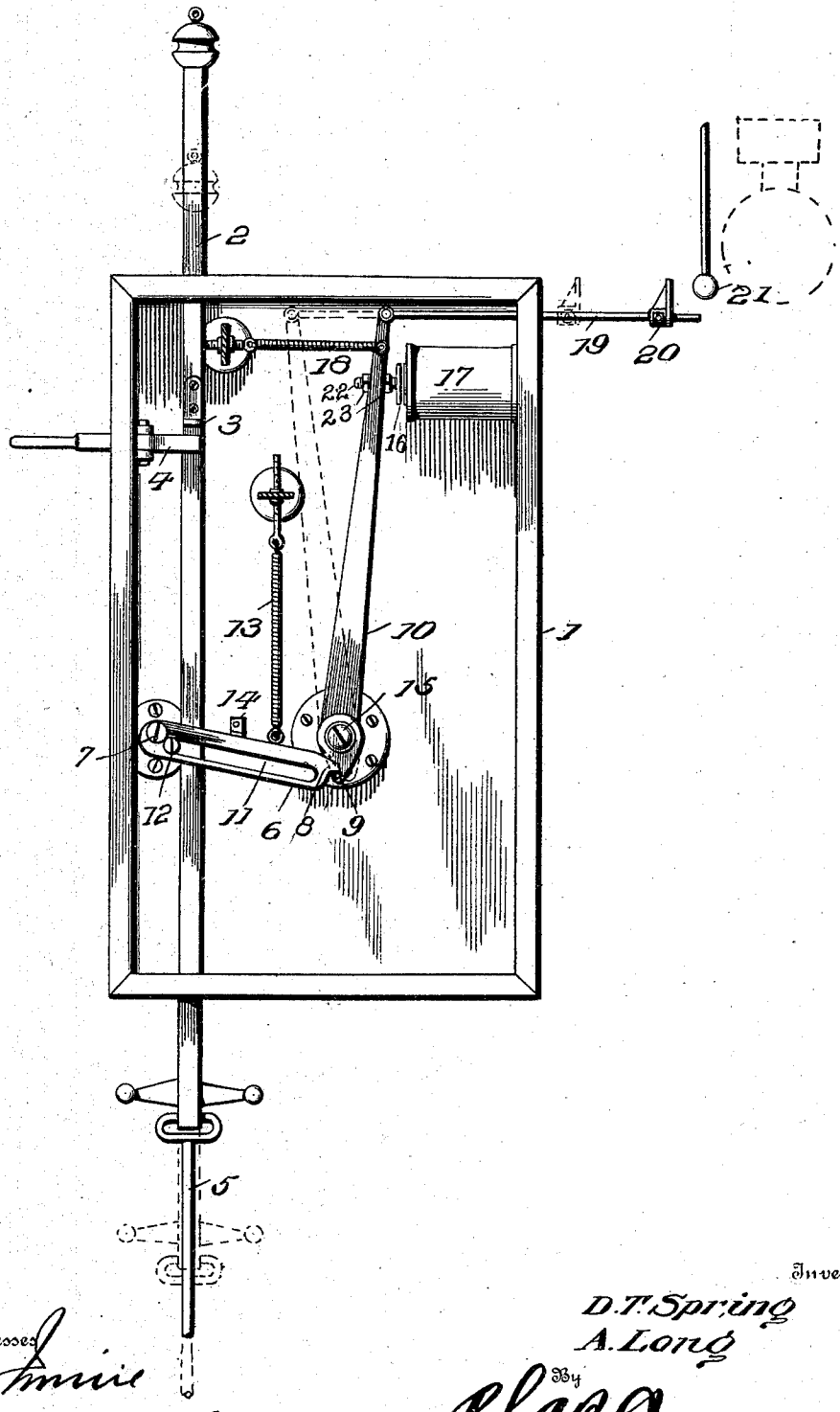
No. 681,081. Patented Aug. 20, 1901.

D. T. SPRING & A. LONG.

ENGINE HOUSE APPLIANCE.

(Application filed Apr. 9, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

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ENGINE-HOUSE APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 681,081, dated August 20, 1901.

Application filed April 9, 1901. Serial No. 55,092. (No model.)

To all whom it may concern:

Be it known that we, DANIEL T. SPRING and ANDREW LONG, citizens of the United States, residing at Wheeling, in the county of Ohio and State of West Virginia, have invented certain new and useful Improvements in Engine-House Appliances; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to releasing mechanism for engine-houses of a fire department of a village, town, or city to automatically liberate the horses when an alarm of fire is sent in, so they may quickly take their places under the harness preparatory to being hitched, the purpose being to save time and to provide a reliable, efficient, and simple mechanism.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawing hereto attached.

While the essential and characteristic features of the invention are necessarily susceptible of modification, still the preferred embodiment of the invention is illustrated in the drawing, which is a front view of the releasing mechanism, the dotted lines showing the operation of the parts.

The operating parts are attached to a base or support 1, consisting of a plate either of slate, wood, or other material selected for the purpose. The operating parts comprise the releasing-bar 2, mounted for sliding movement upon the base or support and adapted to be connected with the part to be released in any selected way. A stop 3 projects laterally from the releasing-bar and is adapted to be engaged by a pivoted lock-bar 4 when it is required to prevent actuation of the releasing-bar when disengaged from its restraining means on receipt of an alarm or operation of the actuating-lever. The lock-bar 4 is normally turned so as not to extend in the path of the stop 3; but when from any cause it is desired to prevent the automatic operation of the releasing mechanism the lock-bar is turned so as to extend across the path of the stop 3. A strap or hitch 5 of any design and construction has connection with the releasing-bar 2 and is connected with the door or other part to be released.

A holding-arm 6 is pivoted at one end to a post 7, attached to the base, and its opposite end is formed with an extension 8, to be engaged by a pin or stop 9, carried by the actuating-lever 10. This holding-arm is longitudinally slotted, as shown at 11, and a pin or stud 12, attached to the releasing-bar 2, is adapted to make positive connection with the holding-arm by passing through the slot 11 thereof. A spring 13 serves to return the holding-arm to a normal position when the releasing-bar 2 is disengaged from the hitch 5 or part to be released. A stop 14, attached to the base 1, limits the upward movement of the holding-arm. The upper portion of the projection 8 is beveled, so as to ride upon the pin or stop 9 and admit of the projection 8 passing by the part 9 when the holding-arm is returning to a normal position. This holding-arm supports the releasing-bar against the tension of the weight, spring, or other force normally tending to release the animals or open the door.

The actuating-lever 10 is pivoted near one end to a post 15, attached to the base 1, and its short arm carries the pin or stop 9, which engages under the projection 8 and supports the holding-arm against the force normally tending to release the part which under normal conditions is closed and made secure. The long arm of the actuating-lever carries an armature 16 for coöperation with an electromagnet 17 in the alarm-circuit. This electromagnet is included in a closed circuit, hence normally attracts the armature 16 and holds the pin or stop 9 under the projection 8. When the circuit is broken, as by the turning in of an alarm, the electromagnet 17 is demagnetized, and the lever 10, moving under the tension of the spring 18, as indicated by the dotted lines, withdraws the pin or stop 9 from under the projection 8, and the holding-arm 6 being unsupported permits the releasing-bar to slide and the part or parts connected therewith to become automatically released. The spring 18 is normally under tension, which tension can be varied in the usual way and is sufficient to move the lever, so as

to withdraw the pin or stop 9 from under the projection 8.

A rod or bar 19 has connection with the long arm of the actuating-lever 10 and is mounted for sliding movement and is provided with a stop 20 to be struck by the hammer 21 of a gong or audible signal. This stop 20 has adjustable connection with the rod 19, and when the gong is sounded by the turning in of an alarm the first stroke of the hammer imparts a sliding movement to the rod 19 and moves the actuating-lever, so as to withdraw the stop or pin 9 from supporting engagement with the holding-arm 6, when the result hereinbefore described takes place. The rod 19, in conjunction with the hammer 21 of the gong, may be used independently of or in conjunction with the electromagnet 17 and spring 18, so as to effect an automatic release of the part in the engine-house to be liberated.

The armature 16 has adjustable connection with the actuating-lever 10, so as to vary the engagement between the parts 8 and 9 to make the mechanism more or less sensitive to actuation when an alarm is turned in. The manner of adjustably connecting the armature with the lever 10 is not essential so long as it serves to vary the position of the stop 9 with reference to the extension 8. As shown, the armature is pivoted to a stem 22, slidably mounted in an opening of the lever 10 and held in an adjusted position by a pair of clamp-nuts 23. The armature 16 bears against the core of the electromagnet 17. Hence adjustment of the nuts 23 serves to move the lever 10 upon its fulcrum 15, thereby changing the point of contact of the stop 9 with the extension 8.

Having thus described the invention, what is claimed as new is—

1. In releasing mechanism of the character described, a releasing-bar provided with an offstanding part, a pivoted holding-arm having a longitudinal slot to receive the projecting part of the releasing-bar, and an actuating-lever having a pin or stop for engagement with the holding-arm to normally hold it in a given position, substantially as set forth.

2. In releasing mechanism of the character described, a releasing-bar, an arm for holding the releasing-bar in a given position, an actuating-lever for securing the said arm in a normal position, an electromagnet and armature for holding the actuating-lever in a given position, and an operating-rod adapted to move the actuating-lever by receiving the impact of a gong-hammer, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

DANIEL T. SPRING. [L. S.]
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