No. 715,325. Patented Dec. 9, 1902.

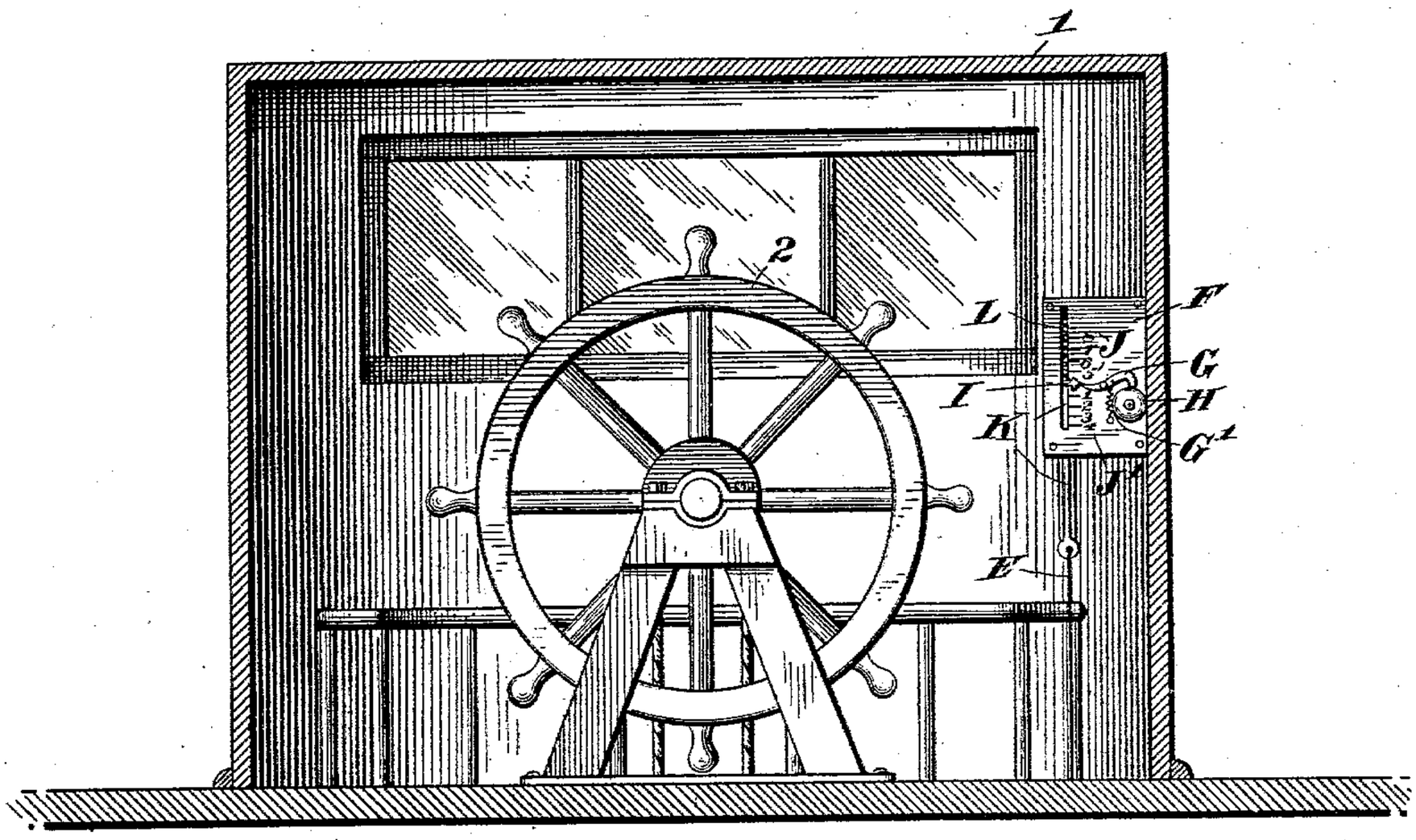
J. N. WAINMAN.

PILOT HOUSE INDICATOR FOR STEAMBOATS, &c.

(Application filed Apr. 17, 1902.)

(No Model.)

Fig. 1.



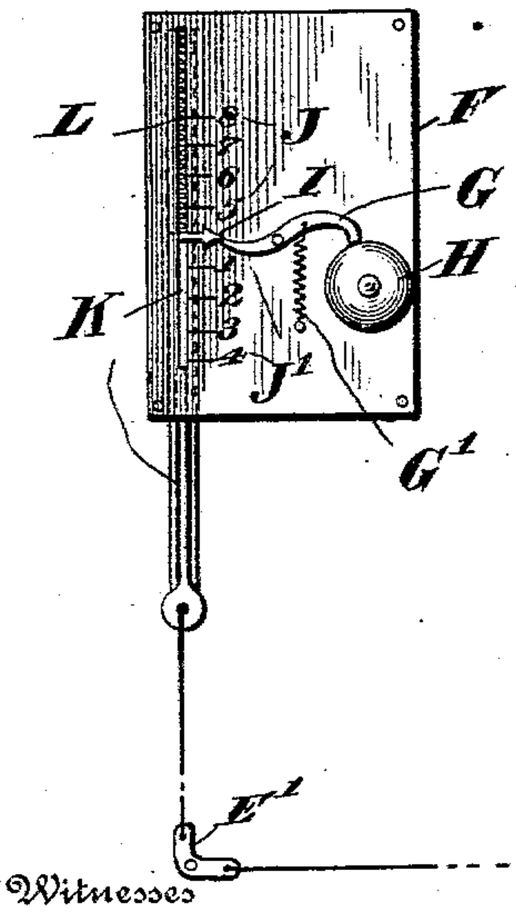
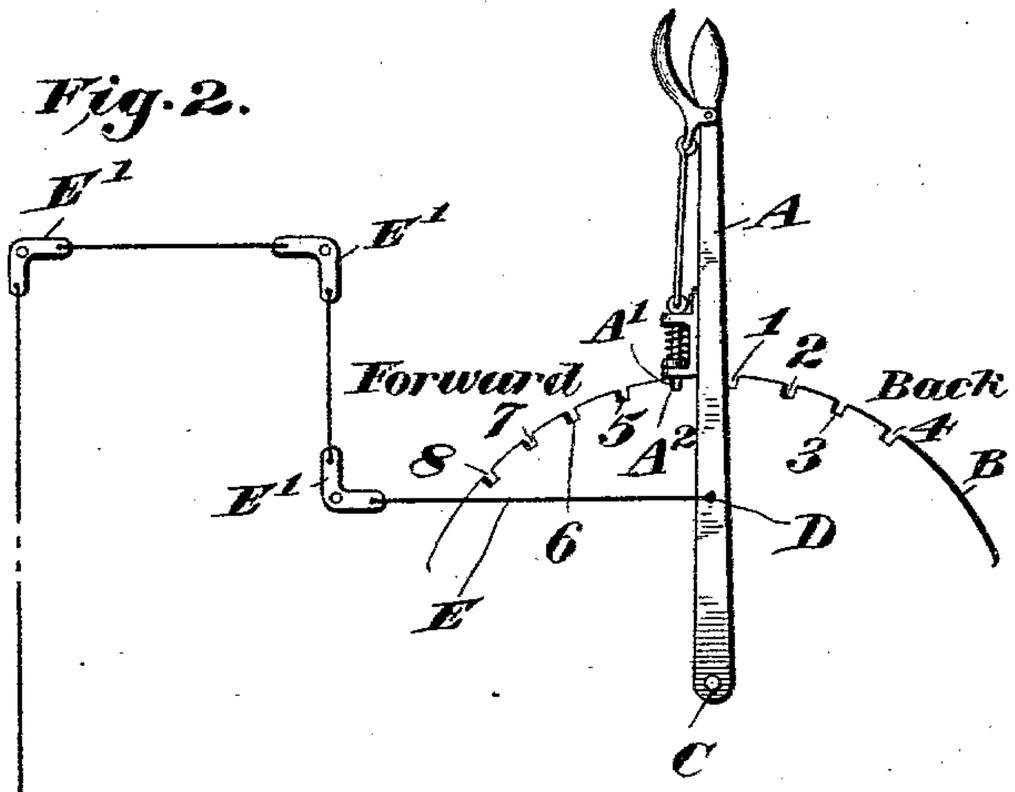


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN N. WAINMAN, OF EVANSVILLE, INDIANA.

PILOT-HOUSE INDICATOR FOR STEAMBOATS, &c.

SPECIFICATION forming part of Letters Patent No. 715,325, dated December 9, 1902.

Application filed April 17, 1902. Serial No. 103,355. (No model.)

To all whom it may concern:

Be it known that I, JOHN N. WAINMAN, a citizen of the United States, residing at Evansville, county of Vanderburg, and State of Indiana, have invented certain new and useful Improvements in Pilot-House Indicators for Steamboats and other Vessels, of which the following is a specification.

My invention relates to pilot-house indicators for steamboats and other vessels.

It is a matter of frequent occurrence in practice for a pilot to forget whether or not his last signal-bell to the engineer was to go forward, backward, or hold the engine on the center.

The object of the present invention is the provision of a pilot-house indicator of improved and novel form by means of which the operations of the engineer in holding the engine on a dead-center, sending it forward, or reversing it will be immediately indicated in the pilot-house to the extent to which said operations are carried on, so that the pilot will at all times be advised of the operation of the engine, thereby lessening, if not entirely obviating, the dangers and mistakes arising from misunderstanding between the pilot and engineer.

Having the foregoing object in view, the invention consists of an indicator in the pilot-house comprising a dial having graduations to indicate the extent of movement of the engine in going either forward or backward, an alarm, and a spring-retracted indicating device adapted to register on the graduations, which is connected to the engineer's controlling-lever, all of said parts being of improved and novel construction and operating in a peculiar and advantageous manner, as set forth in detail hereinafter and recited in the appended claims.

In the accompanying drawings, Figure 1 is a detail view showing the interior of a pilot-house equipped with the indicator, and Fig. 2 a diagrammatic view of the complete invention.

Referring to Fig. 1, 1 is the wall of the pilot-house, and 2 the pilot-wheel. According as one or two engines are employed in the steamboat or vessel one or two of the indicators (shown at F) will be used in the pilot-house.

Referring more particularly to Fig. 2, on the tablet F is pivoted a gong-striker G, which is retracted by a spring G′ and is adapted to strike a gong H. I represents a pointer connected to a slide-bar K, adapted to travel in a suitable slot in the tablet F, said pointer playing along the graduations J and J′, said graduations being by preference indicated by numerals 1, 2, 3, and 4 in the set J′ and 5, 6, 7, and 8 in the set J. L designates a coil-spring having one end connected to the tablet F, its other end being secured to the bar or slide K, and the office of this spring is to retract the slide and pointer on the same being released, so that the pointer will travel over the graduations 5, 6, 7, and 8. The pointer is positioned to engage with the striker G when moving downwardly and to trip past said striker when the graduation 1 is reached, whereupon the coil-spring G′ will cause the striker to strike upon the gong H, thereby sounding the alarm; but on the retraction of the slide and pointer by the coil-spring L the striker is not tripped or made to strike the gong.

In the engine-house is the controlling-lever A, having the usual pawl A′ and adapted to move over the quadrant B, and said lever is pivoted at C to hold the lever A on the dead-center. There is provided in the quadrant the notch A″. At the right of the lever is the series of notches 1, 2, 3, and 4 for engagement with the pawl A′ to hold the lever at different points to which it may be thrown, while at the left of the lever is the series of notches 5, 6, 7, and 8 to hold said lever when thrown in the opposite direction. The notches 1, 2, 3, and 4 secure the lever A at different points for the purpose of backing or reversing the engine, while the notches 5, 6, 7, and 8 hold it at different points when the lever is operated to send the engine forward. These series of notches are numbered and correspond with the series J and J′. A wire E or other suitable connection, with interposed bell-crank levers E′, connects the lower end of the slide or bar K with the controlling-lever A at the point D.

In operation, if the controlling-lever A has been thrown to the notch 1 the slide or bar K will be pulled downward in opposition to the retracting tendency of the spring L until the pointer I has reached the graduation 1 on the deflector F, and in making this movement the pointer I engages the striker G and trips past it, thereby causing the striker to strike the gong H and sound the alarm, which immediately informs the pilot that the engineer has reversed his engine and the boat has started to back. The pilot's attention having been attracted to the indicator by the sounding of the gong, any further downward movement of the pointer I consequent on the shifting of the lever A to the points 2, 3, or 4 will at once be apparent, so that the pilot will be informed as to the rate at which the engine is reversing. Assuming that the lever A is either at the dead-center or after having been thrown to any of the reversing-notches is moved to the notch 5, the coil-spring L will retract the slide or bar, causing the pointer I to pass the striker G, but without causing it to ring the gong, and onto the graduation 5, which indicates to the pilot that the engines are moving forward. Any further shifting of the lever A to the notches 6, 7, or 8 will be duplicated on the scale J, the extent of movement being shown in each instance.

I am aware that modified constructions and arrangements of parts could be resorted to in carrying out my invention, and I do not, therefore, limit myself to the precise details herein shown and described, but consider that I am entitled to all such modifications and changes as fall within the spirit and scope of the invention.

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

1. In a device of the class described, the combination with a movable indicator adapted to travel in opposite directions from a neutral point and a spring adapted for retracting said indicator or moving it in one direction, of an alarm sounded by the movement of said indicator when it passes its neutral position, and an operative connection between said indicator and the engine-controlling lever, whereby the movements of the lever are duplicated by the indicator and the alarm sounded on the movement of the indicator from its neutral position.

2. In a device of the class described, the combination with an engine-controlling lever, of an indicator having two series of graduations, one series corresponding to different degrees of movement of the lever in sending the engine forward and extending in one direction from a neutral point and the other series corresponding to different degrees of movement in sending the engine backward or reversing it, and extending in the other direction from the neutral point, an indicator adapted to normally remain at the neutral point, a spring for moving said indicator over one series of graduations, and a connection between the indicator and the lever, whereby movement of the lever in one direction will cause the indicator to move over one series of graduations, and movement of the lever in the other direction will cause the indicator to move over the other series of graduations.

3. In a device of the class described, the combination with an engine-controlling lever, of an indicator having two series of graduations, one series corresponding to different degrees of movement of the lever in sending the engine forward and the other series corresponding to different degrees of movement in sending the engine backward or reversing it, an indicator, a spring for moving said indicator over one series of graduations, a connection between the indicator and the lever, whereby movement of the lever in one direction will cause the indicator to move over one series of graduations, and movement of the lever in the other direction will cause the indicator to move over the other series of graduations, and an alarm adapted for sounding on the movement of the indicator past normal position.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JOHN N. WAINMAN.

Witnesses:

PERCY C. HOPKINS,

FRANK C. GORE.