C. KOOK.

HOLE CLOSING DEVICE FOR SHIPS.

APPLICATION FILED AUG. 27, 1917.

1,249,422. Patented Dec. 11, 1917.

FIG. 1.

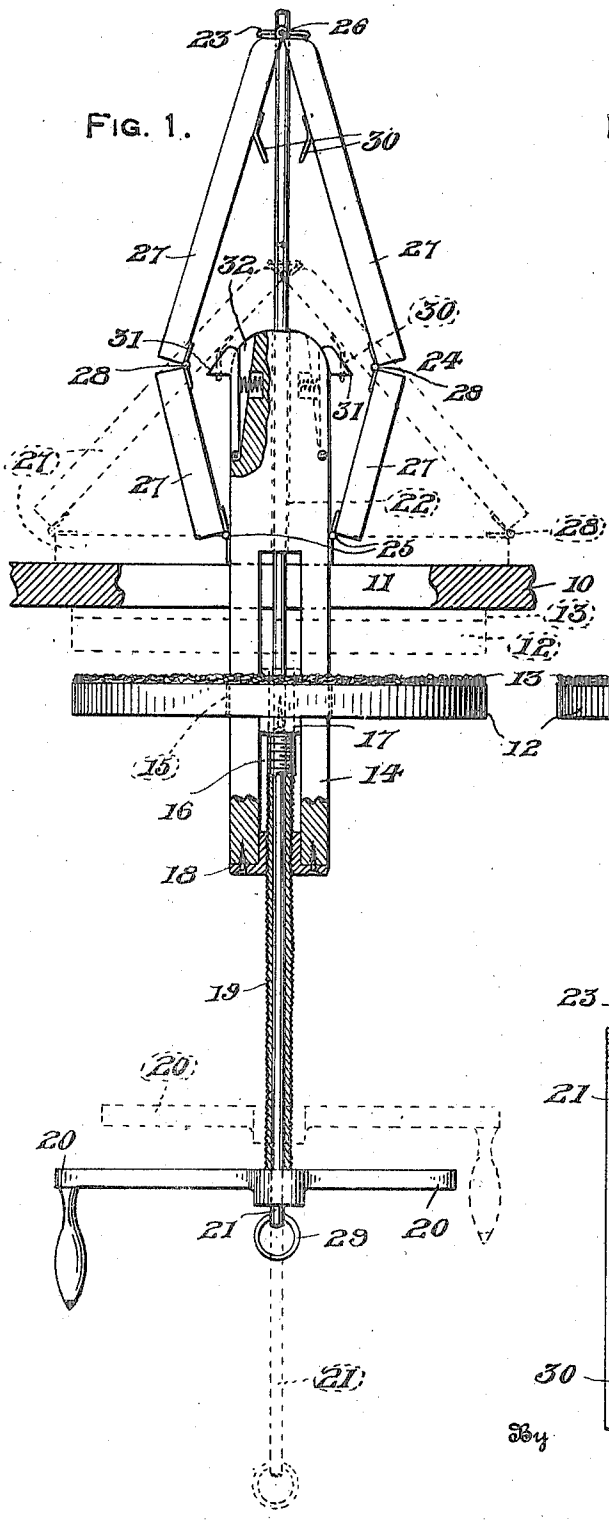


FIG. 2.

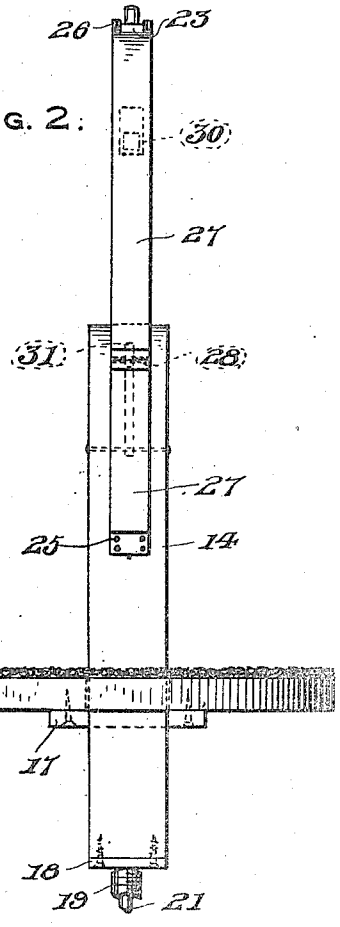


FIG. 4.

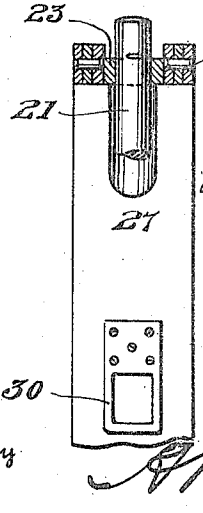
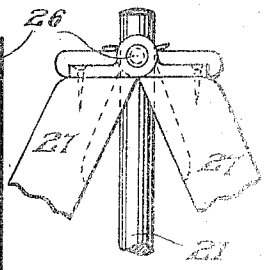


FIG. 3.



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UNITED STATES PATENT OFFICE.

CHELI KOOK, OF AKRON, OHIO, ASSIGNOR OF ONE-EIGHTH TO STANLEY BESSER, OF WARREN, OHIO.

HOLE-CLOSING DEVICE FOR SHIPS.

1,249,422. Specification of Letters Patent. Patented Dec. 11, 1917.

Application filed August 27, 1917. Serial No. 188,396.

To all whom it may concern:

Be it known that I, CHELI KOOK, a citizen of Russia, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Hole-Closing Devices for Ships, of which the following is a specification.

This invention relates to certain new and useful improvements in hole closing devices for ships.

The primary object of the invention is the provision of a device readily carried by a boat and adapted for instant use in closing a hole or opening that has been made in the side of the hull, the device being readily secured in position when desired.

A further object of the invention is the provision of a simple arrangement whereby a leak in the hull of a boat may be temporarily repaired by a single person positioned within the hull the device being readily carried for immediate use when required.

A still further object of the invention is the provision of a leak stopping device for hulls arranged for positioning a stopper member over a hole in the hull from the inner side thereof, great strength being exerted in retaining the device in its operative position.

In the drawing forming a part of this application and in which like designating characters refer to corresponding parts throughout the several views,

Figure 1 is a side elevation of the device partially broken away illustrated in connection with a portion of a hull having a hole therein and with the device illustrated by dotted lines in its operative position in closing engagement over the hole.

Fig. 2 is a side elevation thereof with a portion of the device removed.

Fig. 3 is a side elevation of the same, and

Fig. 4 is an enlarged sectional view of a portion of the device adjacent the outer hinged joint thereof.

It being understood that the device is adapted for use in connection with any form of boat, a portion of a hull 10 is herein shown having an opening 11 therein and my device provides a stopper plate 12 having a soft lining or packing 13 upon its inner face adaptable for forcibly engaging the inner side of the hull 10 overlying the hole 11 for preventing the entrance of water therethrough.

A mounting beam or frame 14 is shiftably arranged centrally through an opening 15 in the stopper 12, the beam 14 having a longitudinal slot 16 arranged with a cross strip 17 carried by the stopper and spanning the opening 15 positioned within said slot. A detachable head 18 is arranged upon the inner end of the beam 14 adapted for convenience in assembling the device and having a threaded tubular shaft 19 threaded through said head for forcible engagement with the stopper strip 17 while an operating crank 20 is provided for the outer end of the shaft.

A slide rod 21 is longitudinally shiftably arranged through the shaft 19 and through a longitudinal bore 22 of the beam 14 and arranged with a collar 23 adjacent its outer free end. Oppositely arranged pairs of levers 24 are connected between the collar 23 and the opposite sides of the beam 14, the said levers being hinged as at 25 to the beam and at 26 to the collar 23. The sections 27 of the levers 24 are hinged together as at 28 and the device is normally arranged as shown in Fig. 1 of the drawing with the levers 24 extended with the rod 21 projected while the shaft 19 is partially projected with the stopper 12 considerably spaced from the lever hinges 25.

When it is desired to use the device, the beam 14 and its levers 24 are projected through the hole 11 and the rod 21 is drawn outwardly by means of the handle or ring 29 upon its outer end, thereby shifting the levers 24 into a triangular arrangement and positioning the same flatly against the outer side of the hull 10. The crank 20 is then turned forcing the shaft 19 against the strip 17 and forcing the stopper 12 with its packing side, 13 against the inner face of the hull 10 and overlying the hole 11. It will be understood however that when the levers 24 are operatively positioned in this manner, the same are automatically retained so positioned by means of loops 30 arranged upon the inner sides of the levers 24 and engaging over spring pressed hooks 31 arranged within slots 32 in the outer sides of the beam 14. The levers 24 being retained in this manner form a strong abutment exteriorly of the hull 10 while the stopper 12 may be securely clamped against the inner side thereof by turning the shaft 19 as heretofore noted. The hole in the hull of a boat may

be readily stopped in this manner and the water prevented from entering the hull, the device being employed until it is possible to permanently repair the same.

What I claim as new is:—

1. A stopper device comprising a beam, a toggle-joint form of abutment arranged adjacent one end of the beam, an operating rod for said abutment extending to a point adjacent the opposite end of the beam, a stopper plate longitudinally movable upon the said beam and an operating shaft for the said plate operable adjacent the operating end of the said rod.

2. A device of the class described comprising a beam having a longitudinal slot, a threaded head carried by the beam at the outer end of the slot, a tubular shaft threaded in said head and extending within the slot, a stopper plate slidably arranged upon the beam, a strip carried by said plate extending through said slot in operative engagement with the inner end of the shaft, an operating crank upon the outer end of the shaft and an extensible abutment carried by the beam operable at a point adjacent the said crank.

3. A device of the class described comprising a beam having a longitudinal slot, a threaded head carried by the beam at the outer end of the slot, a tubular shaft threaded in said head and extending within the slot, a stopper plate slidably arranged upon the beam, a strip carried by said plate extending through said slot in operative engagement with the inner end of the shaft, an operating crank upon the outer end of the shaft, a rod slidably arranged through the said shaft and beam, an operating handle upon said rod adjacent the crank, opposite pairs of hinged levers pivotally connected between the said beam and the opposite free end of the rod and automatic hook connections between the said levers and beam when the levers are retracted in their abutment-forming arrangement.

In testimony whereof I affix my signature.

CHELI KOOK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."