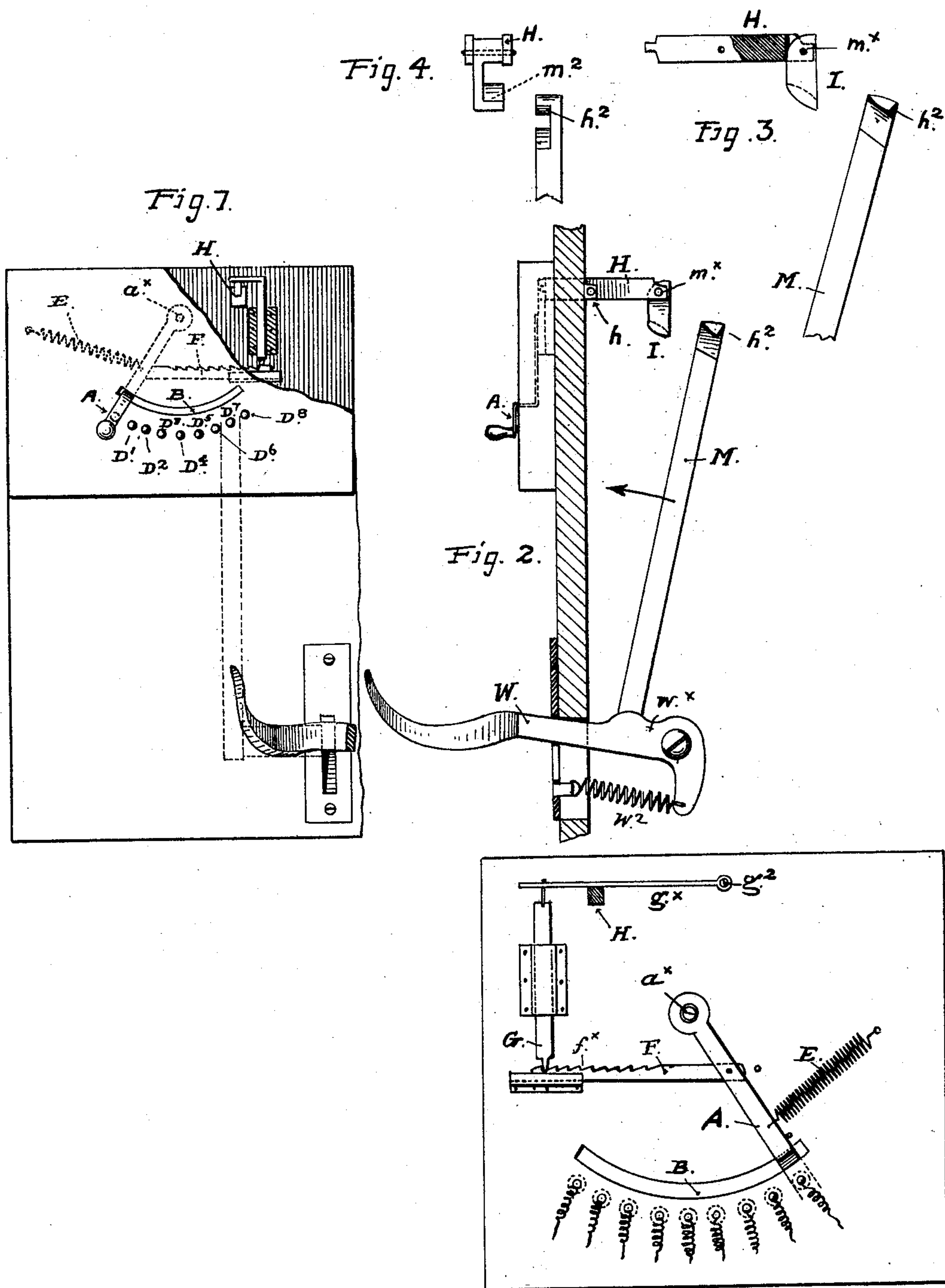


(No Model.)

N. FALLEK.
THROW-OFF SWITCH FOR TELEPHONES.

No. 603,681.

Patented May 10, 1898.



Witnesses=

M. Beggs.
E. Salomon.

Fig. 5

Inventor

Nathan Fallick

By Smith & Horn 4-1045

UNITED STATES PATENT OFFICE.

NATHAN FALLEK, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF THIRTY-ONE SIXTIETHS TO FREDERICK HESS, JR., ALBERT K. ANDRIANO, AND ISIDORE HARRIS, OF SAME PLACE.

THROW-OFF SWITCH FOR TELEPHONES.

SPECIFICATION forming part of Letters Patent No. 603,681, dated May 10, 1898.

Application filed August 17, 1897. Serial No. 648,581. (No model.)

To all whom it may concern:

Be it known that I, NATHAN FALLEK, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented certain new and useful Improvements in Automatic Throw-Off Switches for Office Telephone Systems, of which the following is a specification.

This invention relates to an improved automatic switch for local telephones of that kind or description generally known as "office telephone systems," in which a number of rooms, offices, or stations located in different parts of the same building are supplied with transmitters and receivers and signaling mechanism all interconnected through a switch in each room or at each station in such manner that a person at any one of the stations or telephones in the system can call up and communicate with a person located at any other station.

My present improvement in throw-off switches of this character consists in the described construction and combination of parts, having for its object to provide a simple and inexpensive throw-off device that can be readily applied to most of the constructions of switches of this kind in use, as hereinafter more fully set forth, and pointed out in the claim at the end of this specification, reference being had to the accompanying drawings, in which—

Figure 1 represents in front elevation a nine-point switch constructed according to my invention and arranged for operation with the telephone-hook of an ordinary battery and transmitter-box. Fig. 2 is a side view of the same parts, taken from the right-hand side of Fig. 1, showing the front of the box in section. Figs. 3 and 4 are details of the tripping device connected with and worked by the telephone-hook, Fig. 3 being a side view of the tripping-lever and connected parts and Fig. 4 an end view taken from the right-hand side of Fig. 3. Fig. 5 is a rear view of the switch, looking at the back of the board on which the parts are mounted.

A indicates the switch-lever; a^x , its pivot; B, the slot in the board or front of the case containing the parts that lock the switch-

lever in any given position; D D' D², &c., the contact-points of the several lines composing the system; E, a coil-spring acting to bring the switch-lever back to its first position, from which it starts in each setting operation.

F is a ratchet-bar attached to the lever A and having teeth f^x on its top edge corresponding in number with the contact-points on the switchboard.

G is a pawl or dog set to engage the teeth of the ratchet-bar, and g^x is a spring-arm attached at one end to the fixed point g^2 .

H is a short lever working on a pivot h and carrying on its inner end a tappet-finger I, the opposite end of the lever being brought through a slot in the switchboard or case into working position under the arm g^x .

The piece I is attached to the end of the lever H by a pivot-joint m^x to swing loosely in a backward direction when struck from the front, but to maintain a rigid position about perpendicular to the lever when struck from behind. M is an arm rigidly secured to the lever-arm w^x of the telephone-hook and extending upward therefrom to the lever H. The end of this arm is provided with a wedge-shaped block h^2 , projecting from one side to engage and pass over a similar incline m^2 , with which the tappet-piece I is provided, the faces of these two inclines being so arranged with relation to each other and of such degree of inclination that the movement of the end of the arm M in an arc from the pivot of the telephone-hook as a center will cause the incline on the arm to draw down the piece I in the forward movement of the arm, or in the direction indicated by the arrow in Fig. 1, and thus to draw down the outer end of the lever H. In the contrary movement of the arm M, on the other hand, the piece I will swing on its pivot and allow the arm to pass by without disturbing the lever H. It will be seen that the result of these two movements and different actions of the parts will be to raise the dog from the ratchet-teeth and release the switch-lever when the telephone-hook is depressed, but to produce no effect on the switch when the hook flies up. As often as the receiver is hung on its

hook, therefore, the switch-lever will be released and allowed to move back to its first position, while the switch will not be disturbed when the receiver is taken off the hook
5 for use. This allows the switch to be set to any required position either before or after the receiver is taken off the hook; but it cannot be returned to place on the hook without throwing off the switch.

10 Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination with the pivotally-at-

tached switch-lever A; of the spring E, the ratchet-toothed bar F, the sliding dog G, 15 spring-arm g^x , pivoted lever H, pivoted piece I on the end of said lever and the arm on the telephone-hook having the inclines h^2 on the end to engage the inclines on the said piece I, constructed for operation as set forth. 20

In testimony that I claim the foregoing I have hereunto set my hand and seal.

NATHAN FALLEK. [L. S.]

Witnesses:

C. W. M. SMITH,

W. T. HESS.