

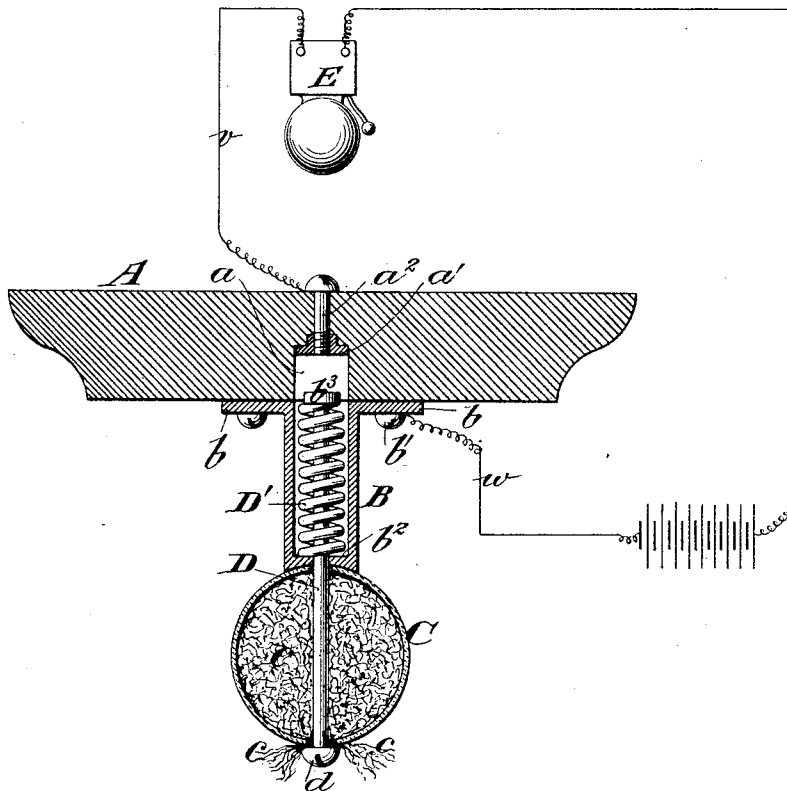
(No Model.)

J. WRIGLEY & G. P. CHAMBERS.

THERMO CIRCUIT CLOSER FOR ELECTRIC FIRE ALARMS.

No. 463,298.

Patented Nov. 17, 1891.



Witnesses:-

R. H. Haywood
A. Sundgren

Inventors:-

John Wrigley
George P. Chambers
by attorneys
Forrest & Howard

UNITED STATES PATENT OFFICE.

JOHN WRIGLEY AND GEORGE P. CHAMBERS, OF PATERSON, NEW JERSEY.

THERMO CIRCUIT-CLOSER FOR ELECTRIC FIRE-ALARMS.

SPECIFICATION forming part of Letters Patent No. 463,298, dated November 17, 1891.

Application filed June 26, 1891. Serial No. 397,587. (No model.)

To all whom it may concern:

Be it known that we, JOHN WRIGLEY and GEORGE P. CHAMBERS, both of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Improvement in Thermo Circuit-Closers for Electric Fire-Alarms, of which the following is a specification.

Our invention relates to circuit-closers for electric fire-alarms, in which the heat from a fire in proximity thereto ignites an explosive and by bursting the bulb in which it is contained releases a spring-actuated contact-piece and closes circuit, the object being to automatically ring a fire-alarm in case of a fire occurring any where near.

We will now proceed to describe our invention with reference to the accompanying drawing, and then point out its novel features in claims.

With reference to the accompanying drawing, A represents a suitable base, preferably of some non-conducting material—such, for instance, as wood—to which is attached a hollow metallic socket B. The socket is here shown as attached thereto by means of screws passing through lugs *b* at the sides thereof, one of said screws, as *b'*, forming a terminal for an electric wire *w*. The base A has a recess *a* opposite the point at which the socket is attached and within the recess is a contact-piece *a'*, a binding-screw *a²* connecting the same with the other electric wire *v*. Now if electrical connection is made between the terminal *b'* and the contact-piece *a'*, the circuit will be closed, and the electric bell shown at E, which here constitutes the fire-alarm, will be rung. The said connection is made automatically in the following manner: Contained partially within the socket B and adapted to move longitudinally therethrough is a circuit-closer D, consisting of a rod provided at one end with a contact-piece *b³* and terminating at its opposite end in a head *d*. Surrounding said rod is a coiled compression-spring D', ex-

tending between the contact-piece *b³* and the bottom *b²* of the socket B. Said spring tends at all times to force the circuit-closer toward the contact-piece *a'*, but is normally prevented from doing so by the interposition between the said socket and the head *d* of the said circuit-closer of a frangible bulb C. The bulb C, which will be preferably of glass, is kept filled with some explosive—such, for instance, as gun-cotton—and, as shown at *c* in the drawing, a small quantity of said explosive is permitted to come without the bulb. Now in case of a fire that portion will become ignited instantly, exploding that which is contained within the glass bulb, bursting the bulb and releasing the spring-actuated circuit-closer D, which, by the pressure of the spring, will be forced against the contact-piece *a'*, closing circuit and ringing the fire-alarm.

What we claim is—

1. The combination, in a thermo circuit-closer, of a stationary contact-piece, a spring-actuated movable contact-piece, and a frangible bulb containing an explosive, said contact-pieces being normally kept out of contact by said bulb, substantially as specified.

2. The combination, in a thermo circuit-closer, of a fixed base, a stationary contact-piece attached to said base, a socket attached to said base opposite said contact-piece, a rod working lengthwise in said socket and provided at its inner end with a contact-piece and at its outer end with a head, a frangible bulb containing an explosive interposed between said socket and the head of said rod, and a spring applied to said rod within said socket to press the said rod toward the stationary contact-piece, all substantially as and for the purpose herein set forth.

JOHN WRIGLEY.
GEORGE P. CHAMBERS.

Witnesses:

FRED. T. GREGSON,
WILLIAM CLAYTON.