikes can be extended from the ladder in a ground engaging position or swung to lie flush with the side of the ladder whereby,

f. said ladder can be clamped to a boat and extended substantially vertical to provide a boarding ladder and extended substantially horizontally using said spikes as ground engaging means to provide a dock.

**2.** The structure of claim **1** wherein a pair of auxiliary legs are provided, said legs each having a clamp whereby the legs can be clamped intermediate the ends of the ladder to extend at right angles thereto, said legs being of adjustable length.