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MEANS FOR OPERATING SIGNALING DEVICES.

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1,390,040.

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Fig. 1.

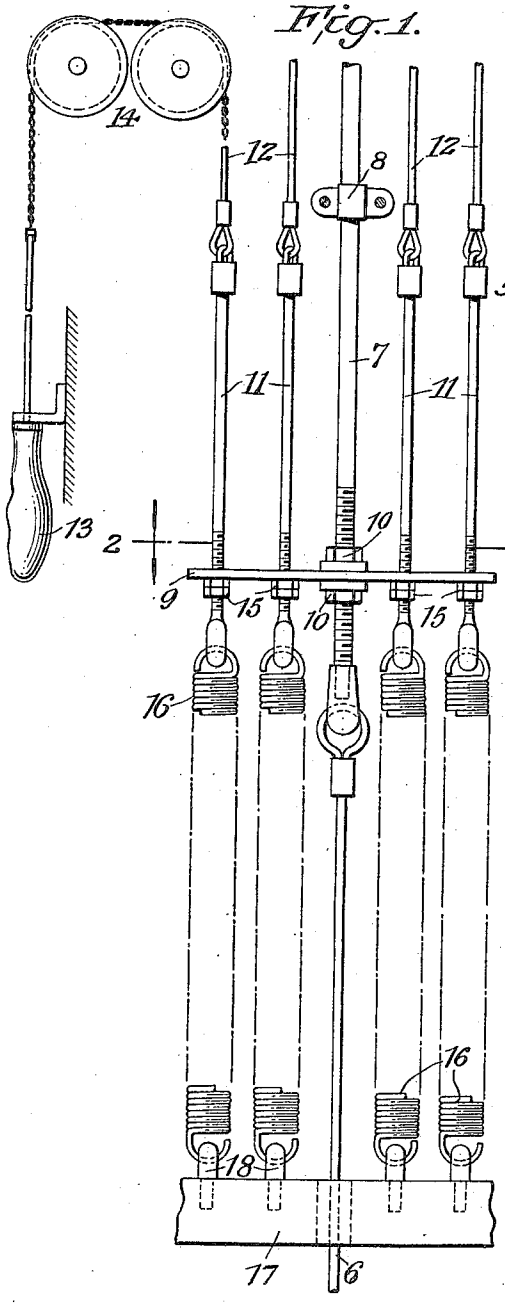
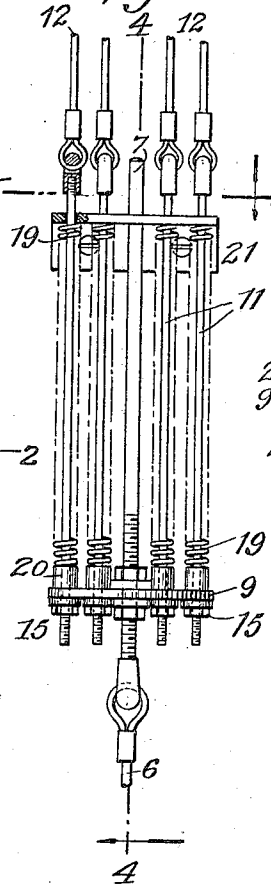


Fig. 3.



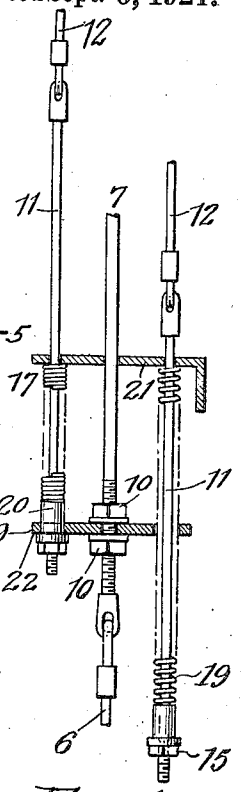


Fig. 4.

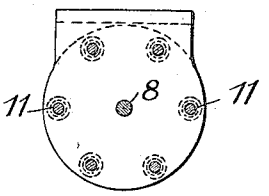
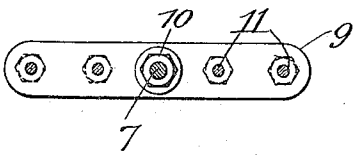


Fig. 5.

Fig. 2.



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MEANS FOR OPERATING SIGNALING DEVICES.

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To all whom it may concern:

Be it known that I, JOHN A. KEESEY, a citizen of the United States, and a resident of Brooklyn, county of Kings, State of New York, have invented new and useful Means for Operating Signaling Devices, of which the following is a specification.

The object of this invention is to provide a simple and effective means for operating the main or lead line of a signaling device, as for instance a whistle, bell or mechanical apparatus, from a plurality of stations or selected places of operation.

A constructive feature of this invention includes such an arrangement of the operating devices of the individual lines that, while they are all adapted to actuate a signaling apparatus or device, any one of them may be manipulated without disturbing any of the others.

The operating connecting means consist of rigid wires or rods always under tension, the applied tensional power of each one being opposed by a spring, whereby they are maintained in normal inoperative condition ready to be actuated by their individual lines from the selected places of operation.

Where, as often happens on ships, to which this invention is particularly applicable, a single signaling device or apparatus has to be operated from a great number of separate stations the individual lines will be collected together in suitable working groups, each group controlling a lead line connected to the main line, or a number of lead lines of the individual lines groups may be collected in a group or groups adapted to actuate the main line.

To further describe this invention reference will now be had to the accompanying drawings, in which:

Figure 1, is an elevation of a means for operating a lead or main signaling line from a number of individual lines from separate selected places, embodying the features of this invention.

Fig. 2, is a sectional plan view of the same on line 2, 2, Fig. 1.

Fig. 3, is an elevation of a modification of the invention.

Fig. 4, is a vertical section of Fig. 3, taken on line 4, 4.

Fig. 5, is a sectional plan view of Fig. 3, on line 5, 5.

The means for operating signals of this invention will preferably and generally most conveniently be placed in the pilot house, it being particularly adapted to actuate the signaling devices of ships.

To the lead end of the main line 6, which extends to the signal device, as for instance a whistle, a gong or bell jingles, or a mechanical telegraph apparatus, is fastened a rod 7, fitted to slide in a guide bracket 8. As the device will work equally well in any position this guide bracket 8 may be secured to the ceiling, wall or other suitable place.

A controller 9, which may be an elongated plate, as shown in Figs. 1 and 2 or a circular plate as shown in the other views of the drawings, is held on the rod 7 by nuts 10. Rods 11, seat freely in holes in the controller 9 and are fastened to the ends of the operating lines 12, each of which extend from a selected order or message sending location where it is provided with a handle or pull 13. These lines 12, as well as the main line 6 will include the usual pulleys and chains, as indicated at 14, where changes occur in the directions of their movements. The rods 11 are screw threaded and provided with lock nuts 15, against all of which the controller plate 9 bears when the device is in normal inoperative condition.

The rods 11 and operating lines 12 are kept under tensional strain by springs; for this purpose the structure shown in Figs. 1 and 2 is supplied with expansion or tension springs 16, which are located between the ends of the rods 11 beyond the jam nuts 15 and a bar 17 provided with eye screws 18, to which the ends of the springs connect, said bar being stationary and permanently located relative to the guide bracket 8. In the other structure shown in Figs. 3, 4, 5, compression springs 19 are used, surrounding the rods 11 and bearing against the tops of the upper jam nuts, which are formed as shouldered sleeves 20, and against the underside of a bracket guide plate 21, through the center of which the rod 7 of the main line passes; the rods 11 of the operating lines pass freely through holes circularly arranged in the plate 21. The guide holes in the controller 9 are of a size to freely slide over the springs 19 and the sleeve nuts 20, and said controller is moved, when any one of the operating lines is manipulated, by the shoulder on its sleeve nut acting against the underside of said controller, as indicated at 22, Fig. 4, and so

cause the signaling device connected to the main line to be actuated, the controller then sliding over the springs 19 of all of the other operating lines. The pull on the main line is usually opposed by a spring located at or near the signaling device.

Besides simplicity of construction and positiveness of operation all adjustments of the main line and operating lines may readily and with little trouble be made in the pilot house or other place of installation of this signal operating means. Such adjustments are often necessary to take up slack etc. in the lines. With the springs 16 and 19 holding the rods 11 and their connected lines 12 taut the nuts 15 will be set to bear against the controller 9, and the nuts 10 adjusted on the rod 8 to straighten or tighten the main line 6. These simple nut adjustments at the main order sending station avoids the use of turnbuckles now generally used in signaling lines.

It will be noted, by an inspection of Figs. 3, 4 and 5, the bracket plate 21 is the only part of this form of the invention that is stationary and has to be secured to some permanent part of the ship or other structure selected for the installation of this multiple signal operating means; also that the individual operating lines may be increased to any practical number without increasing the size of the structure beyond proper working limits.

It will also be understood that, although only one of the line operating means of this invention is shown and so far referred to, several of them may be installed in suitable places, where a signaling device is required to be operated from a number of widely separated stations, by collecting the lead lines 6 in suitable groups or combinations of groups to act on the controller of the main line of the signaling device.

I claim:

1. Means for operating signaling devices, comprising a controller secured to the main or lead line of the signaling device, a rigid operating element connected to each one of a number of operating or pull lines and adapted to act on the controller and so move the main or lead line when its pull line is manipulated and to remain stationary in inactive position when the main line is actuated by any of the other operating lines.

2. Means for operating signaling devices, comprising a controller secured to the main or lead line of the signaling device, a rigid operating element connected to each one of a number of operating or pull lines and adapted to act on the controller and to remain stationary when the controller is actuated by any of the other operating or pull lines, said main or lead line being always held under tension by its controller bearing against the stationary operating elements or the operating element acting thereon and means for holding each of the pull lines and its operating element under tension.

3. In a signal operating system, a main line attached to a signaling device, a controller attached to the lead end of the main line, a plurality of pull lines individually extending from a selected place of operation, an operating element connected to each of the pull lines, adapted to act on the controller and held in operative position thereby and means for holding the pull lines under tension and setting their operating elements in inoperative positions, the main line always being held taut by its controller contacting with one or more of the operating elements of the pull lines.

4. In a signal operating system, a main line attached to the signaling device, a controller adjustably connected to the lead end of the main line, a plurality of pull lines individually extending from a selected place of operation, an adjustable operating element connected to each of the pull lines, adapted to act on the controller and held in operative position thereby and means for holding the pull lines under tension and setting their operating elements in inoperative positions.

5. Means for operating signaling devices, comprising a rod adapted to be secured to the lead end of a main or signal actuating line, a controller plate carried on said rod, rods adapted to be secured to the following ends of a plurality of operating lines and held in operative positions by the controller plate, said plate being free to move in one direction over the operating rods, and a device on each operating rod adapted, when they are individually operated, to move the controller plate and so actuate the main or signal line without disturbing the other operating rods.

6. Means for operating signaling devices, comprising a rod adapted to be secured to the lead end of a main or signal actuating line, a controller plate and nuts for adjustably holding it on said rod, a fixed guide in which said rod is free to slide, rods adapted to be secured to the following ends of a plurality of operating lines and held in operative positions by the controller plate, adjustable nuts on the operating lines rods for contact with and moving the controller plate, and springs arranged to act on the operating lines to hold them under tension.

Signed at New York, county and State of New York, this 27th day of September, 1920.

JOHN A. KEESEY.

In the presence of:—
J. C. LAWRENCE,
JAMES A. HUDSON.