No. 668,987. Patented Feb. 26, 1901.

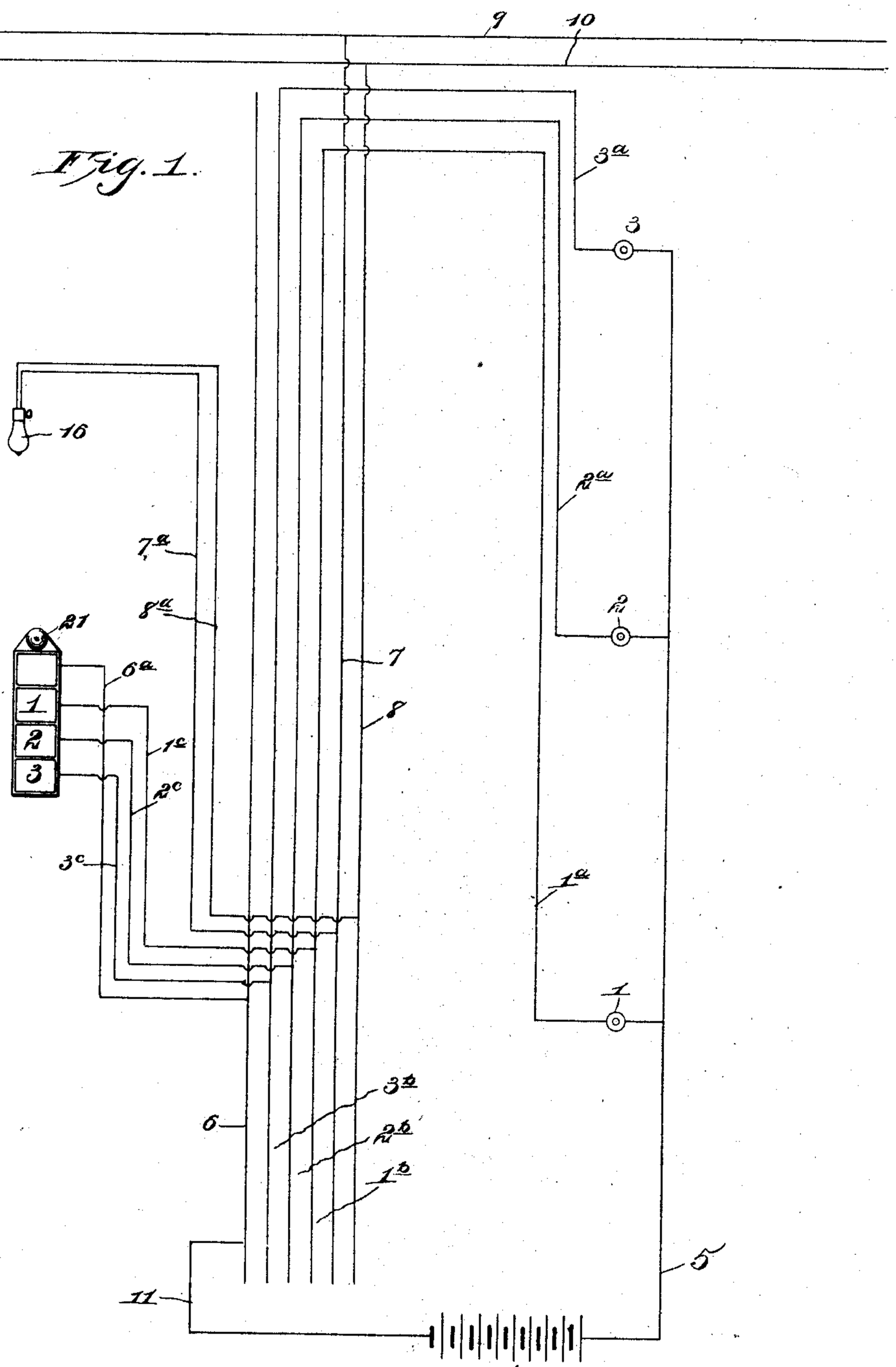
D. B. FLECK.

ELECTRIC ATTACHMENT FOR ELEVATORS.

(Application filed Feb. 2, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.



Witnesses
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Fig. 2.

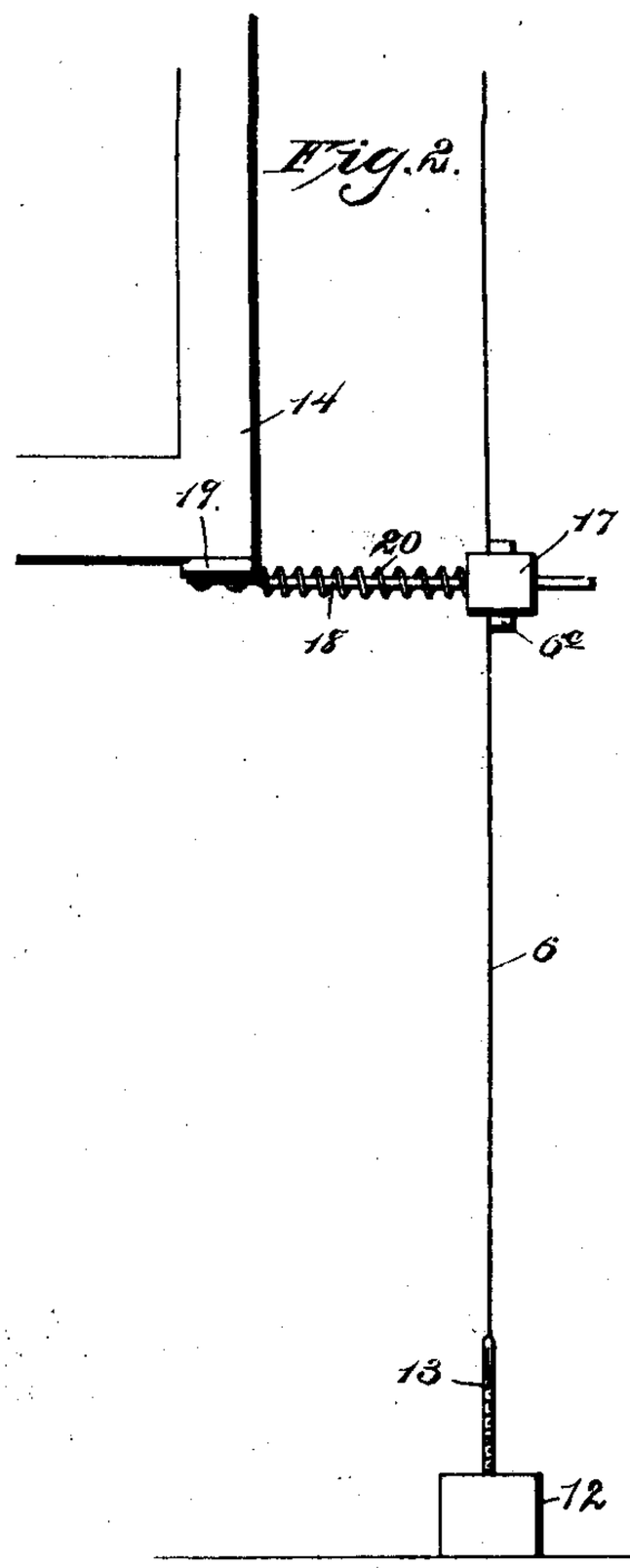


Fig. 3.

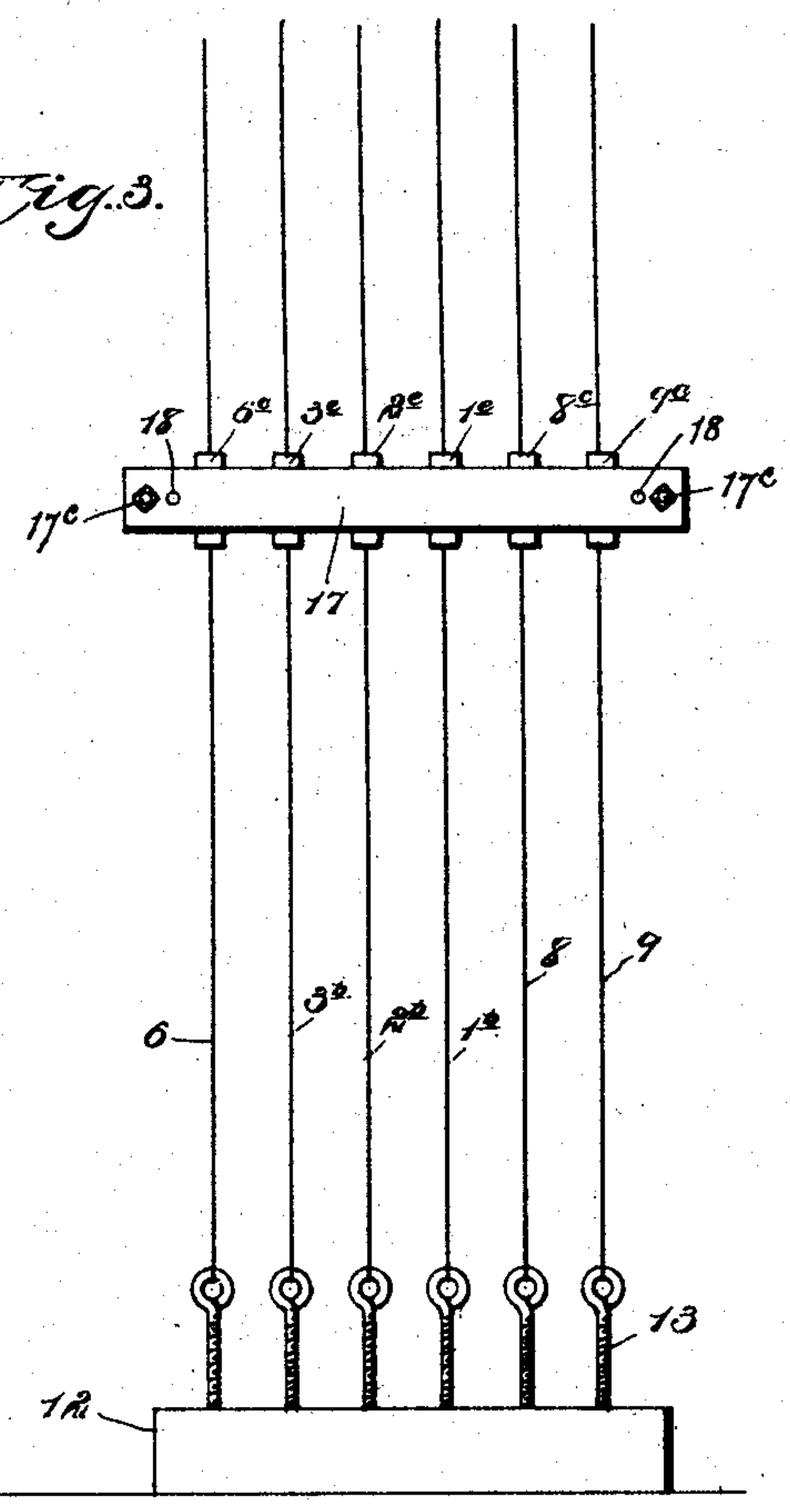


Fig. 1.

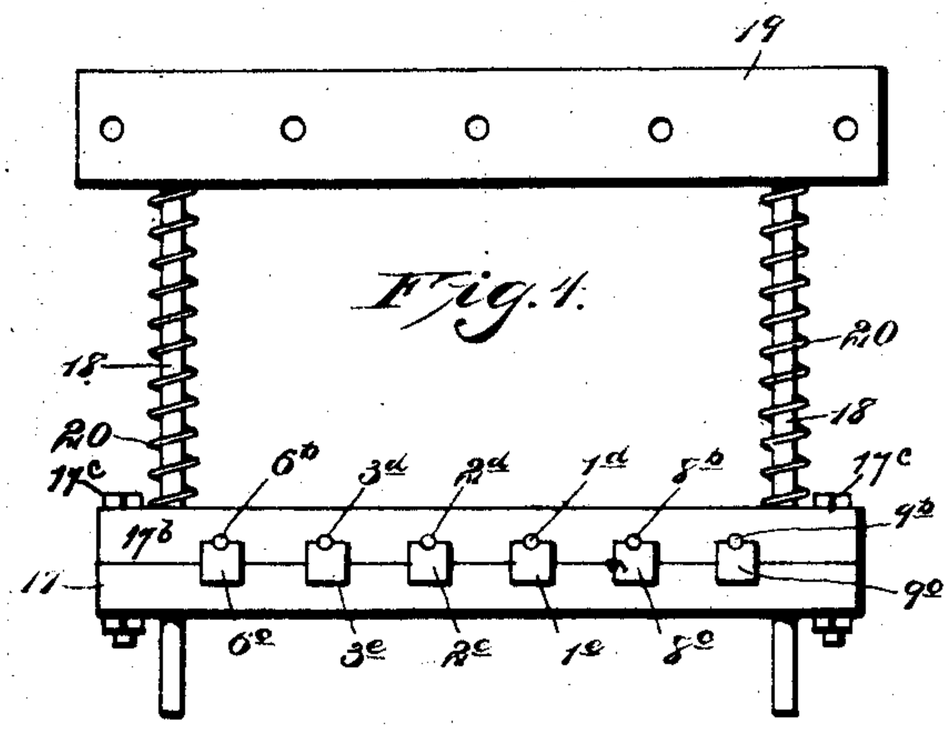


Fig. 5.

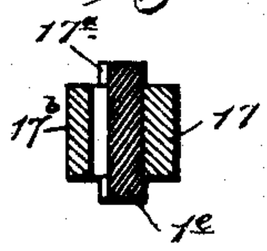
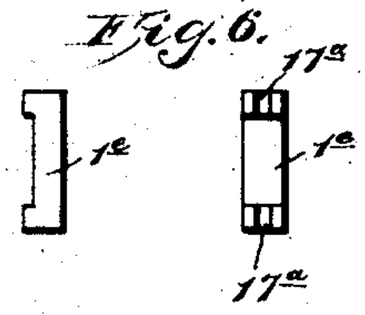


Fig. 6.



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UNITED STATES PATENT OFFICE.

DAVID B. FLECK, OF PORTLAND, OREGON.

ELECTRIC ATTACHMENT FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 668,987, dated February 26, 1901.

Application filed February 2, 1900. Serial No. 3,724. (No model.)

To all whom it may concern:

Be it known that I, DAVID B. FLECK, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Electric Attachments for Elevators, of which the following is a specification.

My invention consists in novel features of construction as hereinafter described and claimed.

In the drawings, Figure 1 represents a diagram showing the connections of the wires comprised in the system for both the annunciator and the electric lamps. Fig. 2 is a view showing the movable contact-frame carried by the elevator and the engagement of the contact-frame with the series of shaft-wires. Fig. 3 is a front view of the series of shaft-wires and the movable contact-frame thereon. Fig. 4 is a top or plan view of the contact-frame. Fig. 5 is a transverse vertical section taken on line $x\,x$ of Fig. 4, and Fig. 6 detail views of one of the contact-shoes carried by the contact-frame.

The drawings illustrate the invention as applied to an elevator in a building having but three floors, and therefore corresponding to the several floors are the push-buttons 1, 2, and 3, which perform the usual function of making the circuit, though normally keeping the circuit open. These circuit-closing buttons are connected with a storage battery 4 by means of wire 5 and have wires 1^a 2^a 3^a, which connect them, respectively, with the shaft-wires 1^b, 2^b, and 3^b at their upper ends, a separate shaft-wire being employed for each circuit represented by the buttons. The shaft-wires are six in number, the wire 6 being common to wire 1^b, 2^b, and 3^b in that it completes the circuit with such wire according to the button operated, while wires 7 and 8 are respectively connected with the wires 9 and 10 of the electric-lighting system. A wire 11 connects wire 6 with the battery 4. These several shaft-wires are strung, as shown in Figs. 2 and 3, a block 12 being secured at the bottom of the shaft and one near its top, each provided with eyebolts 13, equidistantly arranged and properly insulated therein or provided with insulation in their eyes, to which the several wires are tautly secured at their ends. The wires serve to complete the circuits with their corresponding wires 1^c 2^c 3^c 6^a 7^a 8^a, carried by the elevator-cage 14, Fig. 2, and leading to the annunciator 15 and the electric lamp 16 therein. To bring about this connection of cage-wires with the shaft-wire the device illustrated in Fig. 4 is employed, which comprises a two-part or sectional bar or frame 17 17^b, detachably secured together by bolts 17^e, and in which are provided insulated openings 1^d, 2^d, 3^d, 6^b, 8^b, and 9^b for the passage therethrough of the shaft-wires and brass contact blocks or shoes 1^e, 2^e, 3^e, 6^e 8^e, and 9^e, having a wire-engaging groove 17^a, recessed in the same block or being fitted within the frame 17 17^b where it is made in two parts and bolted together for the purpose. The frame 17 is supported on rods 18, which are secured to the under side of the cage 14 by means of a bar 19 and extend in a horizontal direction a short distance beyond the shaft-wires. The rods form a slide for the frame to move upon, the same being held under the tension of the springs 20, coiled about the rod in order that the contact blocks or shoes will be held in positive engagement with the shaft-wires and accommodate the yielding of said wires.

The contact block or shoes referred to form the terminals of the cage-wires, which are respectively connected therewith in a suitable manner. A bell 21 is placed in the annunciator-circuit after the usual method.

It will be readily seen that by the movable contact-frame on the series of shaft-wires a connection is at all times insured to make the annunciator and circuit complete when the button in any circuit is operated, and the electric-light circuit being formed in like manner when that circuit is closed. Thus for the better understanding of the system we will suppose the button 2 is operated. This action brings wire 2^a in electrical connection with wire 5, and the shaft-wire 2^b, with which 2^a connects, makes connection with the cage-wire 2^c, which connects, as do the other cage-wires, with the wire 6^a and which in turn connects with shaft-wire 6 and finds the completion of the circuit on the wire 11, connecting said shaft-wire with the battery.

The card 2 of the annunciator will be caused to drop by the completion of the circuit and

the bell 21 rung as each button is operated, since it is in that part of the system common to each circuit.

What I claim, and desire to secure by Letters Patent, is—

1. An electric attachment for elevators comprising a series of shaft-wires, a cage, a plate, a pair of rods, means whereby the plate and rods are secured to the cage, a contact-frame having insulated openings through which the shaft-wires extend and slidably mounted on the rods, tension-springs located on the rods between the cage and the contact-frame, and contact-blocks having wire-engaging grooves and located in the contact-frame.

2. An electric attachment for elevators comprising a series of shaft-wires, a cage, a plate, a pair of rods, means whereby the plate and rods are secured to the cage, a two-part contact-frame detachably secured together and slidably mounted on the rods and having insulated openings through which the shaft-wires extend, tension-springs located on the rods between the cage and the contact-frame, and contact-blocks having wire-engaging grooves and located in the contact-frame.

3. An electric attachment for elevators comprising a series of annunciator and light shaft-wires, a cage, a plate, a pair of rods, means whereby the plate and rods are secured to the cage, a contact-frame having insulated openings through which the annunciator and light shaft-wires extend slidably mounted on the rods, tension-springs located on the rods between the cage and the contact-frame and contact-blocks having wire-engaging grooves and located in the contact-frame.

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

DAVID B. FLECK.

Witnesses:
GEO. P. LENT,
A. P. ARMSTRONG.