

(No Model.)

2 Sheets—Sheet 1.

H. I. LURYE & M. H. LEWIS.
DEVICE FOR INSURING CLOSING OF WINDOWS, &c.

No. 587,591.

Patented Aug. 3, 1897.

Fig. 4.

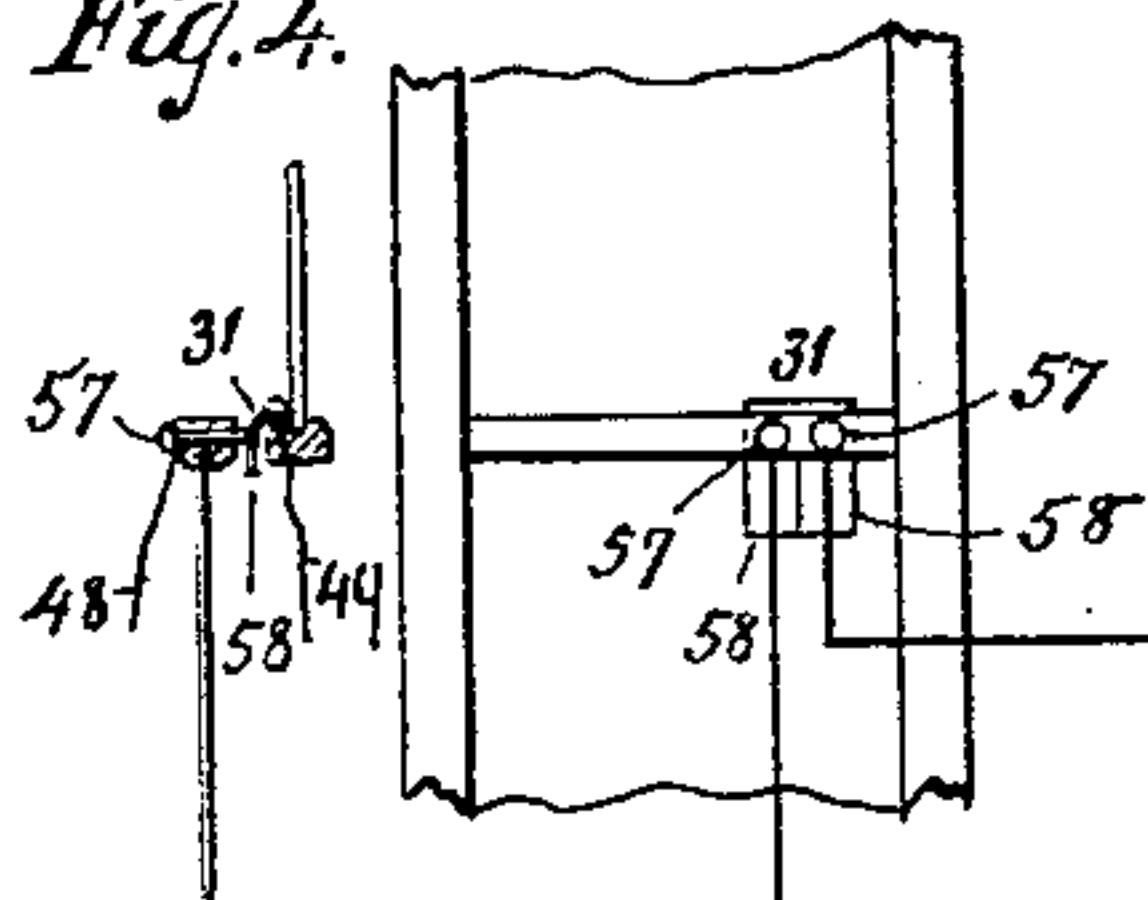


Fig. 1.

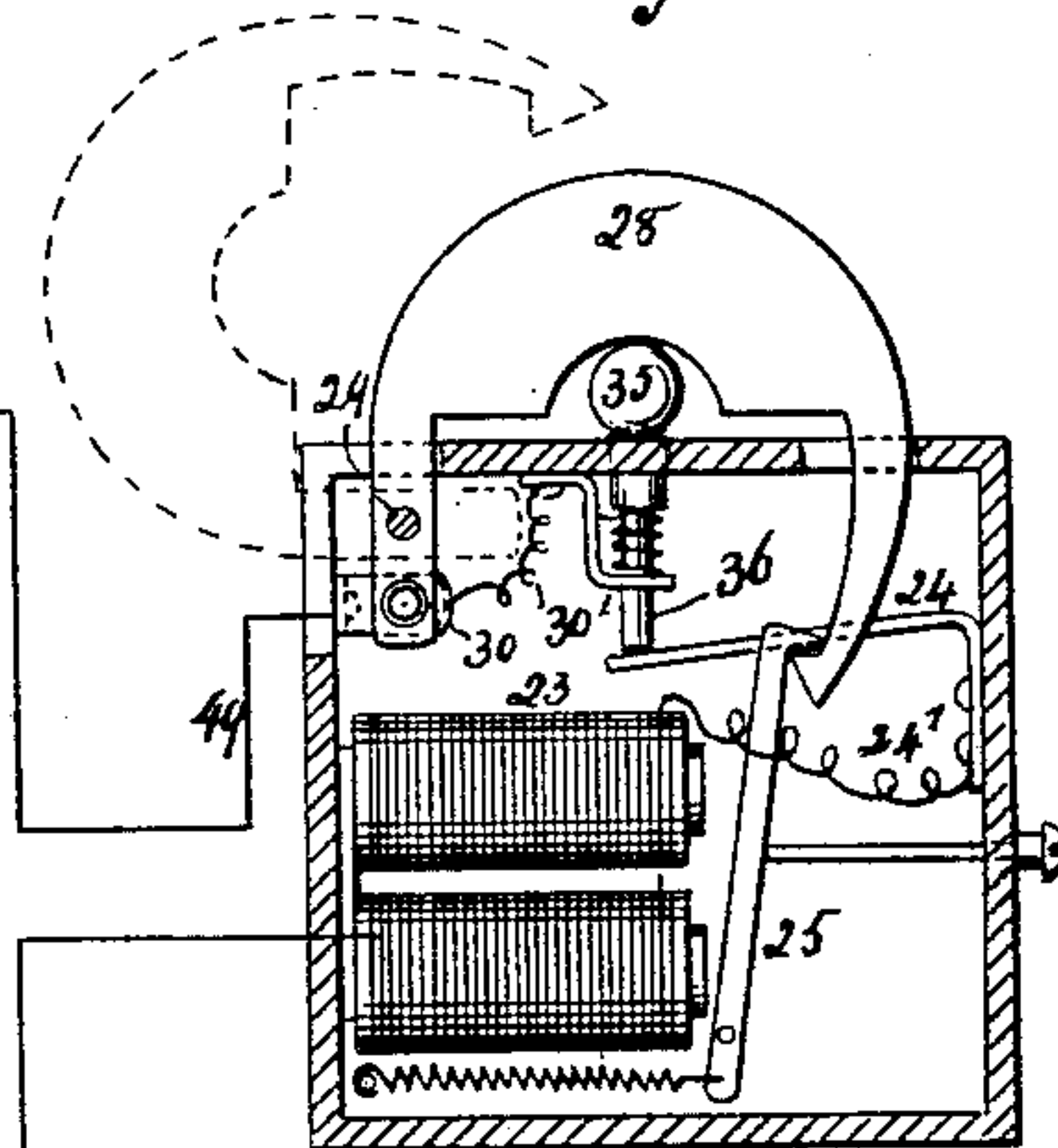


Fig. 2.

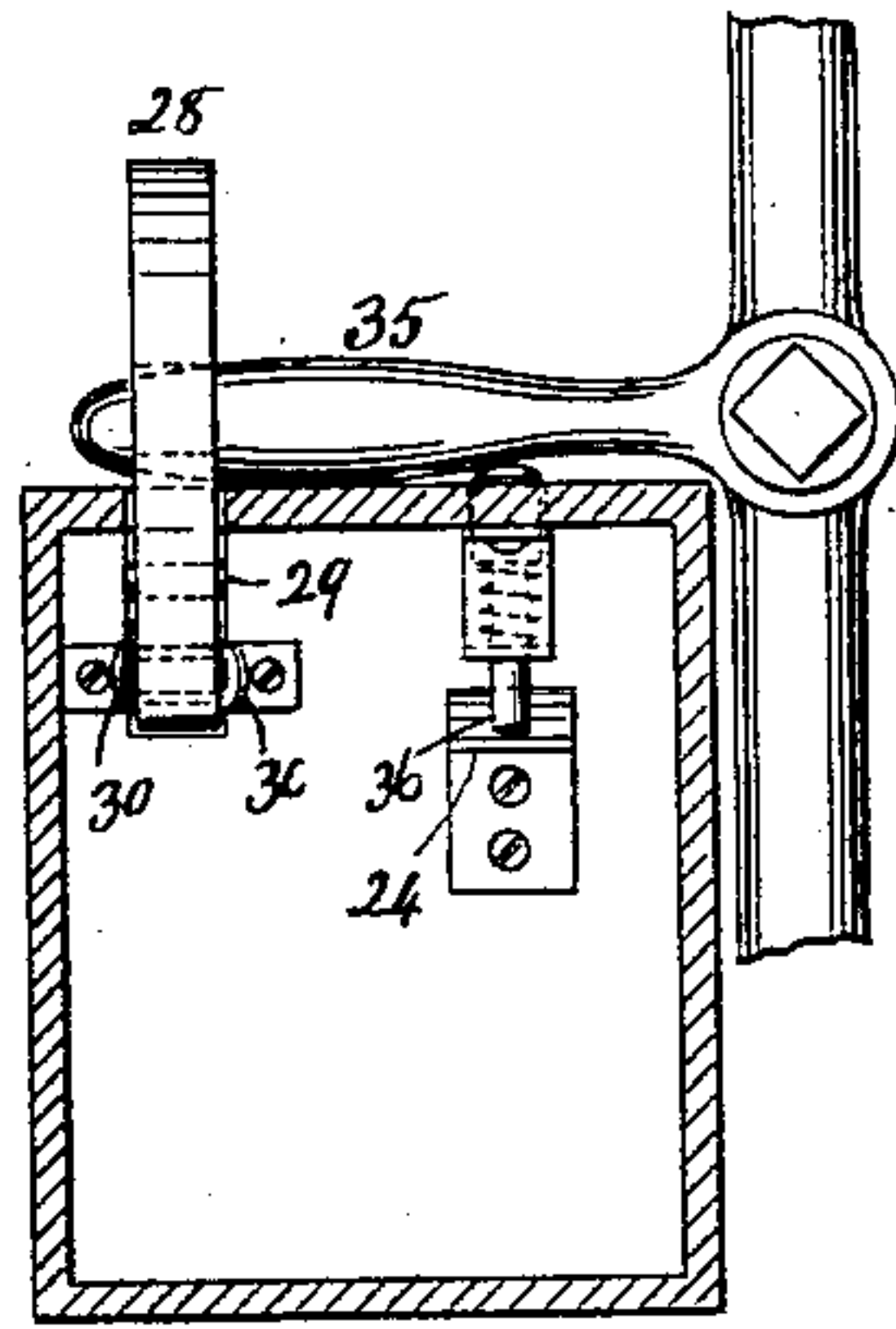
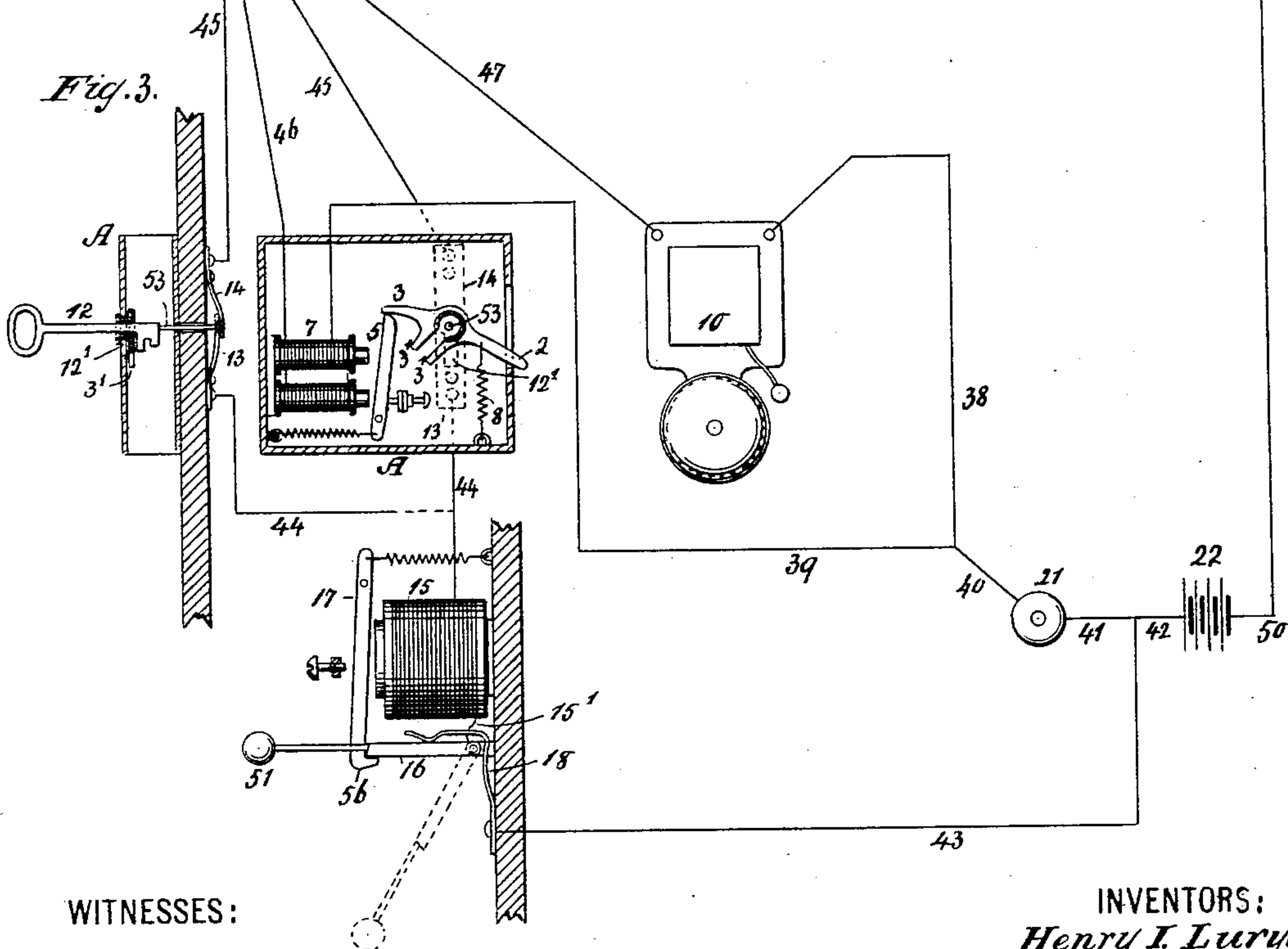


Fig. 3.



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Fig. 5.

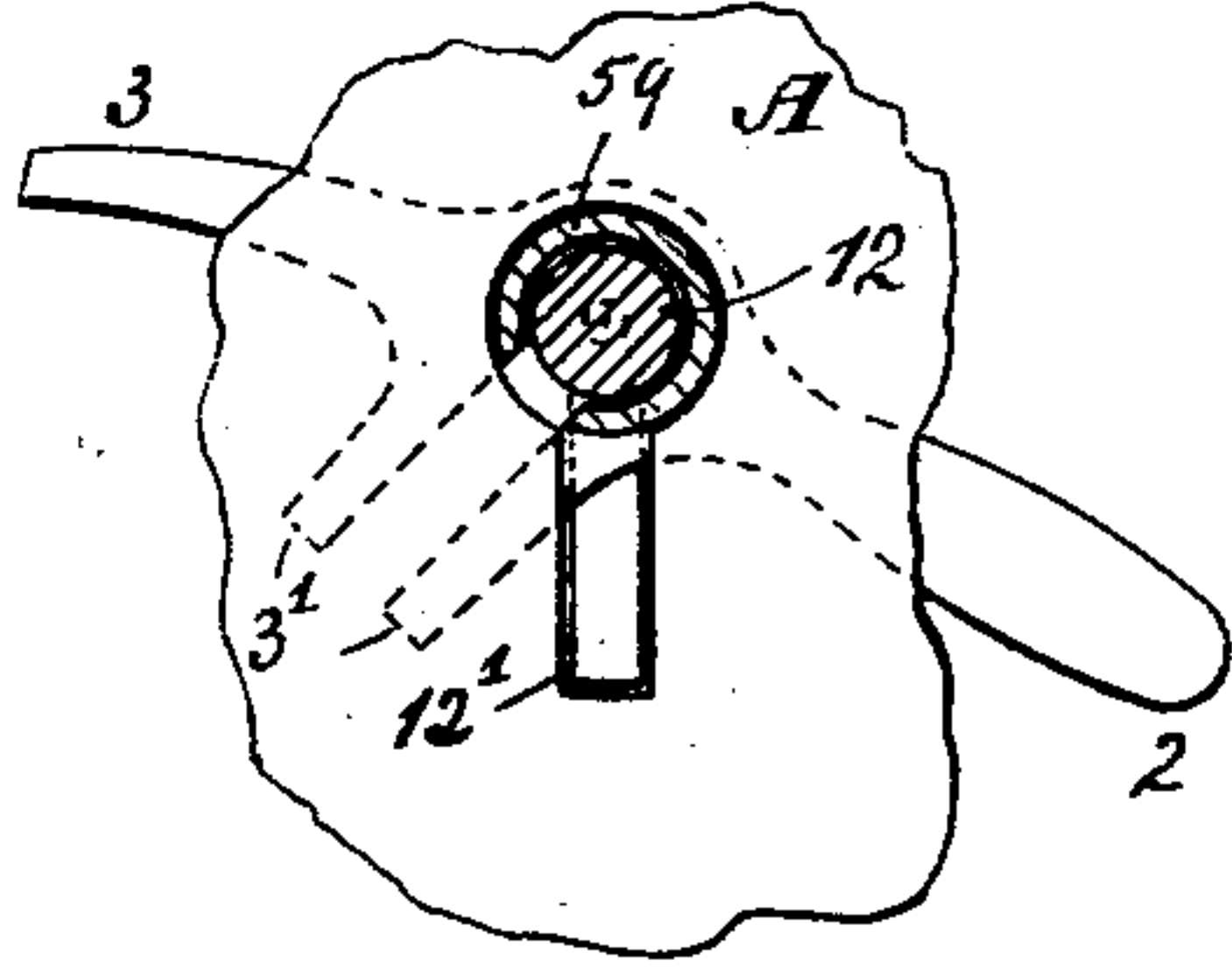


Fig. 6.

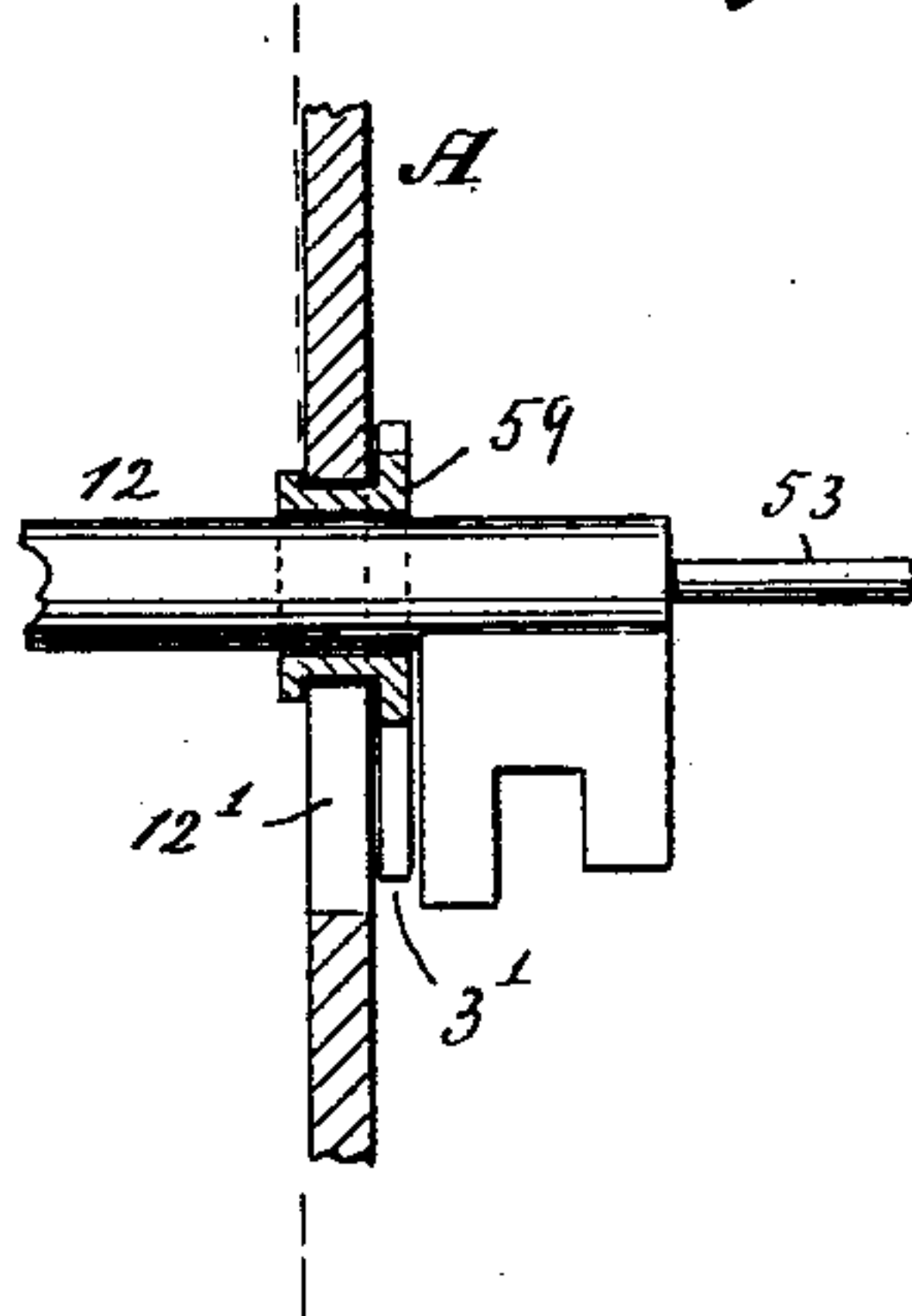
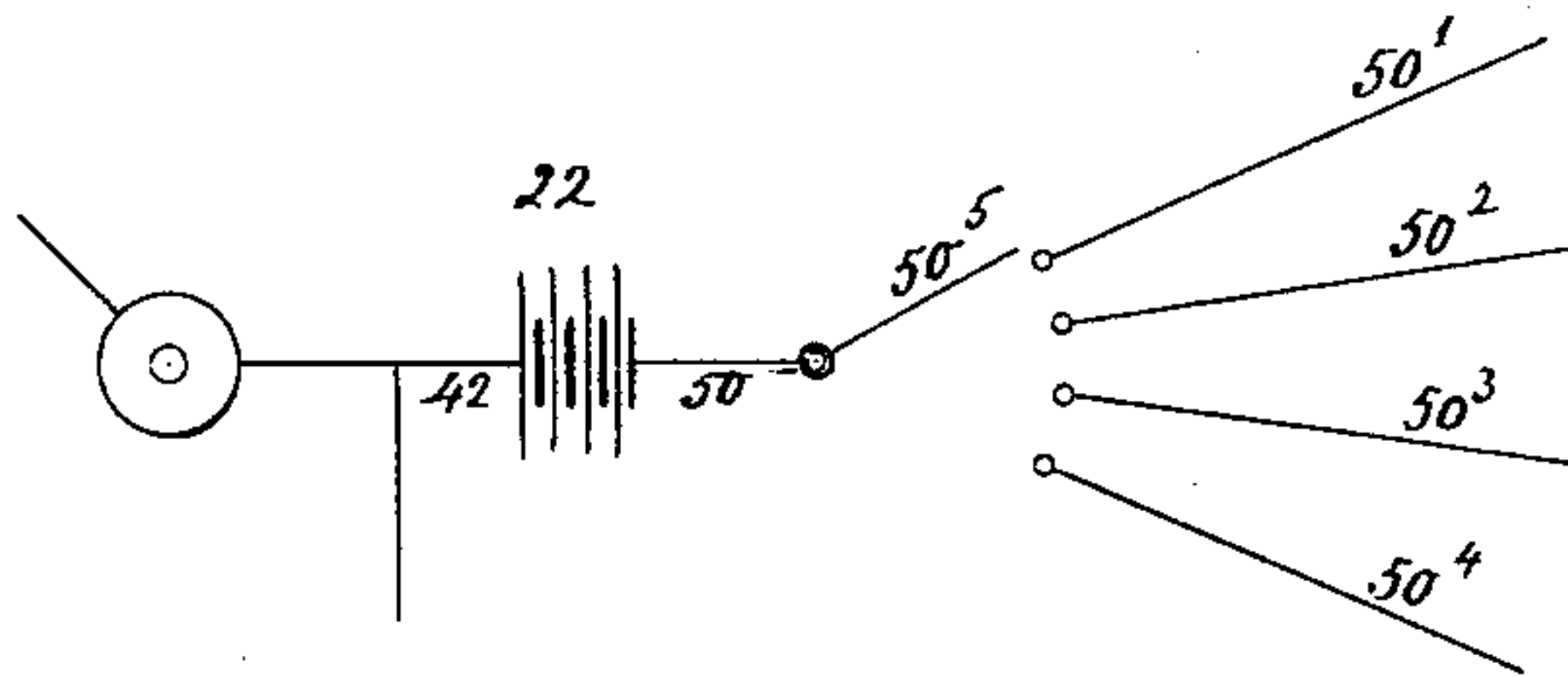


Fig. 7.



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UNITED STATES PATENT OFFICE.

HENRY I. LURYE AND MEYER H. LEWIS, OF NEW YORK, N. Y., ASSIGNORS
OF ONE-HALF TO SIMON SCHWARZ AND JOSEPH SCHWARZ, OF SAME
PLACE.

DEVICE FOR INSURING CLOSING OF WINDOWS, &c.

SPECIFICATION forming part of Letters Patent No. 587,591, dated August 3, 1897.

Application filed March 25, 1897. Serial No. 629,256. (No model.)

To all whom it may concern:

Be it known that we, HENRY I. LURYE and MEYER H. LEWIS, citizens of the United States, residing at New York, in the county
5 and State of New York, have invented new and useful Improvements in Devices for Insuring the Closing of Windows and other Appliances, of which the following is a specification.

10 The object of this invention is to prevent the front or street door of a building—as, for example, a factory—or any other door desired from being locked until all the windows,
15 traps, faucets, cocks, doors, and like appliances in such building are properly closed; and the invention resides in the novel arrangement set forth in the following specification and claims, and illustrated in the annexed drawings, in which—

20 Figure 1 is a diagrammatic view of the device, showing the key-cabinet as also the outside circuit. Fig. 2 shows a faucet-engaging hasp. Fig. 3 is a sectional side view of a key-cabinet appearing sectioned in face view
25 in Fig. 1. Fig. 4 is a sectional view of a window-contact. Fig. 5 is a sectional face view of a key-holder on larger scale than in Fig. 3. Fig. 6 is a sectional side elevation of Fig. 5. Fig. 7 shows a modification.

30 The key for locking the front door is shown at 12, Fig. 3, and said key during the day sticks in the keyhole 12', Fig. 1, of a cabinet or case A, separate from and practically placed just inside or suitably near to the front
35 door or office or other convenient place, and said key 12 cannot be taken out of hole 12' until the key holder or fork 3' of lever 2 3 registers its slit with hole 12'. The spring 8 normally draws lever 2 3 to the key-engaging
40 or locking position, where the lever is held by armature 5, which is withdrawn from the lever when electromagnet 7 is vitalized, but, as will presently appear, this magnet 7 cannot be vitalized until all windows, faucets, and
45 the like throughout the building are closed.

Supposing every window, faucet, and the like to be closed, then starting from magnet 7 the conductors 46 and 48 find a contact at
50 window. From contact 31 runs conductor 49,

which finds a closed contact at 30, closed by the tail of hasp 28 when closed, said hasp being hinged at 29 and its tail entering the contact-springs 30 and connecting wires 49 and 30'. The hasp 28 holds a faucet-handle 35 in
55 closed position to turn off the water. The closed handle 35 presses on spring slide or plunger 36 to move the latter to contact with the contact-piece 24, thus bringing wires 30' and 24' into connection. The conductor 24' 60 leads to electromagnet 23, which, when vitalized, will attract the armature 25 to unhook or free the hasp 28, normally locked by said armature. From magnet 23 leads conductor 50 to battery 22, from which leads conductor 65 42 and 41 to push-button 21. From this button leads conductor 40 and 39 to magnet 7. A branch circuit 38 47 includes a buzzer or alarm 10. When now button 21 is pressed, the current can circulate, which is indicated 70 by buzzer 10, and at the same time armature 5 is attracted by magnet 7 to release the lever-arm 3, so that by lever-handle 2 the fork 3' can be moved to releasing position for freeing the key. If any window or other part—as, for 75 example, faucet 35—is not closed, the circuit is broken at some point, bell 10 will not ring, and the failure of magnet 7 to vitalize will not only indicate such fact, but will also prevent key 12 being taken out of cabinet A un- 80 til the proper closing has been attended to. The key 12 when put aside for the day in said key-receiving cabinet A or keyhole 12' will press on stem or slide 53, Fig. 3, so as to cause contact 13 to touch contact 14. From con- 85 tact 13 runs conductor 44 to electromagnet 15, from which runs conductor 15' to contact-lever 16, weighted, as by ball 51, and which lever when raised by hand will be held by the hook 56 of armature 17, attracted by magnet 90 15, provided the latter is vitalized. When held up by armature 17, the lever 16 touches contact 18, from which run conductors 43 and 42 to battery 22, whence conductor 50 runs to electromagnet 23, which attracts the arma- 95 ture or lock 25, so as to release the hasp 28 and allow faucet-handle 35 to be moved to open the faucet.

Should the key 12 not be placed into the cabinet, the contact at 13 14 would not be 100

made and the electromagnet 15 would not be vitalized and would fail to attract armature 17, and lever 16 when raised by hand would not be engaged by armature 17 and would drop as soon as let go and no contact would be effected at 18, so that magnet 23 would not be vitalized and hasp 28 would not be released. It is thus necessary to insert key 12 into its cabinet, where it is to be kept during the day, so that contact will be effected at 13 14, and magnets 15 and 23 can be vitalized before the hasp 28 can be released to free cock 35 for turning on the water.

The contact 14, as seen, connects with magnet 23 by conductors 45, 48, 49, 30', 36, 24, and 24'.

When the hasp 28 is in its open position, as shown by broken lines in Fig. 1, its tail is free from or breaks connection at the springs 30, and the circuit-closer or lever 16 when out of contact, as shown by broken lines, breaks the circuit through magnet 15.

Supposing the circuit-closer 16 is held in contact position by armature or detent 17, then, as noticed, the circuit through magnet 23 is closed to vitalize the latter and attract armature or detent 25, so that hasp 28 can be opened to free faucet-handle 35. As soon, however, as said hasp is opened or handle 35 moved to turn on the water the circuit is broken at 30 or at 36, and the magnet 15 being thus devitalized the armature 17 releases the contact 16 to allow the latter to drop or break contact at 18, as indicated by broken lines, thus indicating that the water has been turned on or handle 35 freed for turning on the water. Of course the handle 35 must be closed and hasp 28 then moved to locking position before the circuit is reestablished, there being a break or circuit-closer at both points 36 and 30, as noted.

In the drawings is shown but one faucet, but of course the device is applicable also when several faucets or appliances are placed at different points—as, for example, on different floors. Supposing, for example, as seen in Fig. 7, several wires, as 50' 50² 50³ 50⁴, lead from different floors, then by means of a switch, as 50⁵, each such wire can in turn be brought into circuit with battery 22 to test each floor or locality by itself.

A practical arrangement is to have the parts of the apparatus from 48 to and including battery 22 with cabinet A, magnet 15, buzzer 10, and contact-maker or push-button 21 in one locality, as in a closet or office on the ground floor of the building. The conductor 48, running to contact 31 and then on, as also conductor 50, running from battery 22 to magnet 23 and then on, form an external circuit or circuits leading to various floors or localities.

The conductor 50 may include not only a window and faucet, but also other appliances, as doors, traps, cocks, electric switches, and so on, which on being closed establish connection at the various breaks in the con-

ductor 50; also, the hasp 28 is not confined to use in locking a faucet 35, as said hasp might form an electric padlock for locking other appliances—as, for example, gas-meters.

By having the buzzer 10 and the magnet 7 in multiple or parallel circuit the breaks occasioned by the movements of the buzzer in the circuit of conductors 38 and 47 will not interfere with a continuous current flowing through conductors 39 and 46, whereby the magnet 7 is unbrokenly vitalized for the time being to allow the armature 5 to properly free key-holder 3', the buzzer operating at the same time.

The contact 31 at the window is practically formed by providing one of the meeting-rails with studs or projecting screws 57, which on the closing of the window glide onto or contact with spring or metallic tongues 58, formed by a partly-slit piece of sheet or spring metal 31, suitably bent and secured to the other meeting-rail.

The fulcrum of key holder or lever 2 3 is formed by a hub 59, Fig. 6, of said lever, journaled or rotating in the eye part of the key-hole 12', said hollow hub 59 being of sufficient diameter to allow the entrance of the stem of key 12.

The hasp 28 does not open automatically—that is to say, when the dog 25 is attracted by the magnet 23 and releases the hasp the latter will not open of itself, although it is free to be moved open by hand. Therefore when the main circuit, including the window-fastener and the faucet-fastener, is closed the faucet lock or hasp 28 remains closed or can be left closed and the main circuit remains unbroken to permit the key to be removed from the holder.

What we claim as new, and desire to secure by Letters Patent, is—

1. A key-receiving cabinet provided with a key-holder, and electromagnet and circuit for freeing the holder, and a closer for said circuit, said closer comprising a hasp having a circuit-closing tail or part, a circuit-closing spring-slide, and an electromagnet in said circuit, said magnet having an armature adapted to engage or lock the hasp substantially as described.

2. A key-receiving cabinet provided with a key-holder, a lock or detent armature for the holder, an electromagnet and circuit, and window-contacts for closing the circuit, said window-contacts comprising spring-tongues at one of the meeting-rails, and projections or studs on the other meeting-rail made to touch the tongues on the closing of the window substantially as described.

3. A key-receiving cabinet provided with a keyhole, a sliding stem opposite said keyhole and in the path of a key entering by said hole, a key-holding lever having a hollow hub or fulcrum journaled in the eye part of the keyhole and adapted to receive a key-stem, said lever having an arm or tine made to ex-

5 tend from said fulcrum part to swing across the keyhole as the lever is tilted, a lock or detent armature for holding the lever in tilted position, an electromagnet for withdrawing the armature, a circuit for said magnet, and contacts for closing said circuit, said contacts being closed by the key-actuated stem, substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

HENRY I. LURYE.
MEYER H. LEWIS.

Witnesses:

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E. F. KASTENHUBER.