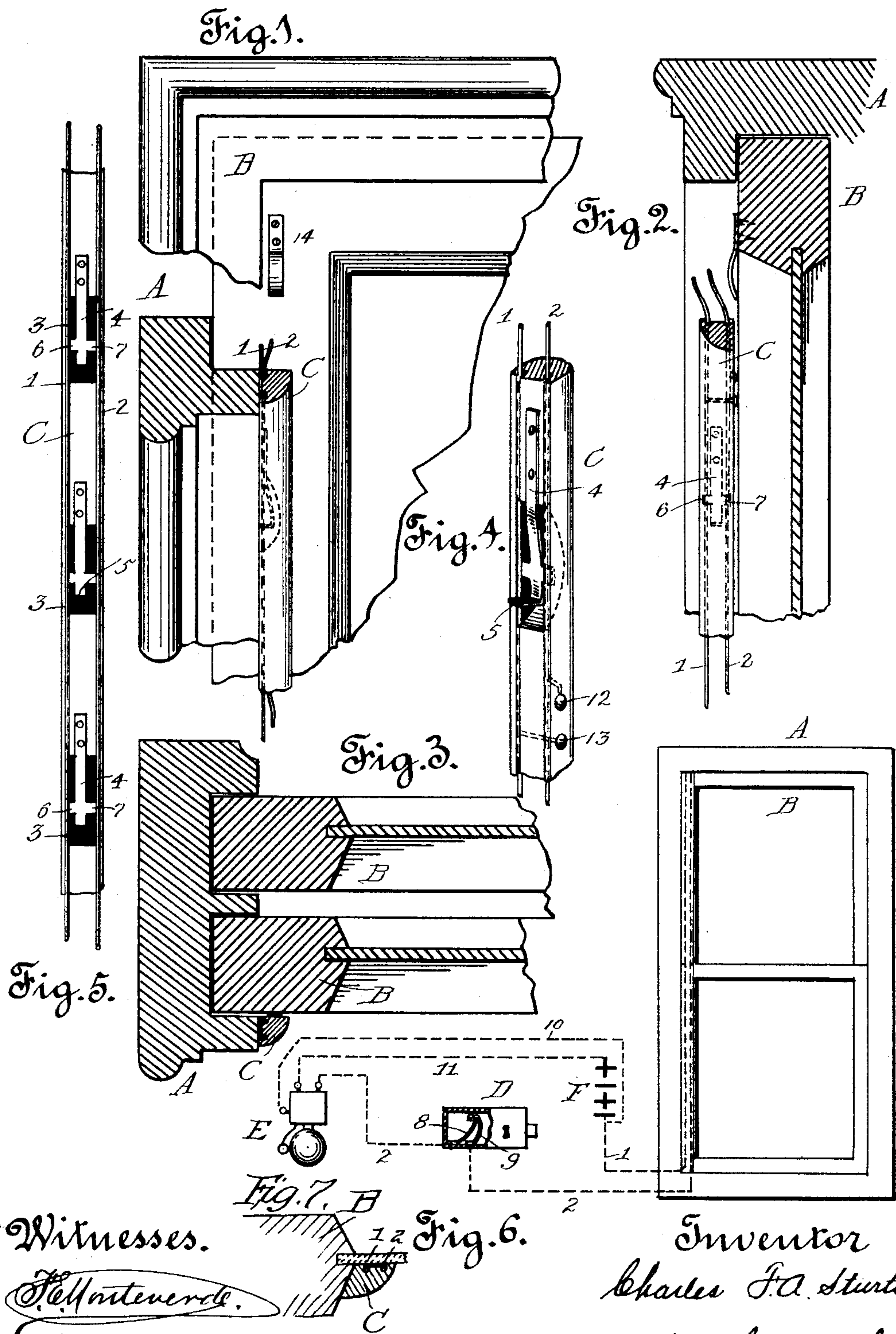


(No Model.)

C. F. A. STURTS.
ELECTRICAL PROTECTION FOR WINDOWS.

No. 516,240.

Patented Mar. 13, 1894.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES F. A. STURTS, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF
ONE-HALF TO WILLIAM J. SCHROTH, OF SAME PLACE.

ELECTRICAL PROTECTION FOR WINDOWS.

SPECIFICATION forming part of Letters Patent No. 516,240, dated March 13, 1894.

Application filed April 11, 1893. Serial No. 469,957. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. A. STURTS, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Electrical Protection of Windows, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to the electrical protection of windows, doors, or like parts of a building liable to ingress by unauthorized persons.

The object of my invention is to provide the window with electrical connections in normally open circuit with a battery and an alarm mechanism.

The invention consists partly in a novel means for carrying the wires, further in combining with the window a molding having wires embedded therein and circuit closers operated by opening the window, breaking the glass, or by any attempt to pry off the molding; and further in certain features of construction and arrangement fully hereinafter described and shown in the accompanying drawings in which—

Figure 1, is a broken elevation of a part of a window. Fig. 2, is a vertical cross section of the same. Fig. 3, is a horizontal cross section. Fig. 4, is a perspective of a molding strip for carrying wires. Fig. 5, is an elevation of the same. Fig. 6, is a diagram illustrating electrical connections between a protected window and an alarm. Fig. 7, is a detail illustrating a modification.

It will be understood that my device is adapted to all kinds of glass windows or doors, whether stationary like show case windows, or having movable sashes.

A, represents the frame of a window and B, sashes sliding therein.

C, represents a molding preferably of wood and of desired cross section, in one face of which is scored two parallel grooves in which the wires 1 and 2 are embedded. No fastening is required for securing the wires, as the edges of the grooves in the wood partly close over the wires and clamp them in place. This method of carrying wires affords a very simple, cheap and easily applied means for all

kinds of interior wiring, as the moldings can be made in suitable lengths, and sold with the wires in place, forming a separate article of manufacture, which so far as I know is new. In the present case I have shown this method of wiring in connection with special features of construction and with the alarm system shown in Letters Patent granted to me February 28, 1893, No. 492,478. As applied to a window, and as shown in the drawings, one flat face of the molding is hollowed out at intervals, as at 3. To each of these hollowed portions is fitted a spring 4, having a projecting end 5, and two arms 6, 7, projecting sidewise beneath the wires 1 and 2. When the molding is placed in place against the sash A (dotted lines Fig. 1), the spring is forced back into the hollow. If the spring is permitted to project, the arms 6 and 7 will make contact with the wires 1 and 2. As many of these contacts as may be necessary may be provided in molding surrounding the glass; but it is best to have them at frequent intervals as illustrated in Fig. 5.

The wires 1 and 2 form part of an electrical circuit, connected to an alarm mechanism conventionally shown in Fig. 6. The representation of circuits shown is in accordance with the construction shown in my patent before referred to, and although its use is not compulsory, it is the construction I prefer to employ.

Fig. 6, indicates a local bell circuit and an external circuit including the lock of a door and the window to be protected.

For guarding against attempts at admission by raising the window I have provided a construction illustrated in Figs. 1, 2 and 4 in which it will be seen that two studs or contacts 13 and 12 are set in the molding and connected respectively to the wires 1 and 2. A contact spring 14 is mounted upon the window frame in such a position that when the window is closed it is free from the two contacts. Should however, the window be raised the spring 14 will contact with the points 12 and 13 and close the circuit long enough to sound the alarm.

The door lock D, may be supposed to be upon the entrance door of a store which is locked out of business hours. The locking

of the door causes a contact between two springs 8, 9, to one of which the wire 2 extends from the window and thence to the bell E. The alarm E, as in my former patent, is supposed to be placed in an inaccessible position, as upon the front of the building in local circuit 10, 11, with the battery F. The wire 1, extends from the window to the battery. The alarm mechanism is fully described in my patent referred to, as well as the construction of the door lock. For the purpose of the present case it is sufficient to say that the external circuit is normally open at the lock and open at each of the contacts in the window, while the local circuit is normally open at the alarm. The door lock thus controls the operation of the system. When the store is left and the door locked, the circuit is closed at the lock, and remains open at all the other points. Now if an attempt be made to force the window by prying off the molding, or in any way that will permit one or more of the springs 4 to move slightly outward and close the circuit at the wires 1, 2, or if the window be raised to cause the spring 14 to contact for an instant with the points 12 and 13 the external circuit will be closed, and energize the magnet of the alarm, throw in the local circuit and sound a continuous alarm. The local circuit being established, the whole external circuit could be destroyed without stopping the alarm. For the latter purpose some mechanical means such as shown in my patent will be adopted to break the local circuit.

To guard against admission by shattering the glass, the molding would be placed around

the casing adjacent to the glass, so that any break in the glass extending to the edge, would permit some one of the springs to close the circuit. Such a construction is shown in detail in the Fig. 7.

What I claim is—

1. In combination with a window or like structure and an alarm mechanism, a molding connected to the window frame, parallel wires in said molding and one or more spring contacts normally open, but adapted to make contact with both of said wires.

2. In combination with a window or like structure, a molding, parallel wires in said molding, one or more spring contacts in recesses in said molding, normally out of contact with said wires, but adapted to make contact with both wires when the molding is moved, and an alarm in circuit with said wires.

3. As a new article of manufacture a molding strip having two wires embedded in grooves extending longitudinally thereof, and a series of spring contact arms located in recesses in said strips and adapted to contact with both of said wires, a portion of each of said contact arms being projected from the recess beyond the face of the molding substantially as described.

In testimony whereof I have affixed my signature, in presence of two witnesses, this 1st day of April, 1893.

CHARLES F. A. STURTS.

Witnesses:

L. W. SEELY,
JOHN COFFEE.