

**No. 680,982.**

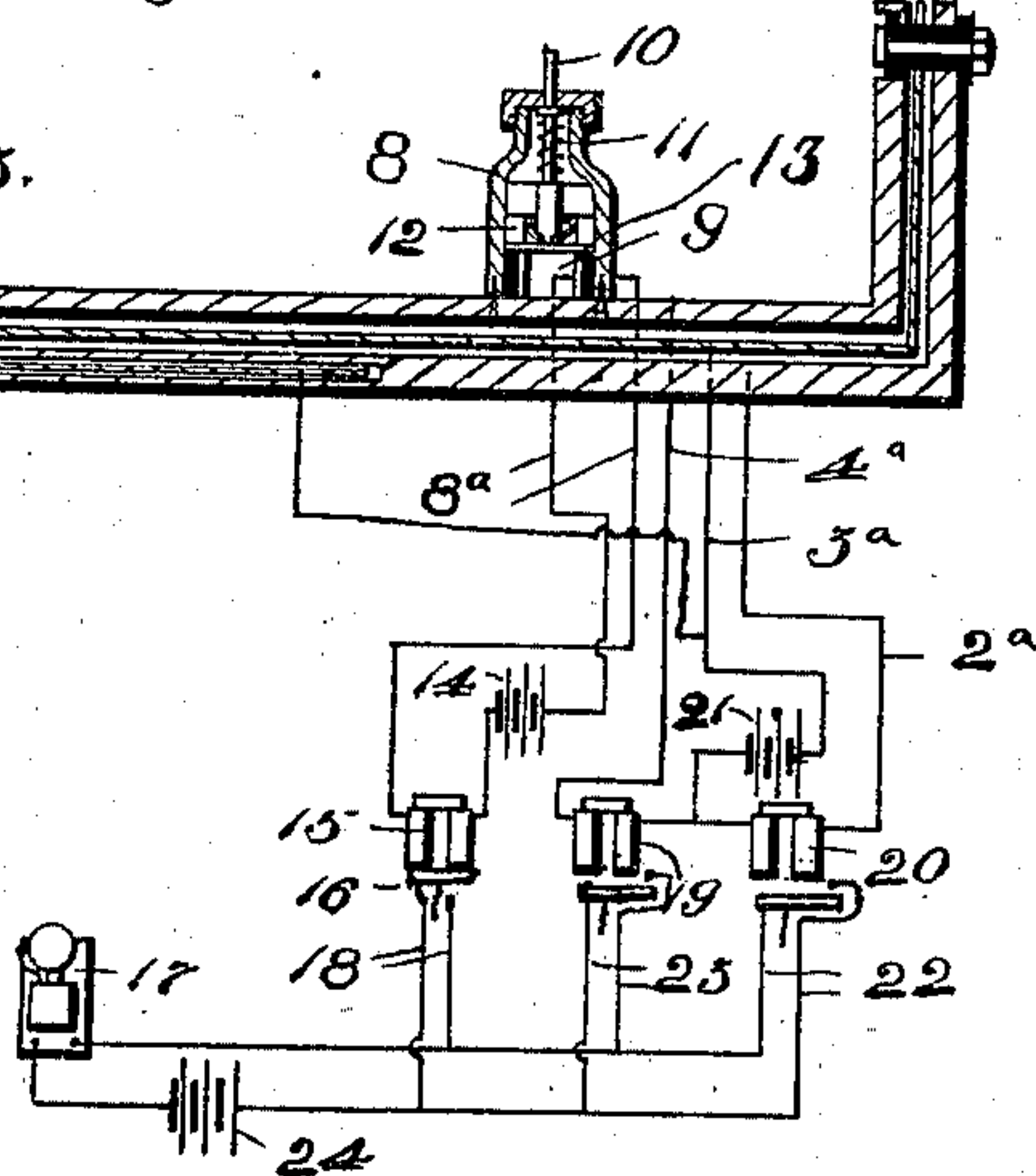
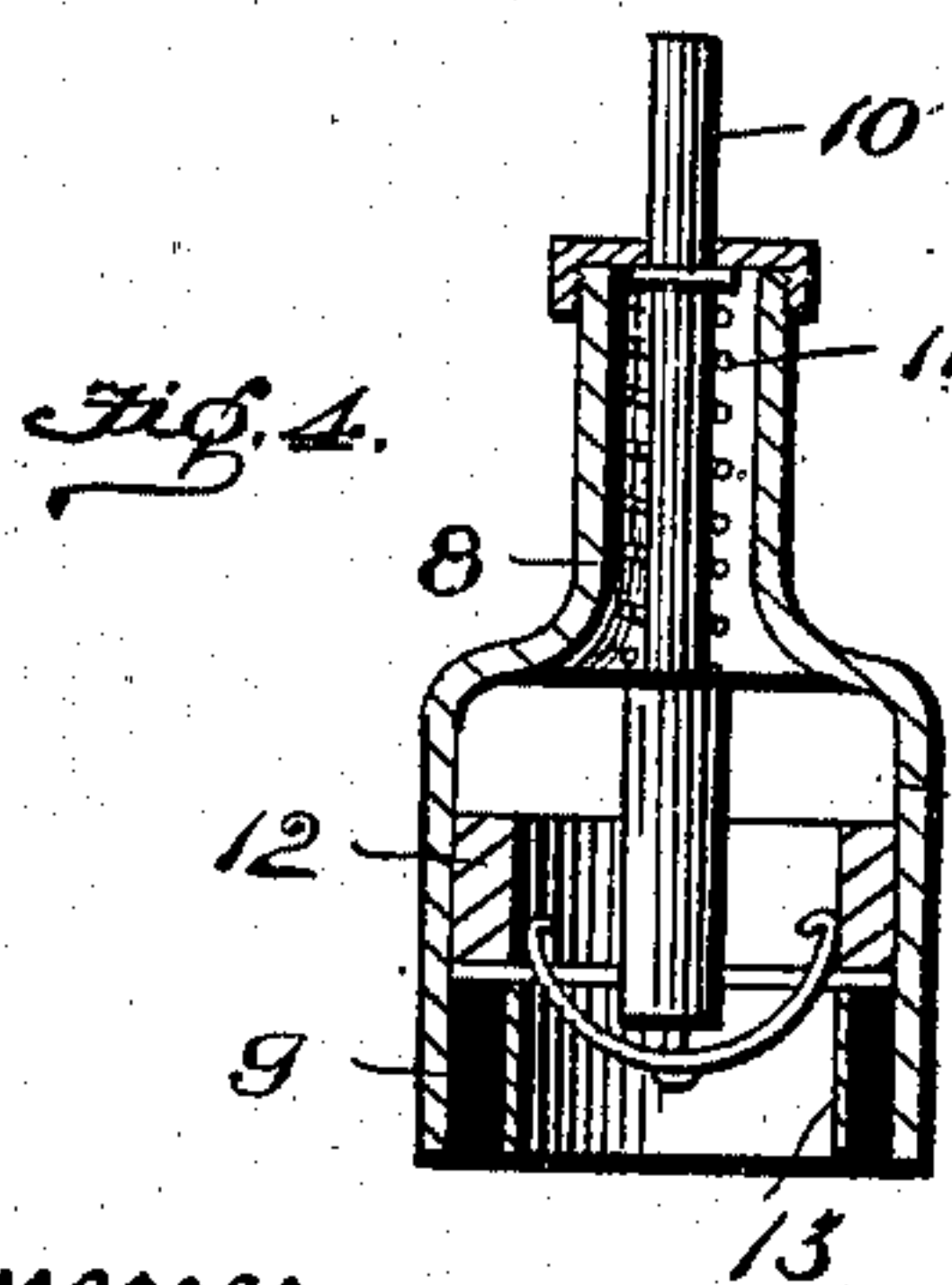
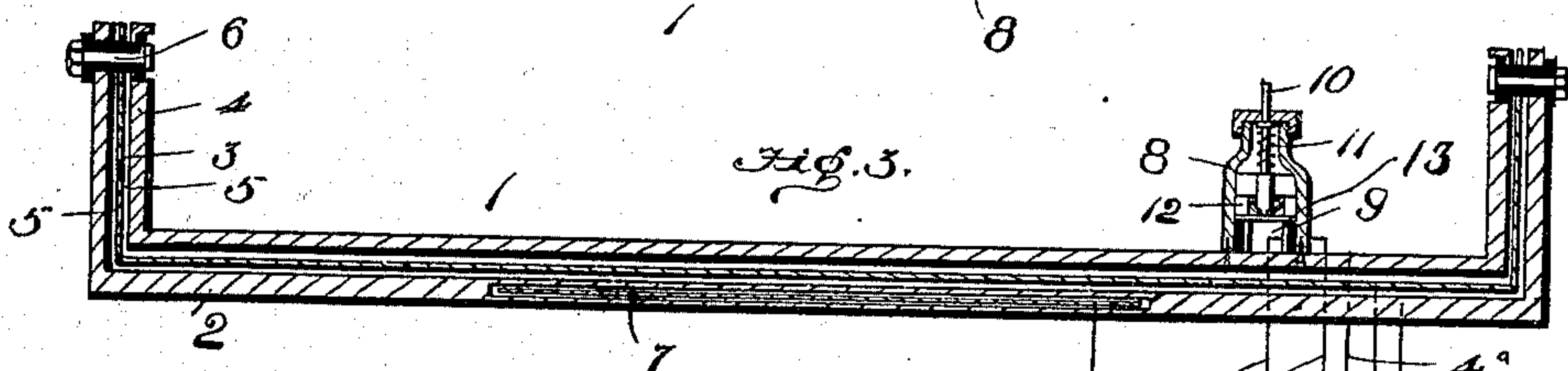
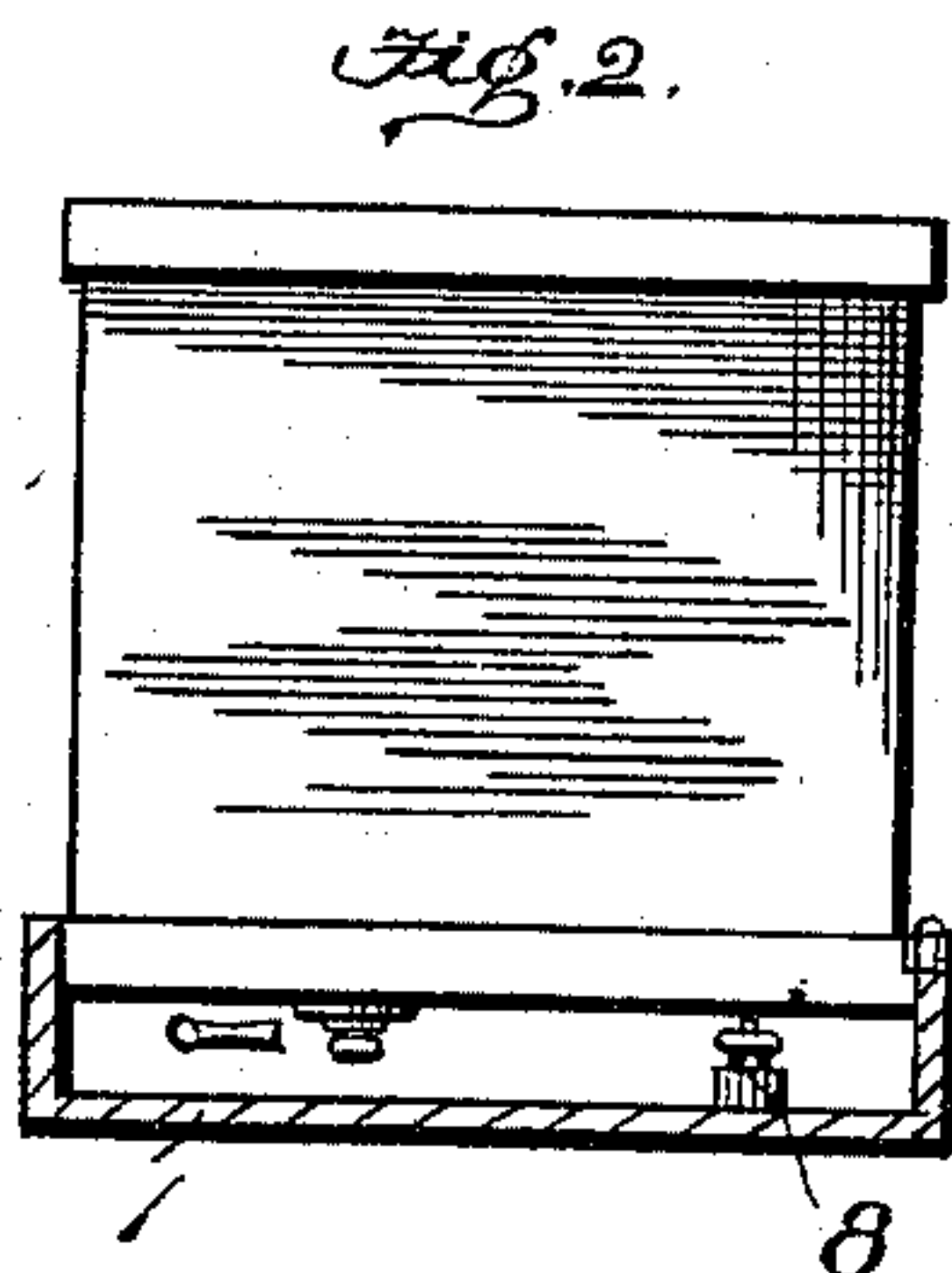
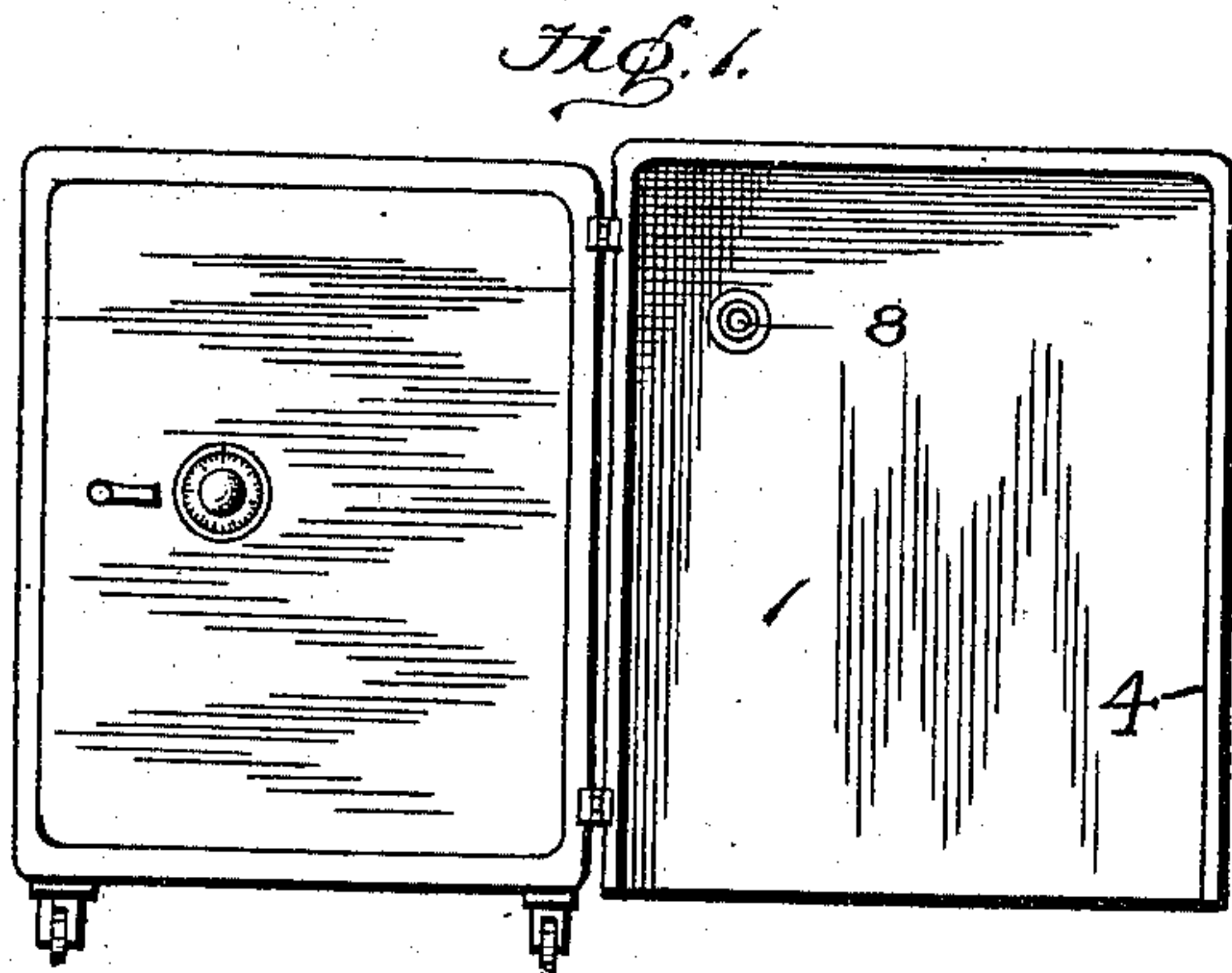
**Patented Aug. 20, 1901.**

**A. T. METCALF & V. D. SIMONS.**  
**BURGLAR PROOF DEVICE FOR SAFES.**

(Application filed Mar. 5, 1901.)

(No Model.)

**2 Sheets—Sheet 1.**



Witnesses 13  
Bernard M. Offutt.  
A. Caswell

Inventors  
Abraham T. Metcalf  
Veining D. Simons,  
by David T. Moore, Attorney.

No. 680,982.

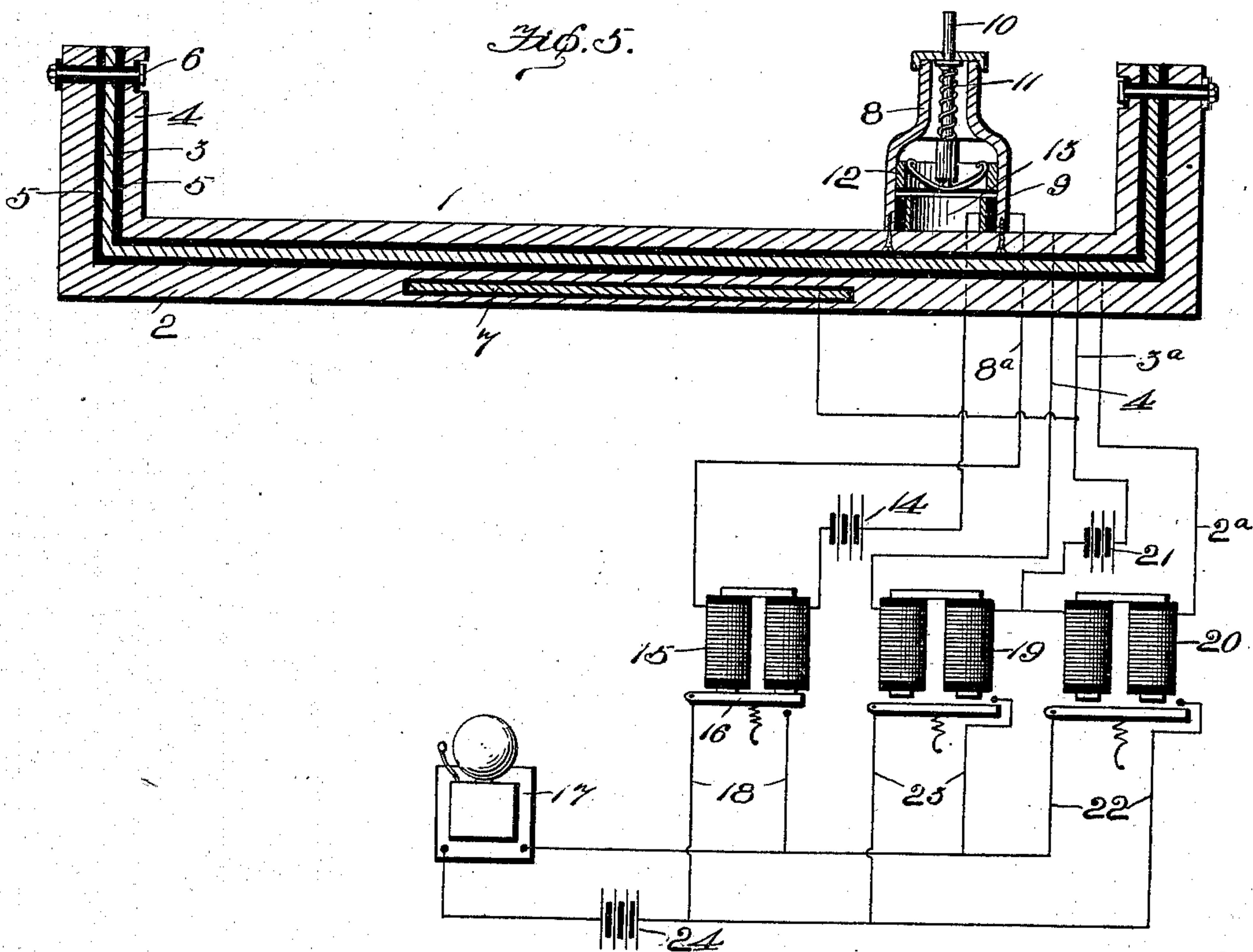
Patented Aug. 20, 1901.

A. T. METCALF & V. D. SIMONS.  
BURGLAR PROOF DEVICE FOR SAFES.

(Application filed Mar. 5, 1901.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses

Bernard M. Offutt.  
A. Cassel

Inventors,  
Abraham T. Metcalf and  
Verning D. Simons,  
David Moore, Attorney



# UNITED STATES PATENT OFFICE.

ABRAHAM T. METCALF AND VENNING D. SIMONS, OF BATTLECREEK,  
MICHIGAN.

## BURGLAR-PROOF DEVICE FOR SAFES.

SPECIFICATION forming part of Letters Patent No. 680,982, dated August 20, 1901.

Application filed March 5, 1901. Serial No. 49,841. (No model.)

*To all whom it may concern:*

Be it known that we, ABRAHAM T. METCALF and VENNING D. SIMONS, citizens of the United States, residing at Battlecreek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Burglar-Proof Devices for Safes, of which the following is a specification.

This invention relates to improvements in burglar-proof devices for safes; and the main object of the invention is the provision of a device which can be connected to any safe, so that it cannot be disturbed in any manner without giving an alarm at police headquarters or the desired place.

Another object of this invention is the provision of an electrical operating device which when the safe is disturbed in any manner makes an electrical circuit to ring an alarm, this being done without in any way warning the burglar.

Another object of this invention is the provision of a burglar-proof device for safes which is very simple, durable, and inexpensive in construction and very efficient and practical in use.

To attain the desired objects, the invention consists of a burglar-proof device for safes embodying novel features of construction and combination of parts, substantially as disclosed herein.

In the drawings, Figure 1 is a front elevation of a safe with the burglar-proof device connected thereto. Fig. 2 is a top plan view of the safe with the upper flange of the device removed. Fig. 3 is a sectional view of the device removed from a safe. Fig. 4 is a sectional view of the switch. Fig. 5 is an enlarged view of the casing and electrical connections, said casing being in section and the electrical connections in diagram.

Referring to the drawings, the numeral 1 designates a rectangular casing composed of the three plates 2, 3, and 4, which are separated by the insulation 5 therebetween, and these plates are connected with the open circuit leaving and going to a place where an alarm is to be given. These plates are connected together by the bolts or studs 6. In the body of the outside plate 2 is embedded

a plate 7, surrounded by insulation, and is connected by an open circuit, so that any attempt to drill plate 2 or otherwise destroy it would close the circuit and cause an alarm to be sent in. This entire construction is adapted to be hung upon the top or clamped on the safe, and in order that the device will be more certain of turning in an alarm a casing 8 is secured upon the inner side of the plate 4, said casing being in the form of a bottle and having an insulation-ring 9 inclosed therein near the lower edge thereof. Mounted in this casing is a stem 10, around which is mounted a coiled spring 11, which is incased by the neck of the casing and normally holds the metallic ring 12, carried upon the inner end of the stem, out of circuit with the metal ring or band 13, which when the casing is closed upon the safe is contacted by the ring 12 and forms a closed circuit, so that when the auxiliary door is opened the spring-actuated stem opens the circuit and causes an alarm to be sent in.

Wires 7<sup>a</sup> are connected to the switch 8 and are in circuit with the batteries 14 and electromagnet 15, whose arm 16 operates the bell or alarm 17 through the circuit 18. The wires 2<sup>a</sup>, 3<sup>a</sup>, and 4<sup>a</sup>, the batteries 21, and the electromagnets 19 and 20 are in circuit and operate at the proper time the alarm or bell 17 through the wires 22 and 23, the batteries 24 being in the bell-circuit.

The plates 2, 3, and 4 are similar in construction and constitute the portions connected in open circuit with the magnets 19 and 20, and should the insulation between these plates be broken they will contact each other, closing a circuit to energize either one or both of the magnets 19 and 20, which operate their armatures 20' to close the bell-circuit. A wire 26 is connected to the plate 7, and should the insulation surrounding said plate be broken when the door is any way demolished or mutilated by a drill or any other instrument a circuit will be closed through the plate 2, wire 3<sup>a</sup>, and wire 25 to operate the magnet 20, and consequently the alarm. As the circuit controlled by the switch is normally closed, any slight opening of the door will allow the circuit to be opened,



demagnetizing the magnet 15, which releases its armature, which closes the alarm-circuit and allows the bell to ring.

From this description it is evident that we 5 provide a burglar-proof safe device which cannot be tampered with without in some way causing an alarm, for even should the wires be cut the closed circuit will be opened and an alarm given.

10 From this description, taken in connection with the drawings, it is evident that it would be impossible to destroy this device or cable without giving an alarm at the proper time and place, and therefore render a safe upon 15 which this device is placed absolutely burglar-proof.

It is seen that a very simple, durable, and inexpensive device of this character is provided that will be thoroughly efficient and 20 practical in use.

We claim—

1. In a device for preventing safes from being burglarized, an auxiliary casing composed of a series of plates insulated from 25 each other, an insulated plate embedded in the outer plate, these plates being connected with open circuits, and a device connected with a closed circuit; the open circuits being

adapted when closed to cause an alarm, and the device connected with the closed circuit 30 being adapted to cause an alarm when operated to open the closed circuit.

2. In combination with a safe, of an auxiliary casing adapted to cover one side thereof, consisting of a series of metallic plates 35 and sheets of insulation secured together, a spring-actuated switch connected to the inner side of the inner plate, a plate surrounded by insulation embedded in the body of the outside plate, a closed circuit connected with 40 the switch, an open circuit connected with the inner plate and the central plate, another open circuit connected with the central plate and the outer plate, and another open circuit connected with the embedded plate and 45 the outer plate; and a bell-circuit adapted to be closed when the switch's closed circuit is opened and when the plates' open circuits are either one or all closed.

In testimony whereof we affix our signatures in presence of two witnesses. 50

ABRAHAM T. METCALF.  
VENNING D. SIMONS.

Witnesses:

ELECTA FURNISS,  
DUANE D. FORD.