No. 829,421. PATENTED AUG. 28, 1906.

J. OCHS.

ELECTRIC RELEASE MECHANISM.

APPLICATION FILED FEB. 27, 1906.

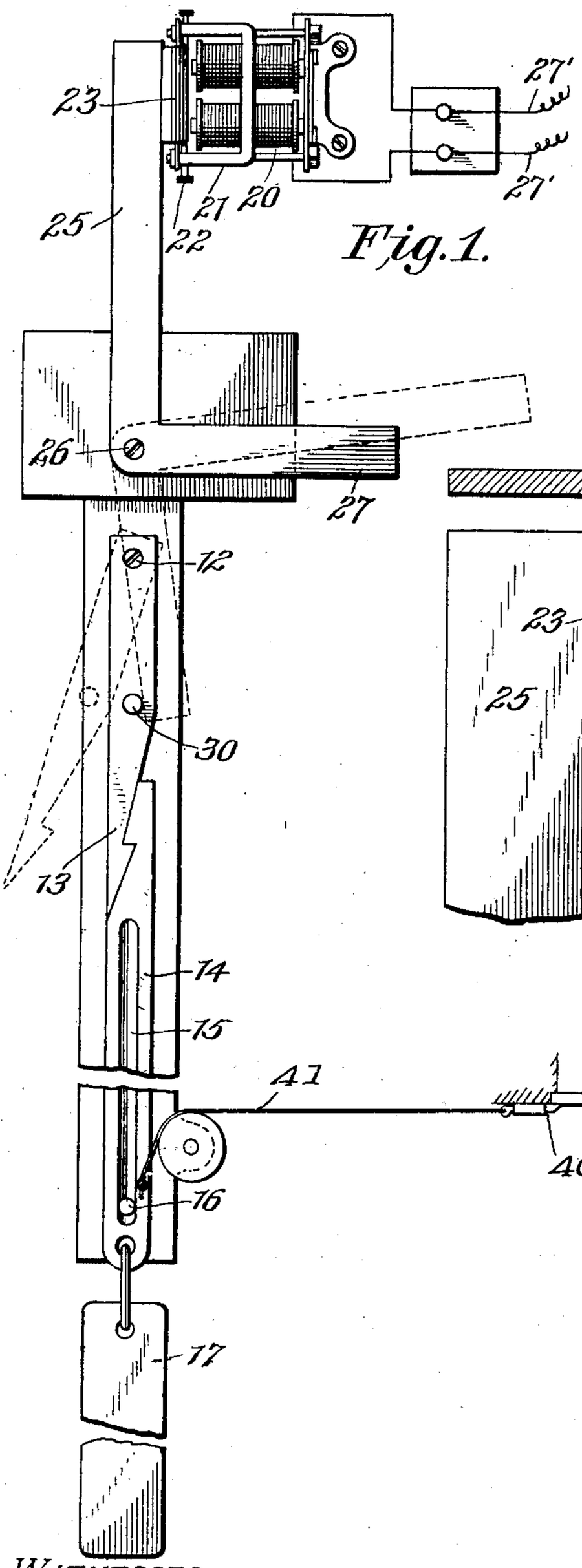


Fig. 1.

Fig. 2.

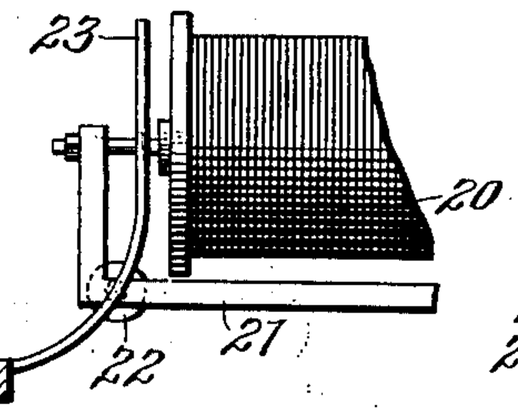


Fig. 4.

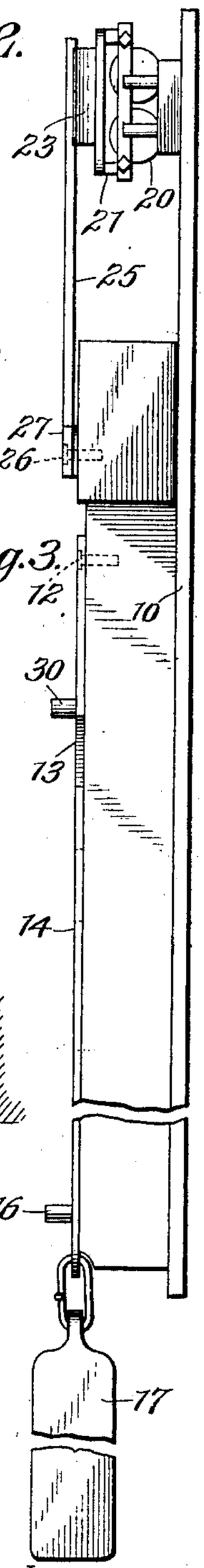
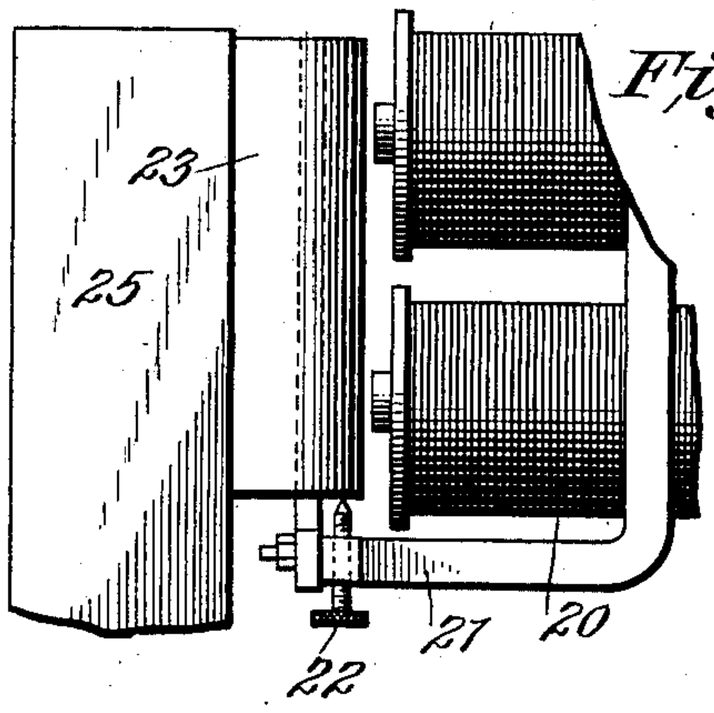
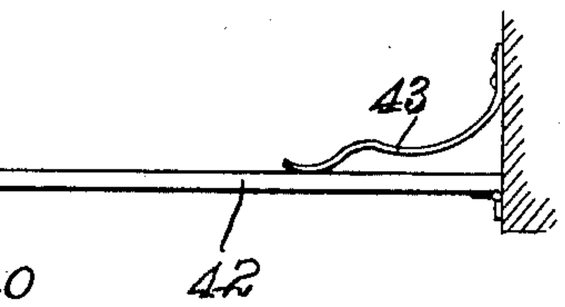


Fig. 3.





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ELECTRIC RELEASE MECHANISM.

No. 829,421. Specification of Letters Patent. Patented Aug. 28, 1906.

Application filed February 27, 1906. Serial No. 303,306.

To all whom it may concern:

Be it known that I, JACK OCHS, a citizen of the United States, residing at Texarkana, in the county of Bowie and State of Texas, have invented a new and useful Electric Release Mechanism, of which the following is a specification.

This invention relates to apparatus of that class employed in fire-engine houses, stations, and the like for effecting the quick release of the horses, opening stall-doors, releasing the harness, opening the outer doors of the house or station, and the like when an alarm is sounded.

The principal object of the invention is to provide an electrically-operated apparatus that is connected in the main signaling or other circuit, so that when an alarm is sounded by the ordinary fire or patrol telegraph or through telephonic or other apparatus the horses will be instantly released and the doors unlocked and opened.

A further object of the invention is to provide a device of this character that is of very simple and economical construction, which may be installed at small initial cost, and which may be quickly readjusted to position after each operation.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a side elevation of an electric release mechanism constructed in accordance with the invention. Fig. 2 is a side elevation of the same. Fig. 3 is a detail view of the operating-magnet and its armature on an enlarged scale. Fig. 4 is a plan view of the same.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The working parts of the apparatus are mounted on a suitable base-plate 10, that is attached to the wall or other convenient support and is disposed adjacent to releasing, door-opening, and circuit-closing mechanisms to be operated. From the base 10 projects a stud 12, on which is pivoted a catch 13, the lower end of which is arranged to engage with a vertically-slidable bar 14, having an elongated slot 15, which receives a guiding-stud 16, projecting from the base. To the lower end of the slide 14 is connected a weight 17, that tends normally to pull the slide down and then operate the releasing and other devices. The slide, however, is normally held in the elevated position shown in Figs. 1 and 2 by means of the catch 13. At a point above the catch is arranged an electromagnet 20, having a stud-frame 21, that is provided with pivot-screws 22, on which is mounted an armature-lever 23, the latter having one end disposed within the field of force of the electromagnet. The opposite end of the armature-lever is arranged to engage with the normally vertical arm 25 of a bell-crank lever that is pivoted on a stud 26, projecting from the base 10, and the second arm 27 of said bell-crank lever is normally held in the full-line position shown in Fig. 1 so long as the armature-lever is in engagement with the arm 25.

The electromagnet 20 is connected by wires 27 in a circuit which includes the fire or patrol telegraph or other electrical means for sounding the alarm, and said electromagnet may be connected in the main circuit or in a local circuit that is under the control of a main-line relay. When the electromagnet 20 is energized, the armature 23 is pulled to one side of the arm 25, and the horizontal arm 27 of the bell-crank lever carries said lever around to the dotted-line position shown in Fig. 1, said horizontal arm striking against a pin 30, that projects from the catch 13, and moving the latter over to the dotted-line position of Fig. 1. This frees the slide 14, and the latter will instantly fall under the influence of the weight 17.

The horse-releasing and door-opening devices may be connected to the slidable bar 14 in any desired manner, and in Fig. 1 is shown a releasing-bolt 40, connected by a cord or chain 41 to said bar 14, so that as soon as the latter is released and moves downward the bolt will be withdrawn. When the bolt is withdrawn, the door 42 moves to open position under the stress of the spring 43. Any desired number of bolts or other releasing devices may be employed. It is obvious that a device of this class may be installed in any station at low initial cost and that the parts may be readily readjusted after each

operation, it being merely necessary to swing the bell-crank lever back until the arm 25 passes beyond the end of the armature-lever and then raise the weight-strip 14 until it is engaged with the catch 13.

I claim—

In apparatus of the class described, the combination with a vertically-guided and weighted releasing-strip, of a pivotally-mounted catch arranged to engage with the upper portion of the strip and hold the same in elevated position, a stud projecting from the catch, a bell-crank lever pivotally mounted above the catch and provided with arms normally occupying vertical and horizontal positions, respectively, the horizontal arm being movable into engagement with the stud to force the catch to release position, an electromagnet, and an armature-lever carried by the frame of the electromagnet and having one end in engagement with the vertical arm of said bell-crank lever.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JACK OCHS.

Witnesses:
V. A. GHIO,
W. T. GRAY.