

No. 643,405.

Patented Feb. 13, 1900.

J. T. FRIEND.
BURGLAR ALARM.

(Application filed Aug. 3, 1899.)

(No Model.)

Fig. 1.

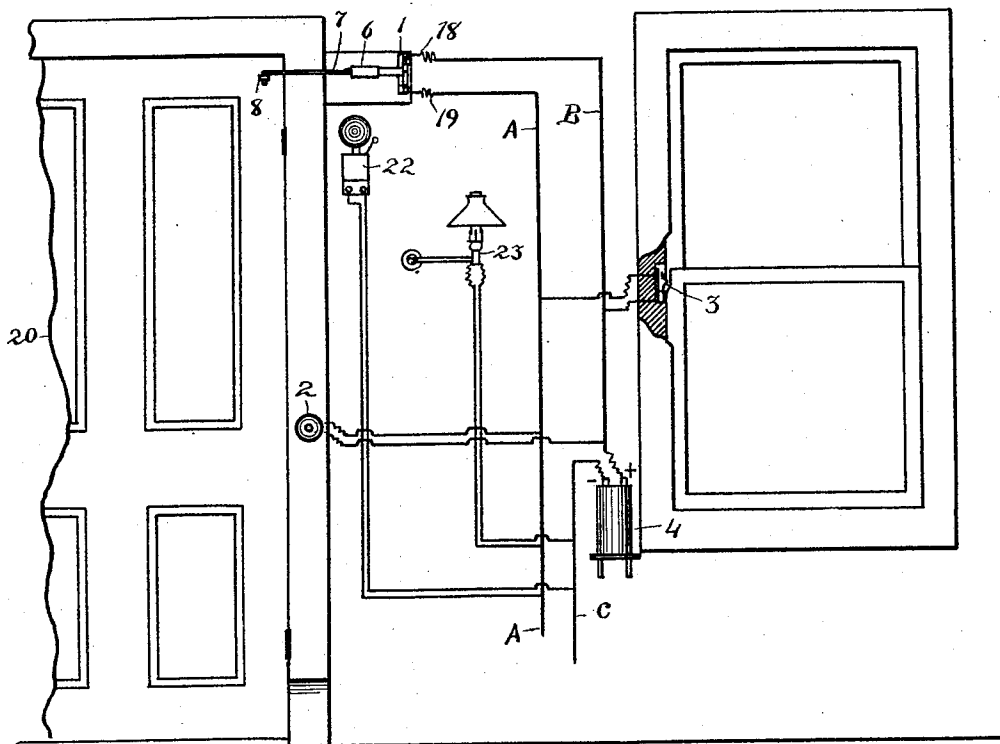
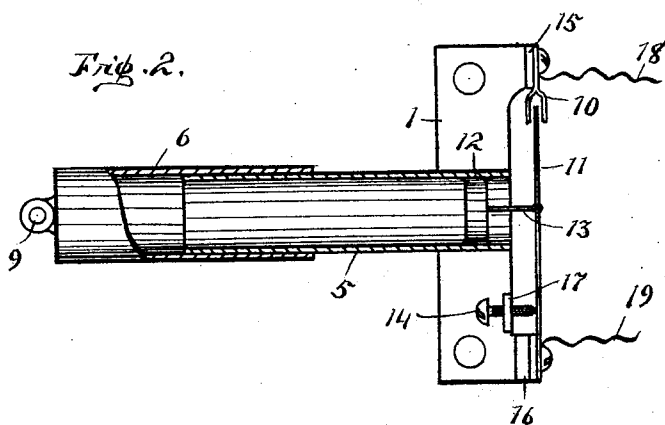


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN T. FRIEND, OF FORT WAYNE, INDIANA.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 643,405, dated February 13, 1900.

Application filed August 3, 1899. Serial No. 725,944. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. FRIEND, a citizen of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Burglar-Alarms; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in burglar-alarms wherein means are provided for automatically closing and opening an electric circuit for the purpose of ringing an electric bell and lighting a gas-jet; and the object of my improvement is to afford automatic means for closing an electric circuit while a door is being swung upon its hinges and for opening said circuit when the door is inert.

I accomplish my object by the construction illustrated in the accompanying drawings, in which—

Figure 1 is an elevation showing my improvement connected to a door and with electrical connection in parallel with a window contact-spring and push-button and also an electric bell and electric gas-jet lighter connected in parallel in the return-circuit; and Fig. 2 is a side elevation of my improved contact device, partly cut away to disclose the interior.

Similar letters and numerals of reference indicate corresponding parts in both views.

The contact device consists of a plate 1, having a rearwardly-extending tube 5, open at both ends. The said plate has upturned lugs 15 16 17. To the lug 16 is secured a flat sensitive spring 11, which passes over the inner end of the tube 5. The upper end of said spring normally rests midway between the two contact-points of the bifurcated plate 10. A screw 14 is mounted in the lug 17 and is adapted to engage the spring 11 for the purpose of adjusting the same. The bifurcated spring 10 is secured to the lug 15 and ranges astride the end of the spring 11. A piston-head 12 loosely fits in the tube 5 near the end and is connected by a rod 13 to the spring 11, by means of which said spring is actuated.

Over the outer end of the tube 5 is mounted

the shell 6, which is closed at its end and is provided with an eye 9. The said shell is adapted to reciprocate upon the tube 5 when the door 20 is moved back and forth by means of the connecting-rod 7, which is attached to the eye 9 and to a bracket 8, secured to the door.

The wire 18 leads from the contact-plate 10 to the battery-wire B, and the wire 19 leads from the spring 11 to the circuit-wire A.

I have also shown a window contact-spring 3 and push-button 2, with respective connections with the battery and circuit wires A and B, and an electric bell 22 and electric gas-jet lighter 23, with respective connections with the circuit-wire A and return-wire C.

When the door 20 is swung open, the shell 6 is driven on the tube 5, and consequently the air-pressure within the tube is raised, thereby pressing the piston-head outward, which in turn presses the spring 11 into contact with one of the points of the plate 10. Thus the circuit is closed and the bell and gas-jet lighter are actuated. When the door ceases to move, the air within the tube 5 gradually escapes past the loosely-fitting piston-head 12, and the spring 11 by reason of its own tension returns to its normal position, and thus the circuit is reopened. When the door is being closed, the shell is drawn backward, which causes the piston-head and spring 11 to move backward. The spring comes into contact with the other end of the plate 10, and again the circuit is closed, with the obvious result.

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

An electric-circuit closer, consisting of a plate having a tube mounted thereon; a shell having a closed end, adapted to reciprocate upon said tube; a piston-head loosely fitting in said tube, and having a connection with a contact-spring; a bifurcated plate having contact-points ranging upon either side of said contact-spring; and means in connection with said shell for actuating the same, substantially as and for the purpose specified.

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

JOHN T. FRIEND.

Witnesses:

WILMER LEONARD,
MONNELL FITCH.