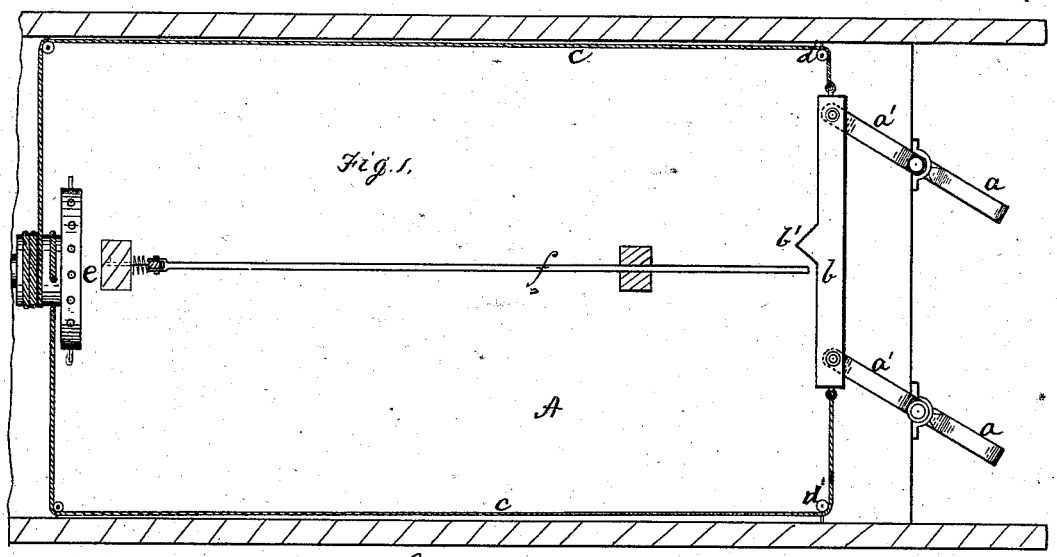
L. SHOOK.

INDICATORS FOR STEERING APPARATUS.

No. 194,476. Patented Aug. 21, 1877.



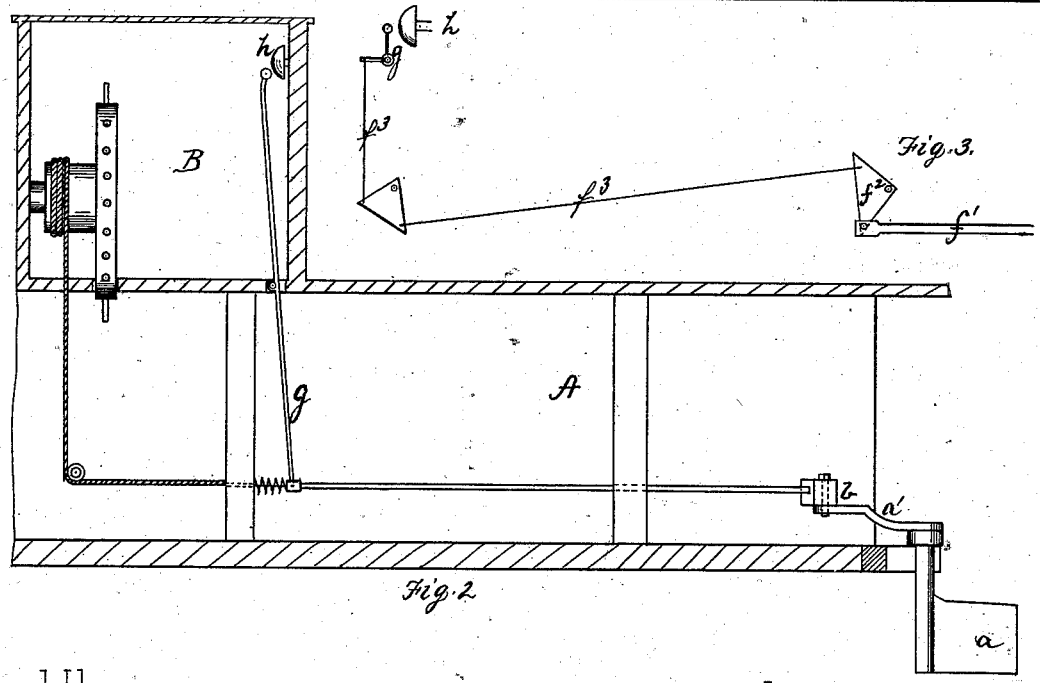


Fig. 2

Witnesses.

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UNITED STATES PATENT OFFICE.

LEVI SHOOK, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND PATTERSON & BISHOP.

IMPROVEMENT IN INDICATORS FOR STEERING APPARATUS.

Specification forming part of Letters Patent No. **194,476**, dated August 21, 1877; application filed June 19, 1877.

To all whom it may concern:

Be it known that I, LEVI SHOOK, of the city of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Devices for Indicating the Position of the Rudder of Crafts; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a horizontal section of a boat, showing my devices arranged thereon. Fig. 2 is a longitudinal vertical section of the same, and Fig. 3 illustrates bell-crank and wire connections which may be employed to actuate the alarm or indicator.

Like letters refer to like parts wherever they occur.

My invention relates to attachments for steamboats and other craft wherein it is desirable at times to determine when the rudder or rudders are in a central position; and it consists in combining with the rudder of a craft or its tiller an alarm or indicator and suitable intermediate mechanism for operating the alarm or indicator from the rudder, so that as the rudder turns past a given position an alarm will be sounded in the pilot-house or other predetermined place.

In backing a steamer or similar craft it is desirable that the rudder should hold a central position, or be in line with or parallel to the keel, and if not so positioned during the backing of the boat it is likely to be turned transversely or twisted and broken. At present the pilot has no means of determining when the rudder has been brought to such position, but has to depend on his judgment, guided by the position of the wheel. If the rudder is tangential to the keel-line, he will have great difficulty in holding the wheel during the backing of the craft, and it frequently occurs that the wheel is torn from his hold, resulting in injury to the pilot and the disabling of the rudder.

The object, therefore, of the present invention is to furnish the pilot with a means for determining the position of the rudder or rudders.

I will now proceed to describe my invention, so that others skilled in the art to which it appertains may apply the same.

A represents the hull of a craft, provided with the usual rudder or rudders *a*, having tillers *a'* connected by the coupling-bar *b*, from which the tiller ropes or chains *c* pass over suitable pulley-blocks *d*, and thence to the shaft of wheel *e* in the pilot-house B. On the coupling-bar *b*, at a suitable point, I form or secure a projection, lug, or cam, *b'*, which serves to actuate a spring bolt or rod, *f*, that operates, through an intermediate rod, *g*, the alarm or indicator *h*, located in the pilot-house B, or placed in some convenient and suitable position.

When three rudders are employed and coupled, as is frequently the case on river boats, the tiller of the middle rudder may be used to actuate the alarm mechanism.

Where a single rudder is employed the alarm may be actuated from the tiller thereof, or from the tiller of any rudder of a series.

Instead of the spring-rod *f* shown in Figs. 1 and 2, I sometimes employ (the equivalent device shown in Fig. 3) a short spring-bolt, f^1, connected to an elbow-lever or bell-crank, f^2, which is, in turn, connected to the rod *g* of the alarm or indicator by the wires or cords f^3 and intermediate elbow-levers *g'*.

The operation of my device is as follows: The wheel being turned in the proper direction, the rudder or rudders will answer thereto, and when in line with or parallel to the keel the lug *b'* (or tiller) will strike the end of spring bolt or rod *f*, and through the intermediate mechanism sound the alarm in the pilot-house, indicating to the pilot the fact that the rudder is on the center, where he can easily hold it during the backing of the boat.

The advantages of my invention are the certainty with which the pilot can determine when the rudder has reached the central position, and the avoidance of accidents from possession of such knowledge.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination, with a rudder or its tiller,

of an alarm or indicator, the spring rod or bolt, and intermediate mechanism, substantially as specified, for operating the indicator or alarm interruptedly, so as to indicate when the rudder passes the central position.

In testimony whereof I, the said LEVI SHOOK, of Pittsburg, county of Allegheny, and State of Pennsylvania, have hereunto set my hand.

LEVI SHOOK.

Witnesses:
JAMES I. KAY,
JOHN K. SMITH.