Feb. 21, 1939. E. B. WHITE 2,148,284

INSTANT RELEASE ROPE HAWSER STOPPER

Filed Oct. 18, 1937

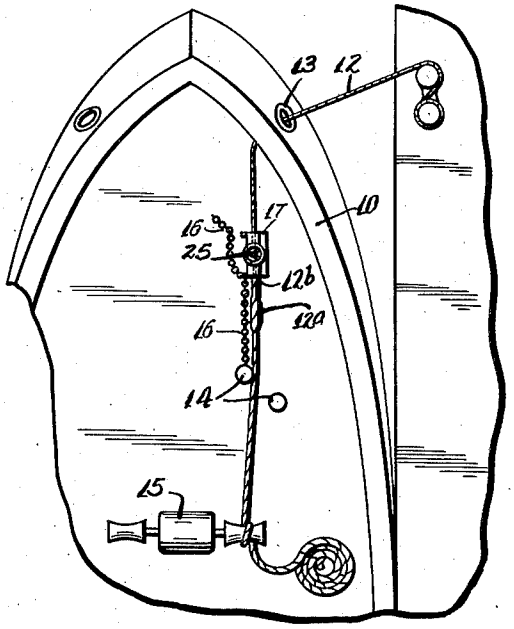


Fig. 1.

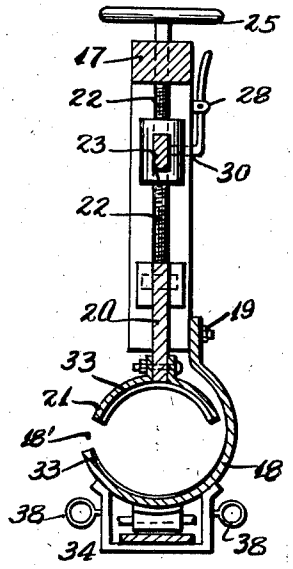


Fig. 4.

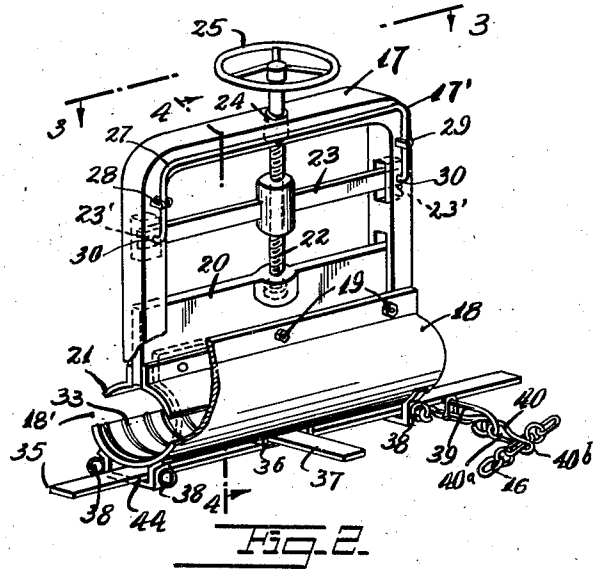


Fig. 2.

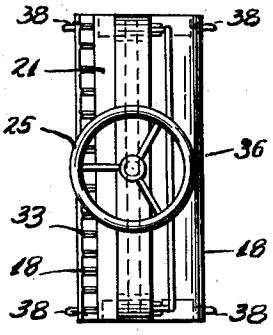


Fig. 3.

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INSTANT RELEASE ROPE HAWSER STOPPER

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Application October 18, 1937, Serial No. 169,651

6 Claims. (Cl. 114—199)

This invention relates to new and useful improvements in an instant release rope hawser stopper.

The invention has for an object the construction of a device as mentioned which is adapted to grip and hold the hawser rope, and which is capable of instantly releasing the hawser when circumstances require this. It is proposed to so arrange the stopper that it releases the hawser without burning its surface should the surface be moved through the stopper.

More specifically, the invention contemplates a combination of certain known and old elements in combination with the hawser to obtain the action desired. It is proposed to use in combination a hawser for docking a ship and extending through a chock in the ship and connected with a docking winch. It is proposed that the hawser be engageable with a set of bitts. The invention contemplates the use of a chain secured to one of the bitts, and that the stopper be releasably mounted on the chain and engageable with the hawser.

Still further the invention proposes to use a pelican hook for connecting the chain with the stopper, by which the hawser may be released from the chain instantly when required.

Still further the invention proposes securing the pelican hook to the chain by use of a movable bayonet chain link which may be set at different positions on the chain. With this arrangement it is possible to avoid a splice in the hawser so that the stopper may be arranged on one side or the other side of the splice.

Another object of the invention resides in so constructing the stopper that it is characterized with a pair of jaws of arcuate shape adapted to grip the hawser there-between.

The invention contemplates constructing the opposed faces of these jaws with grooves or serrations to assist in gripping the hawser.

Still further the invention proposes to arrange the jaws so that there is an opening at one side through which the hawser may be slipped into position between the jaws.

Another object of the invention resides in arranging the jaws to be removable and replaceable from the stopper proper so that these parts may be substituted for similar parts to accommodate hawsers of different diameters.

Another one of the objects of this invention resides in providing a screw mechanism for operating one of the jaws of the stopper and arranged in a particular manner so that the pressure of the stopper may be released quickly when desired.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:—

Fig. 1 is a plan view of a portion of a ship alongside a dock, and a mechanism for docking the ship constructed according to this invention.

Fig. 2 is a perspective view of the stopper per se.

Fig. 3 is a plan view of Fig. 2.

Fig. 4 is a vertical sectional view taken on the line 4—4 of Fig. 2.

The invention includes the combination with a ship 10 adjacent a landing dock 11 of a hawser rope 12 which is secured at one end upon the dock and which extends through the chock 13 of the ship and extends adjacent or between a set of bitts 14 mounted on the ship, and which connects with a dock winch 15. A chain 16 is attached at one end to one of the bitts 14 and the other end is free, or if desired, may be anchored on a stopper 17. This stopper is shown, per se, in Figs. 2–4 inclusive.

The stopper 17 comprises a frame 17' upon the lower end of which there is secured a stationary jaw 18. This stationary jaw is of substantially cylindrical form except for the fact that it has one side 18' open. This jaw is secured to the frame 17' by several removable bolts 19. Within the frame there is a jaw support 20 removably mounted. This jaw support supports a jaw 21 cooperative with the jaw 18. The jaw support 20 is supported with a screw 22. This screw is rotatively secured to the jaw support 20 and threadedly engages through a bar 23.

The screw 22 extends up freely through an opening 24 in the frame 17 and at its top end is provided with a wheel 25. The bar 23 is fixedly mounted in the frame by a release mechanism so that it may be released instantly when desired. The ends 23' slidably engage in grooves 26 formed in opposed faces of the sides of the frame. A yoke 27 is pivotally supported intermediate of its arms by pintles 28, to lugs 29 mounted on the side of the element 17. The free ends of the arms of the yoke 27 are provided with pins 30 which pass through openings in the sides of the frame 17 and which engage into openings in the ends 23' of the bar 23 to hold the bar fixedly in position.

The opposed faces of the jaws 18 and 21 are provided with grooves 33 to assist in gripping a

hawser passing through these parts. The bottom jaw **18** is provided with a brace **34** adapted to support a timber **35** which is capable of supporting the stopper in a vertical position. The sides of the brace **34** are provided with additional mounts **36** adapted to support additional transverse timbers **37** to further assist in holding the stopper in a vertical position. At the bottom, and at the ends, the jaw **18** is provided with anchorage rings **38**. A pelican hook **39** is attached to one of these rings **38** and connects with a bayonet chain link **40**. This link **40** slidably engages over or along the chain **16** and is adapted to be fixed in various positions on the chain. This bayonet link **40** has a large end **40a** which permits the chain to pass through when the chain is in this vicinity, and has a smaller end **40b** which engages on a link of the chain to maintain itself in fixed position.

The operation of the device is as follows:—

To dock the boat **10** it is necessary that the hawser **12** be extended out from the chock **13** and attached to the dock. The winch **15** is then operated to draw the hawser. After the hawser **12** has been drawn tight, the stopper **17** is engaged thereon. If there is a splice **12a** in the hawser which comes out between the bitts **14** and the chock **13** then it may be necessary to shift the stopper **17**.

It is possible to shift the stopper **17** on the chain **16** by shifting the bayonet chain link **40** so that the chain may pass through the enlarged end **40a** thereof. The jaws **18** and **21** are then clamped on the hawser **12**. Tension is then slackened from the winch **15** and because of the slack in tension the hawser **12** expands between point **12b** and the winch which also assists in retaining the line or hawser which becomes tightly gripped between the jaws of the stopper. The hawser **12** is then engaged on the bitts **14** and the entire load occurs between the hawser **12**, the chain **16**, and the bitts **14**.

If for any reason it is desired to release the hawser, as sometimes is necessary when docking the boat, the pelican hook **39** may be instantaneously released so as to disconnect the stopper **17** from the chain **16**. The hawser may then be let out from the bitts **14**. It should be noted that the hawser is not being pulled through the stopper, and therefore there is no possibility of the hawser becoming burnt. Hawsers are very expensive and damage to them is highly objectionable.

To release the stopper from the hawser the screw **25** may be turned to cause the jaw **21** to move upwards relative to the jaw **18**. If there is an emergency, and it is required that the stopper be instantly released from the hawser, the rod **27** may be smartly struck so that it is pivoted and so that the pin ends **30** disengage from the rod ends **23'**. The rod **23** is then free relative to the frame **17** and the top jaw **21** is consequently loose.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:—

1. In combination with a ship having a chock for a hawser, a dock winch for a hawser mounted on said ship located a distance from said chock, a set of bitts mounted on said ship between said chock and said winch, a hawser for docking said ship extending through said chock and between said bitts to said winch, a chain mounted at one end to one of said bitts, a stopper releasably connected to said chain and located between said bitts and releasably engaging said hawser for holding the ship tied to said dock, whereby either said stopper may be released from said chain or said stopper may be released from said hawser in cases of emergency to permit said hawser to be played out.

2. In combination with a ship having a chock for a hawser, a dock winch for a hawser mounted on said ship located a distance from said chock, a set of bitts mounted on said ship between said chock and said winch, a hawser for docking said ship extending through said chock and between said bitts to said winch, a chain mounted at one end to one of said bitts, a stopper releasably connected to said chain and located between said chock and said bitts and releasably engaging said hawser for holding the ship tied to said dock, whereby either said stopper may be released from said chain or said stopper may be released from said hawser in cases of emergency to permit said hawser to be played out, said stopper, comprising a frame, a jaw fixedly mounted on said frame, an opposed jaw adjustably mounted on said frame and adapted to clamp said hawser in conjunction with said fixed jaw.

3. In combination with a ship having a chock for a hawser, a dock winch for a hawser mounted on said ship located a distance from said chock, a set of bitts mounted on said ship between said chock and said winch, a hawser for docking said ship extending through said chock and between said bitts to said winch, a chain mounted at one end to one of said bitts, a stopper releasably connected to said chain and located between said chock and said bitts and releasably engaging said hawser for holding the ship tied to said dock, whereby either said stopper may be released from said chain or said stopper may be released from said hawser in cases of emergency to permit said hawser to be played out, said stopper, comprising a frame, a jaw fixedly mounted on said frame, an opposed jaw adjustably mounted on said frame and adapted to clamp said hawser in conjunction with said fixed jaw, a rotatable screw connected with said movable jaw, a bar threadedly engaging said screw and fixedly mounted on said frame, and means for releasing said bar relative to the frame.

4. In combination with a ship having a chock for a hawser, a dock winch for a hawser mounted on said ship located a distance from said chock, a set of bitts mounted on said ship between said chock and said winch, a hawser for docking said ship extending through said chock and between said bitts to said winch, a chain mounted at one end to one of said bitts, a stopper releasably connected to said chain and located between said chock and said bitts and releasably engaging said hawser for holding the ship tied to said dock, whereby either said stopper may be released from said chain or said stopper may be released from said hawser in cases of emergency to permit said hawser to be played out said stopper, comprising a frame, a jaw fixedly mounted on said frame, an opposed jaw adjustably mounted on said frame and adapted to clamp said hawser in conjunction with said fixed jaw, a rotatable screw connected with said movable jaw, a bar threadedly engaging said screw and fixedly mounted on said frame,

and means for releasing said bar relative to the frame, said bar having its ends slidably engaged in recesses formed in said frame, a yoke pivotally mounted on said frame and having its ends engaging and holding the ends of said bar.

5. In combination with a ship having a chock for a hawser, a dock winch for a hawser mounted on said ship located a distance from said chock, a set of bitts mounted on said ship between said chock and said winch, a hawser for docking said ship extending through said chock and between said bitts to said winch, a chain mounted at one end to one of said bitts, a stopper releasably connected to said chain and located between said chock and said bitts and releasably engaging said hawser for holding the ship tied to said dock, whereby either said stopper may be released from said chain or said stopper may be released from said hawser in cases of emergency to permit said hawser to be played out, said releasable connection of said stopper with said chain, comprising anchorage eyelets mounted on said stopper, a pelican hook connected with said eyelets, and said pelican hook being connected with said chain.

6. In combination with a ship having a chock for a hawser, a dock winch for a hawser mounted on said ship located a distance from said chock, a set of bitts mounted on said ship between said chock and said winch, a hawser for docking said ship extending through said chock and between said bitts to said winch, a chain mounted at one end to one of said bitts, a stopper releasably connected to said chain and located between said chock and said bitts and releasably engaging said hawser for holding the ship tied to said dock, whereby either said stopper may be released from said chain or said stopper may be released from said hawser in cases of emergency to permit said hawser to be played out, said releasable connection of said stopper with said chain, comprising anchorage eyelets mounted on said stopper, a pelican hook connected with said eyelets, and said pelican hook being connected with said chain, means for permitting said pelican hook to be connected with said chain anywhere along the length thereof, comprising a bayonet chain link interposed between said pelican hook and said chain whereby the pelican hook may be shifted along said chain.

EDMUND B. WHITE.