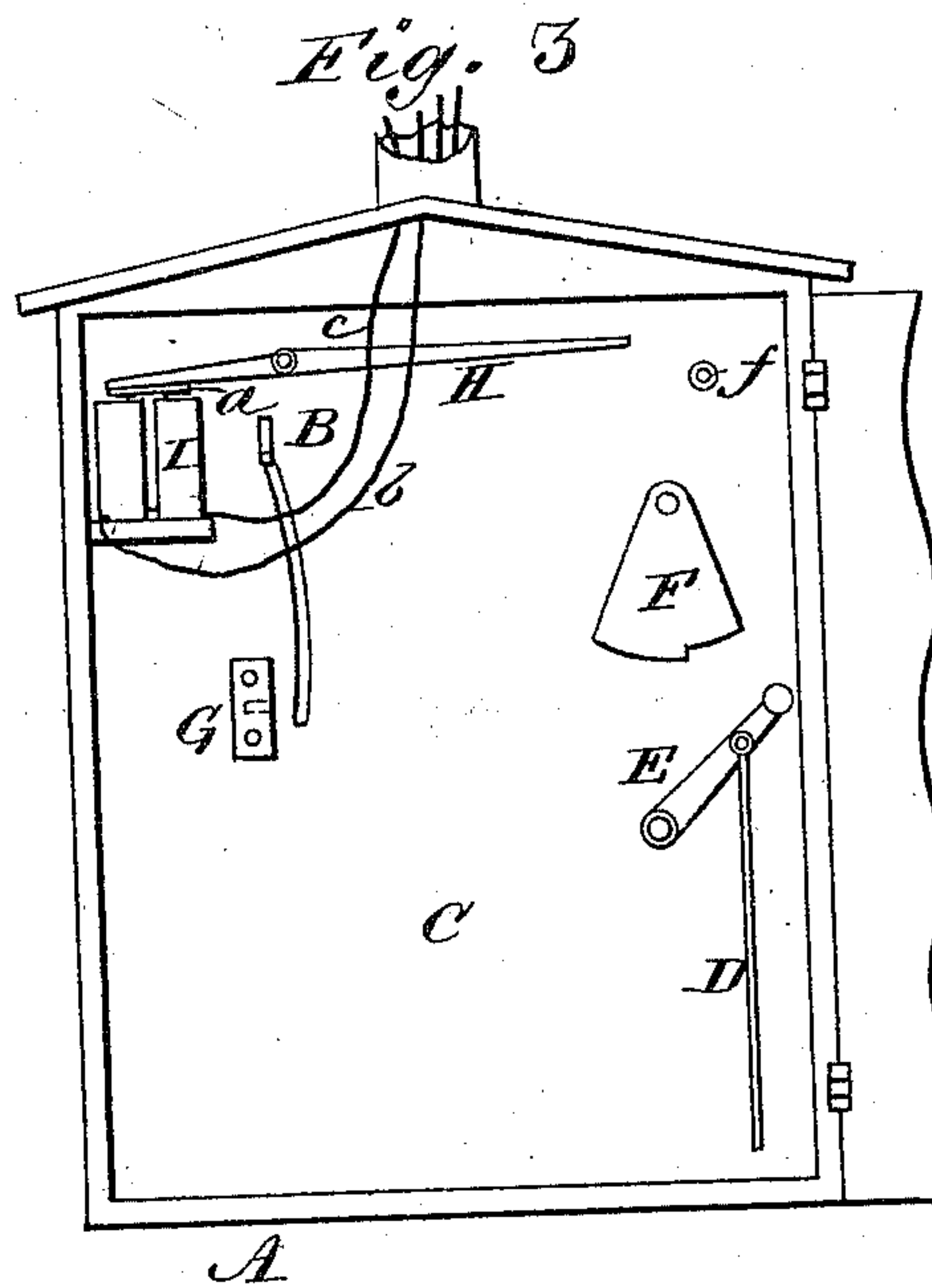
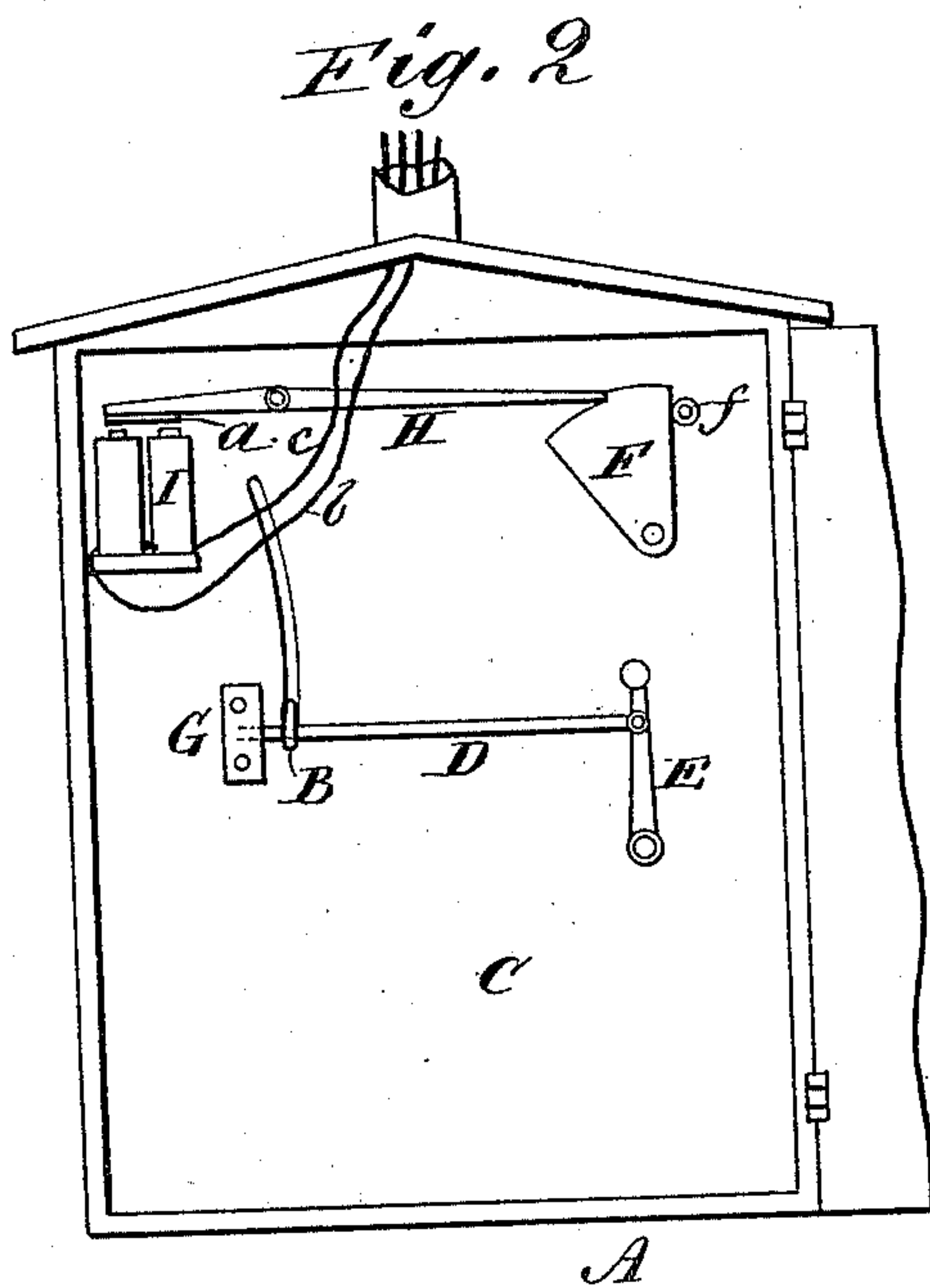
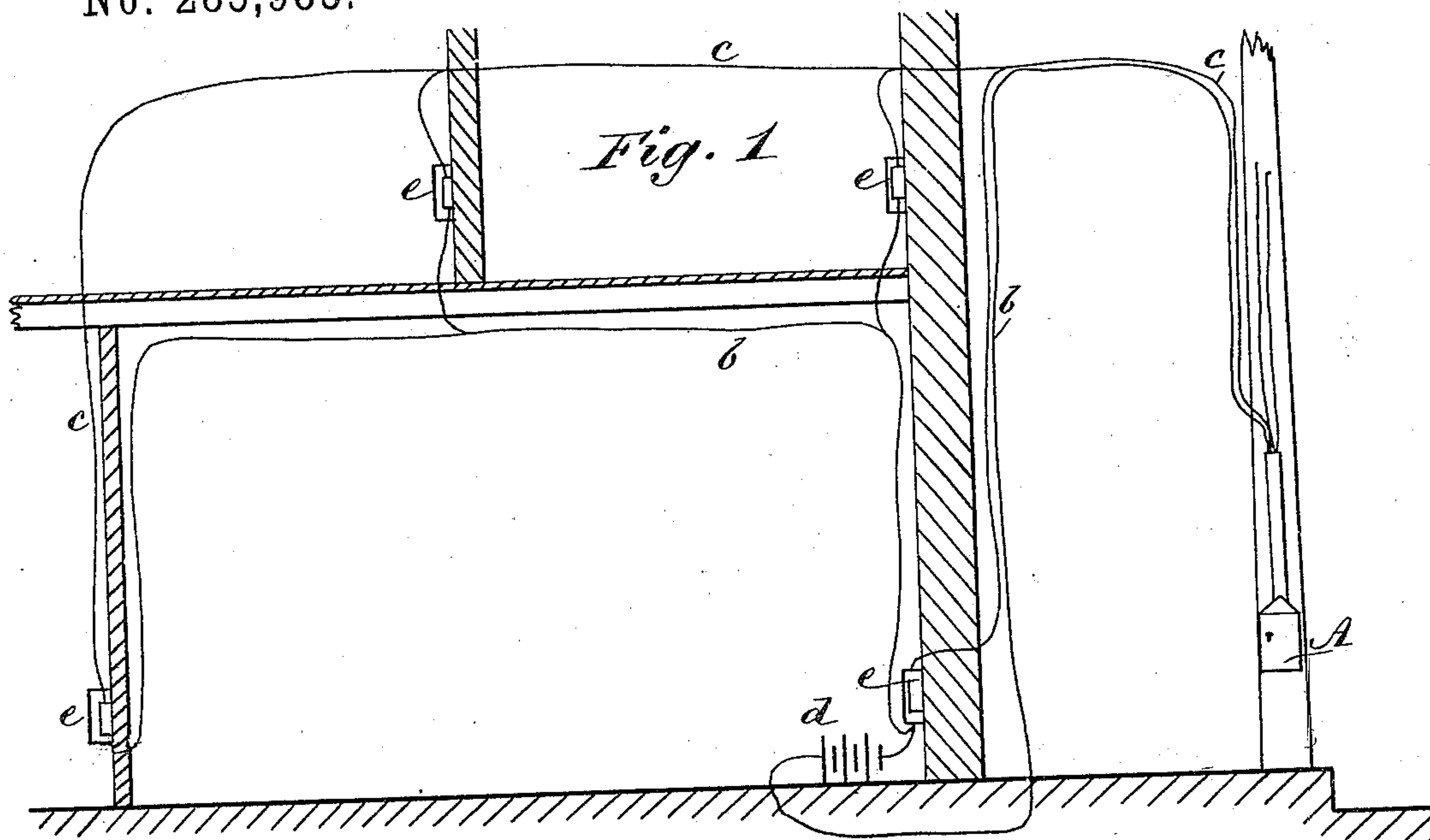


(No Model.)

R. S. FINCH.
FIRE ALARM.

No. 285,983.

Patented Oct. 2, 1883.



WITNESSES:

C. Neveu
L. Sedgwick

INVENTOR:

R. S. Finch
BY *Munn & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ROBERT S. FINCH, OF CINCINNATI, OHIO.

FIRE-ALARM.

SPECIFICATION forming part of Letters Patent No. 285,983, dated October 2, 1883.

Application filed June 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, ROBERT STERRETT FINCH, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved Fire-Alarm, of which the following is a full, clear, and exact description.

My invention relates to an auxiliary device applied to the ordinary electric fire-alarm box, by means of which an alarm may be given from any point on an auxiliary circuit by pressing an electrical push-button or key placed in the auxiliary circuit, or in a branch thereof.

The method of sending a fire-alarm by means of the ordinary fire-alarm telegraph consists in unlocking the door of the alarm-box and pulling down the hook against the pressure of an opposing spring, so that when the hook is released it is carried upward by the spring, and the mechanism connected therewith telegraphs the number of the fire-alarm box to the stations.

My invention consists in a detent for holding the alarm-hook down, and in electro-magnetic releasing mechanism for letting off the detent, thus allowing the hook of the fire-alarm box to rise and give the alarm, the magnet of the releasing mechanism being in a single or branched electric circuit in which are placed push-buttons or keys at various points, so that an alarm can be sent from any locality provided with a push-button or key.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 in the drawings is a diagram showing the relation of the auxiliary circuit and the fire-alarm box. Fig. 2 represents my apparatus before the alarm is given, and Fig. 3 shows the position of the various parts after the alarm is given.

The fire-alarm box A is of the usual well-known construction, and is provided with the hook B, projecting through the plate C, which latter conceals the fire-alarm-telegraph mechanism and provides a support for the several parts of my apparatus.

To send a fire-alarm in the usual way the hook B is pulled to the bottom of the slot, through which it projects, and then released, when the alarm is sent during the upward movement of the hook. In my improvement the hook B is held by the bolt D in readiness to rise at any time when released by the withdrawal of the bolt. The bolt D is jointed at one end to an arm, E, pivoted to the plate C, and having its upper end within the path of the pivoted drop-weight F. The free end of the bolt D passes above the hook B and into a socket, G, secured to the plate C. The drop-weight F is pivoted to the plate C relative to the arm E, so that in making a half-revolution on its pivot it will strike the upper end of the said arm E. The free end of the drop-weight F is notched to engage a detent-lever, H, pivoted to the plate C, and carrying an armature, *a*. The armature *a* is within the influence of the electro-magnet I, and the magnet I is in the circuit *b c*, which includes the battery *d* and the push-buttons *e*. The push-buttons are by preference locked in boxes attached to the walls of factories and other buildings in which they may be located, and the keys of the boxes are accessible to persons authorized to use them.

To set the apparatus the hook B of the fire-alarm box is drawn down, the bolt D is placed over it, with its free end projecting into the socket G. The drop-weight F is placed against the pin *f*, when it is caught and retained by the detent-lever H. The fire-alarm box is now shut and locked. Should a fire occur on the circuit *b c*, or on a branch thereof, one of the push-buttons *e* is pushed, causing the magnet I to draw down its armature, releasing the weight F, when the latter falls, and, striking the upper end of the arm E, withdraws the bolt D from the socket G, when the hook B rises and the alarm is given.

The alarm may be given from the box direct by simply withdrawing the bolt D by hand.

The advantage of my improvement is that an alarm of fire can be given instantly from

any push-button on the auxiliary circuit without the necessity of going in person to the fire-alarm box.

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

The combination, with a fire-alarm box having hook B projecting through a plate, C, of the slide-bolt D, the arm E, jointed thereto, the notched drop-weight F, pivoted to

plate C, the detent-lever H, carrying armature *a*, the socket G, arranged in plate C, and the electro-magnetic devices I *b c d e*, as shown and described.

ROBERT STERRETT FINCH.

Witnesses:

WM. E. BROOKS,
GEO. M. FINCH.