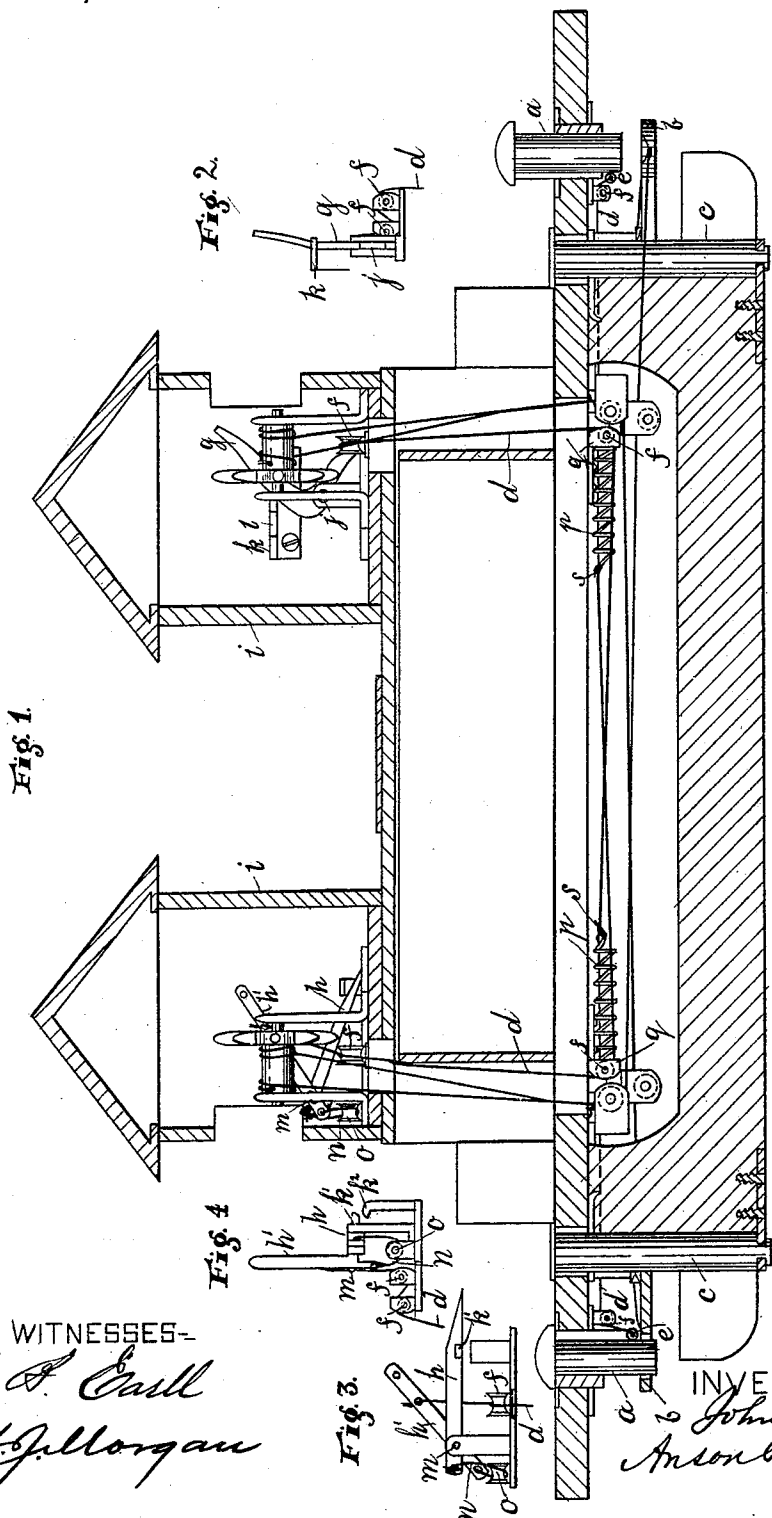


(No Model.)

J. KITSON.
RUDDER LOCKING APPARATUS.

No. 463,517.

Patented Nov. 17, 1891.



WITNESSES-
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UNITED STATES PATENT OFFICE.

JOHN KITSON, OF JERSEY CITY, NEW JERSEY, ASSIGNOR OF ONE-HALF TO
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RUDDER-LOCKING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 463,517, dated November 17, 1891.

Application filed June 5, 1891. Serial No. 395,192. (No model.)

To all whom it may concern:

Be it known that I, JOHN KITSON, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Rudder-Locking Apparatus for Ferry-Boats, of which the following is a specification.

My invention relates to lever apparatus located at a station of an officer of the boat, preferably in the vicinity of the pilot-house, but it may be at the engineer's station, and connected with the rudder-locking pins, whereby the wheelsman, engineer, or other officer may lock and unlock the rudders, according as the direction of the boat's movement is changed, without such officer having to leave his position and go to the positions of the pins to shift them by hand; and it consists in the improvement of such apparatus, all as hereinafter fully described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a longitudinal sectional elevation of a ferry-boat rigged with rudder-locking apparatus according to my invention, said levers being in this example located in the pilot-house. Fig. 2 is an elevation of one of the lever contrivances in a view at right angles to that in which the same devices are seen in the principal figures. Fig. 3 is an elevation of a modified form of lever apparatus same as seen in the left-hand side of the principal figure, but detached for greater clearness; and Fig. 4 is an elevation of the apparatus of Fig. 3 in a view at right angles to the view of that figure.

a represents the rudder-locking pins, which are contrived to drop into perforated arms *b*, projecting from the rudder-posts *c*, as usually arranged to lock the one ahead and be raised out of the one astern, according as the boat runs one way or the other, said pins having lifting-ropes, as *d*, connecting with them, as at *e*, and running over suitable guide-pulleys *f* to the upper deck and connected with any suitable hand-lever, as *g*, or foot-lever, as *h*, in or near the pilot-house *i*, where the pilot can work them to adjust the locking-pins therefrom. The hand-lever *g* is in this example an elbow-lever pivoted to a support at *j*, and has a

notched catch-plate *k*, along which the long arm swings, and may be fastened by lodging in a notch *l*, the rope *d* being connected to the end of the short arm. 55

To the foot-lever *h* I have added another member *h'*, both being pivoted at *m*, and the short arms connected by the cord *n*, extended around the pulley *o*, forming a compound arrangement, whereby greater length of movement of rope *d* is effected with a given range of movement of lever *h* by the foot than if rope *d* were connected directly to the end of lever *h*; but I do not limit myself to any particular form of lever. Lever *h* has a spur *k'* to catch under hook *k²* to hold up the locking-pin. 60 65

The locking-pins may be connected to the working lever at the end of the upper deck next thereto, if desired; but, because it is desirable to lock the rudder last used as soon as the boat is made fast in the slip and not to unlock the other until all preparations have been made for starting, it is preferred to connect the pins with the levers of the opposite ends of said upper deck, respectively, so that the pilot is in position to lock the one from the house in which he has steered the boat into the slip, and the other from the position he takes in the other house when outward bound. 70 75 80

To prevent the sag and inertia of the long ropes running nearly the whole length of the boat from obstructing the fall of the pins, I provide a recoiling spring *p* with each rope, and near the pin to pull the rope back and relieve the pin of the drag of the rope, for which I use coiled springs, located in a position protected from wet and freezing, and which are at the ends toward the pins in connection with which they are employed, fastened to a fixed object, as *q*, and at the other ends connected, at *s*, to the rope to stretch when the ropes are pulled and pull back the ropes when released. 85 90 95

I am aware that rubber springs have been employed for the like purpose in similar apparatus for operating the pins, but in a position exposed to wetting and freezing, which soon destroy such springs, and, besides, such springs have not sufficient range of movement for efficient action in such connection, 100

and I do not claim the recoiling springs broadly. I may, however, as above stated, locate the lever apparatus in the engine-room to be worked by the engineer as directed by
5 signals from the wheelsman.

I claim—

10 In a ferry-boat, the combination, with the rudder-locking pins, of levers for lifting and dropping them, located in the vicinity of the position of an officer of the boat, as on the upper deck in or about the pilot-houses, ropes connecting said levers and pins, guide-pulleys

for the ropes, and the coiled springs located in the protected position and connected with the ropes for relieving the pins of the drag 15 of the ropes, substantially as described.

Signed at New York city, in the county of New York and State of New York, this 11th day of May, A. D. 1891.

JOHN KITSON.

Witnesses:

W. J. MORGAN,
W. B. EARLL.