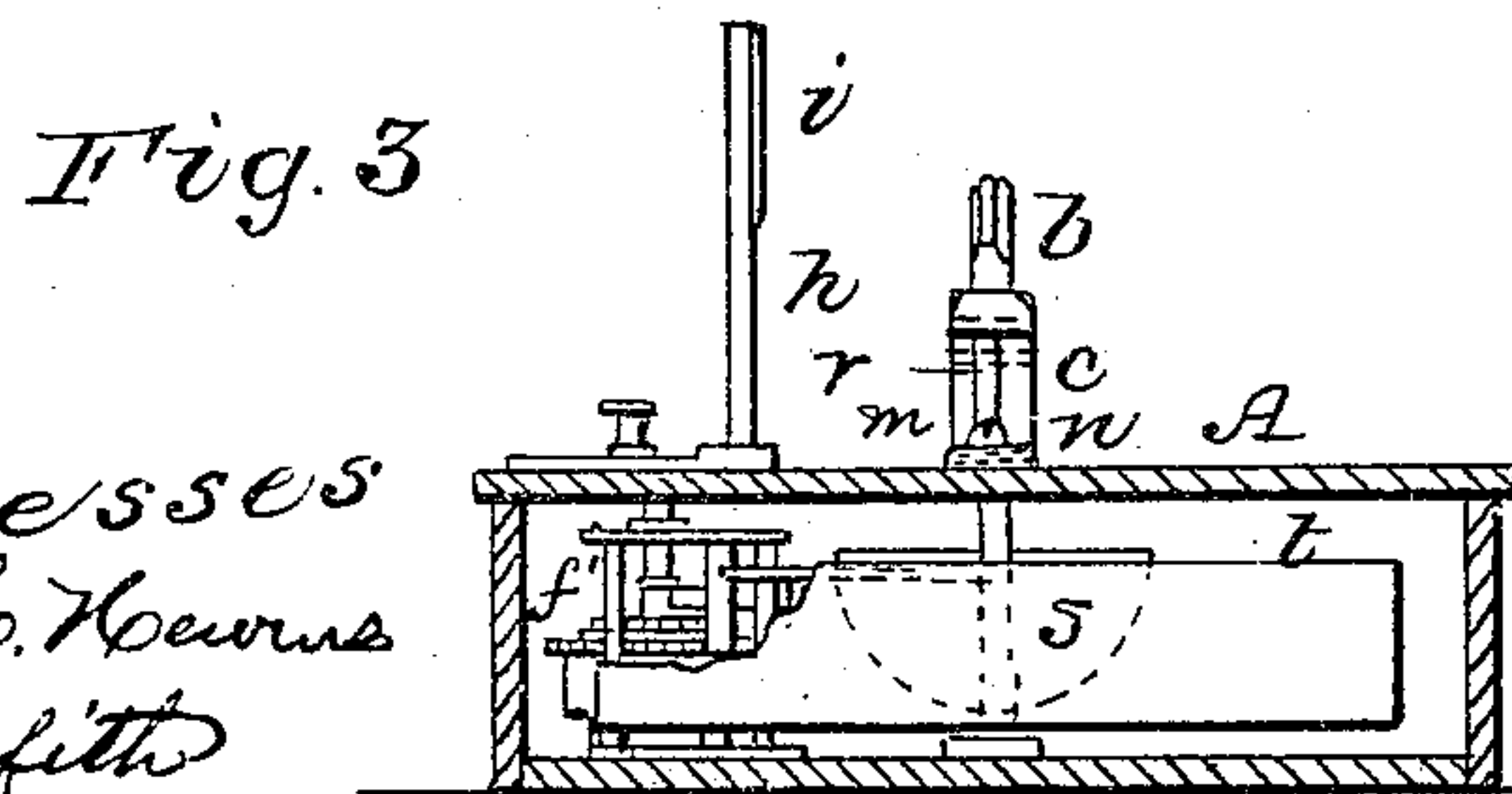
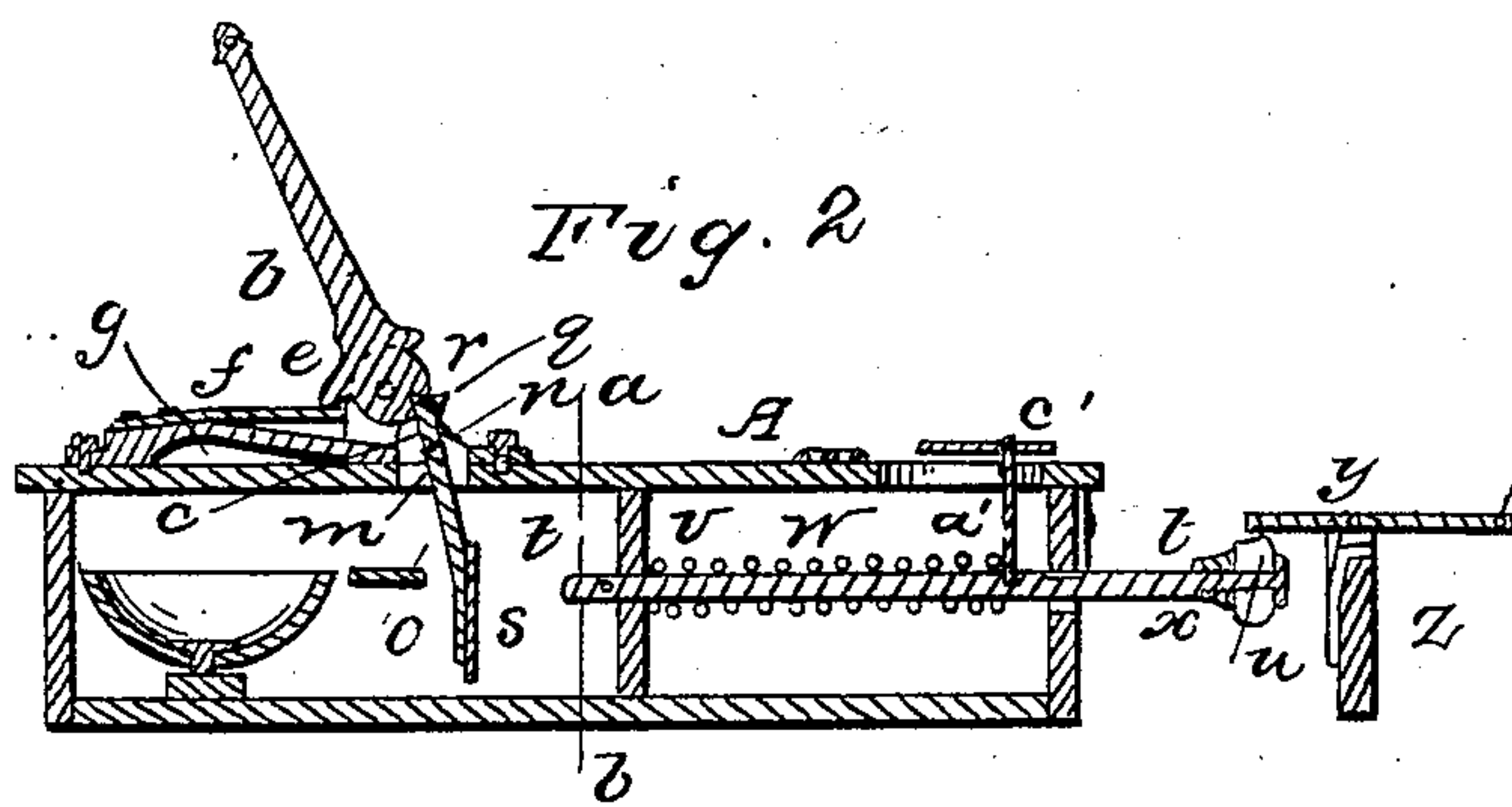
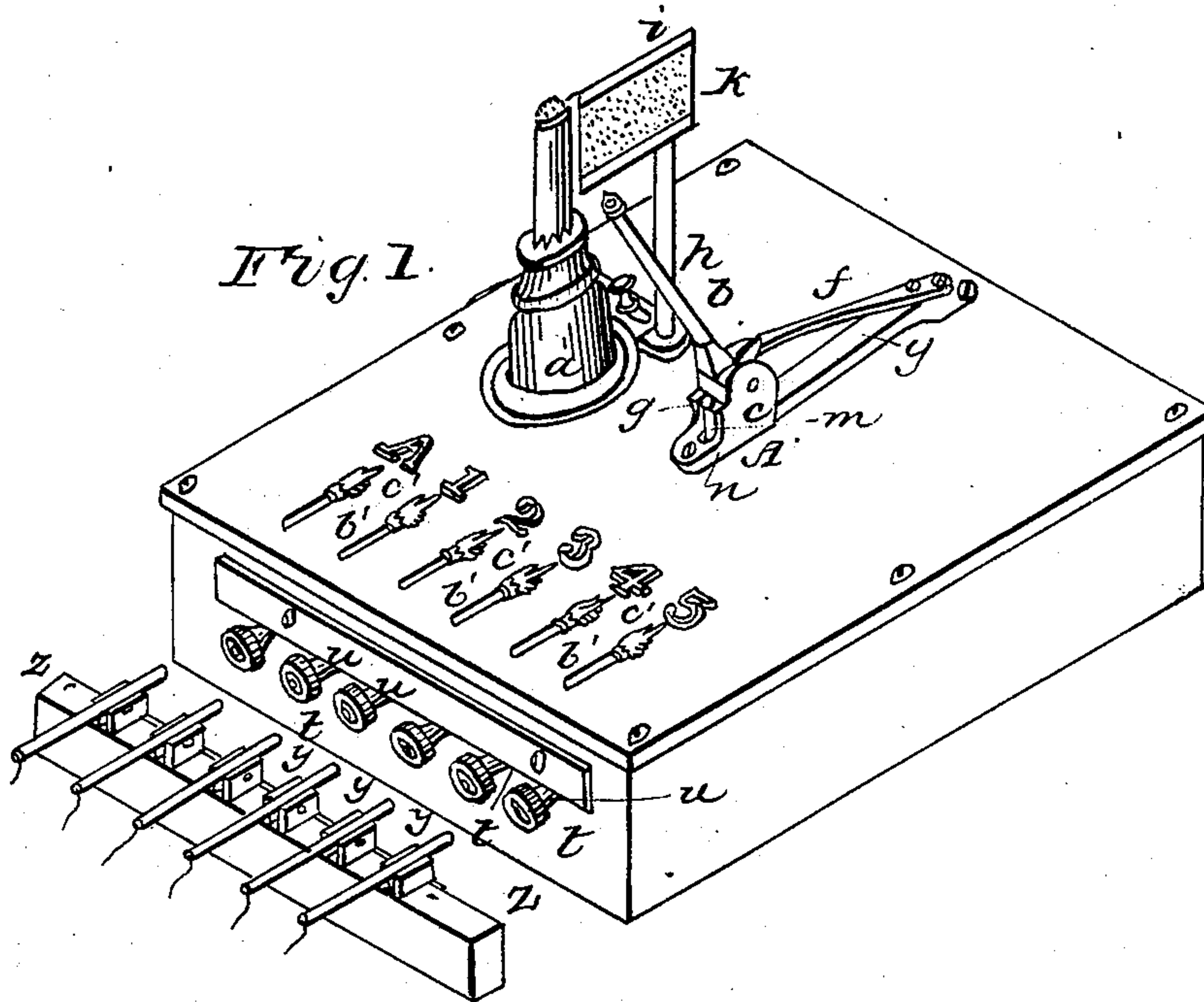


H. J. WOLTERS.

Burglar Alarm.

No. 84,153.

Patented Nov. 17, 1868.



Witnesses  
Edmund H. Hewins  
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Inventor  
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# United States Patent Office.

HERMAN JOHN WOLTERS, OF CHESTER, MASSACHUSETTS.

Letters Patent No. 84,153, dated November 17, 1868.

## IMPROVEMENT IN BURGLAR-ALARMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all to whom these presents shall come:

Be it known that I, HERMAN JOHN WOLTERS, of Chester, in the county of Hampden, and Commonwealth of Massachusetts, have invented an Improved Burglar-Alarm Apparatus; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawings, making part of this specification, and in which—

Figure 1 is a perspective view,

Figure 2, a vertical and transverse section, and

Figure 3, a vertical and longitudinal section of my invention.

The object of this invention is to give warning to the occupants of a dwelling-house, or other habitable building, of the entrance to or attempt to effect an entrance by burglars, and to indicate the precise room or point at which such entrance is attempted, the invention further serving the purpose, at the time of giving the alarm, of lighting a lamp, in order to give the occupants of the apartment opportunity to prepare themselves to receive the burglars.

The invention consists in a box or case, of a rectangular or other proper shape, having located in its interior, and preferably at one corner thereof, an ordinary clock-alarm apparatus, and having extending across its interior, and in immediate proximity to such alarm-mechanism, a horizontal bar, suspended upon or from a pendulous tripper, which in turn is supported upon a pin or fulcrum, inserted within a standard or support fixed to the top of the case, the upper and shorter arm of such tripper acting in connection with a vibrating rod or match-carrier in such manner as to act as a trigger to hold the match-carrier in one extreme of its movement until the alarm is sounded, and upon sounding of such alarm, to release the match-carrier, and allow it to be thrown suddenly forward and ignited, and inflame the wick of a lamp placed upon the top of the case, and immediately adjacent to the match-carrier, the tripper and its bar being actuated at the proper time by one or more of a series of spring-clutches applied horizontally within the case, and arranged with respect to such tripper as hereinafter explained, these spring-clutches being provided with indicators or pointers, and in turn operated upon by a like number of tripping-levers, connected by wires with the different doors or windows of the dwelling, and so that a slight movement of the door or window shall operate the levers and spring-catches, and sound the alarm.

To enable others skilled in mechanics to construct and apply my invention, I will describe its construction and operation.

In the drawings accompanying this specification, and illustrating my invention, A denotes a rectangular box or case, of suitable size and shape, for containing and supporting the operative parts of the mechanism, and upon the top of which, and to the centre of one side thereof, a lamp, *a*, is applied.

The portion of the mechanism for igniting the match consists of a vibrating arm, *b*, supported at its lower end within a bracket or standard, *c*, such standard *c* being affixed to the top of the case at about its centre, and immediately contiguous to the lamp *a*, before mentioned, the lower part of the vibrating arm *b* having a spur, *e*, formed upon one side of it, and on a level or thereabouts with its fulcrum, against the under side of which the free end of a plate-spring, *f*, presses, and serves to force the upper extremity of the arm *b* in a direction away from such spring, and so as to bring it in a line with or opposite to the wick of the lamp *a*, the arm or carrier *b* being at such a distance from the lamp that a match, when applied to it, shall be caused to rest immediately over the lamp-wick. The fixed end of the spring *f* is screwed in a proper manner to the top of the case A, or to an extension, *g*, of the standard *c*.

For the purpose of igniting the match applied to the carrier *b*, I apply to the top of the case A, and to one side of such carrier, a post, *h*, carrying at its top a frame or guide, *i*, for holding the strip *k* of sand-paper, or other suitable material, such guide and sand-paper being situated in the path of movement of the match when applied to the vibrating carrier *b*, and at an angle thereto, in order to insure the attrition of the end of the match against it.

The post *h* should be applied to the top of the case A in such manner that its distance from the match-carrier may be varied or adjusted, in order to accommodate it to matches of different lengths, or to insure the striking of the match against its friction-material. For retaining or "setting" the match-carrier *b* in its extreme position away from the lamp, and against the force of the spring *f*, I apply to the standard *c* a swinging tripper or rod, *m*, pivoted to such standard by a pin, *n*, passing horizontally through the two, and immediately below the fulcrum of the match-carrier, the lower or longer arm *o* of such tripper, extending downward into the interior of the case A, through an aperture, *p*, made in its top, the upper and shorter arm *q* of such tripper resting (when the carrier *b* is "set") underneath or in contact with a projection or notch, *r*, made in one side of the lower end of the carrier, and opposite the spur *e*, before mentioned, the construction and application of the lower part of the carrier and the tripper being much the same as the tumbler and trigger of a cheap construction of fire-arm locks.

To the lower end *o* of the tripper *m* I affix a long bar, *s*, extending across the interior or chamber *t* of the case A, and at right angles to the path of movement of the match-carrier, and I connect one end of such bar *s* to an ordinary clock-alarm escapement placed within the case A, and in such manner that a swinging movement of either end of the bar *s* in either direction shall actuate such escapement, and sound an alarm.

As this escapement is of any well-known construction, and as the mode of attaching the bar *s* to it will



readily suggest itself to any one conversant with clocks, further reference to it in this specification is not considered necessary.

The portion of the mechanism designed for actuating the alarm and the match-carrier is constructed as follows:

A series of horizontal catch-bars or sliding rods, *t t t*, &c., are extended through one side of the case, and into its interior, at right angles to and upon the same horizontal plane as the bar *s*, and so disposed with respect to such bar, that, when at their extreme inward position, they shall strike or abut against such bar.

The outer ends of the rods *t t t*, &c., are provided with knobs *u u u*, &c., as represented in the accompanying drawings, while their inner ends are supported in a partition, *v*, extending across the interior of the case *A*.

For holding the catch-bars or rods *t t t*, &c., in their extreme outward position, a notch or indentation, *x*, is made in the upper side of each bar, into which the end of the case *A* extends, the springs *w w*, &c., serving to secure the rod in contact with such end of the case until depressed by the action of a series of tripping-levers, shown at *y y y*, &c., in the drawings.

These levers, as therein shown, consist of a number of levers pivoted to a horizontal bar, *Z*, in such manner as to be susceptible of free vertical movements or oscillations thereon, such bar *Z* containing the levers *y y y*, &c., being secured to the wall or other portion or the apartment in which it is desired to place the apparatus, the longer arms of the levers *y y y* being connected, by means of wires, with the various doors or windows of the building in which the apparatus is situated, the fulcrum of these levers being situated at about two-thirds the length from the said wires.

Furthermore, I apply to the upper side of each of the rods *t t t*, and at about the centre of the same, an upright post or wire, *a'*, such posts extending upward through slots *b' b'*, &c., made in the top of the case *A*, and being furnished at their upper ends with hands or pointers, *c' c' c'*, &c., arranged as shown in fig. 1 of the drawings.

I also affix to the top of the case *A*, and in an axial line with the pointers *c' c' c'*, &c., and at the end of the slots *b' b'*, &c., a series of initial letters or numerical figures, these figures or letters being identified, respectively, with the different apartments of the building, the doors or windows of which are connected with the levers *y y y*, before mentioned.

A spiral spring, *w*, is coiled about each rod *t*, and between the partition *v* and the indicator-posts *a' a'*, &c., one end of such spring being secured to the partition *v*, and the other end to rod *t*, and serving by its contractile power to force the rod inward, and in contact with the bar *s*.

A person, upon retiring at night, winds up the clock-escapement, shown at *f'*, in the drawings, and forces back the match-carrier *b* against the force of the spring *f*, and into the position shown in fig. 2 of the drawings, a match having been previously applied to the upper end of the carrier, and the cap of the wick-tube of the lamp removed, the rods *t t t* being drawn outward to their fullest extent, and locked to the ends of the case *A*, as before mentioned.

The case *A* is then to be placed upon a table or other convenient object in the sleeping-apartment, and so that

the shorter arms of the levers *y y y*, &c., shall, when in about a horizontal position, rest upon the top of the knobs *u u u* of the rods *t t t*, it being understood, as before stated, that the bar carrying the levers *y y y* is fixed to some convenient part of the apartment, and the levers connected with the various windows and doors of the building, the number of rods *t t*, &c., and levers *y y y*, being proportioned to the number of rooms in the building in which the apparatus is employed, all the doors and windows of one apartment being connected to but one of the levers *y y*, and so that a pressure upon any one of these wires shall actuate the lever.

The least attempt made to tamper with any one of the wires, by opening the door or window to which it is attached, or by endeavoring to cut such wire, will cause an instantaneous depression of the shorter arm of one of the levers *y y*, &c., which will cause a corresponding depression of the outer end of one of the rods *t t*, and allow it to be shot inward by the action of its coiled spring, *w*. As this rod shoots forward, its inner end strikes against the face of the bar *s*, and releases the alarm-mechanism of the clock-escapement, and sounds an alarm sufficient to awaken the occupant of the apartment.

This movement of the bar *s* also causes a movement of the tripper *m*, and releases it from contact with the notch *r* of the match-carrier *b*, and allows the spring *f* to throw such carrier quickly forward toward the lamp, the match, during this movement, impinging against the friction-card or slip *k*, and being ignited, and resting immediately over the wick of the lamp *a*, and inflaming it.

The ringing of the alarm awakens the sleeper, who, by the aid of the lamp, is enabled to determine, by means of the pointers and figures, exactly at what particular point the attempt to enter the building is being made, and gives him ample time to collect himself, and make his preparation accordingly, this being the most important and valuable feature in my invention.

Should an attempt at entrance be made at more than one point in the building at the same time, by different persons, the indicators will, of course, denote the different points.

I claim as my invention, and desire to secure by Letters Patent of the United States—

1. The combination, with the horizontal-sliding rods *t*, for actuating the bar *s*, of the upright posts *a'*, and their pointers *c'*, moving in slots formed in the case *A*, and arranged, with relation to the numerical figures or letters attached to the said case, as herein shown and specified.

2. The combination, with the vibrating bar *s*, operated by the rods *t*, as described, and the tripper *m*, to which said bar is attached, of the vibrating match-carrier, and its actuating-spring, arranged to operate in connection with the friction-plate *k* and lamp *a*, as herein shown and specified.

3. The herein-described construction and arrangement of the friction-plate supporter *h*, so that it may be adjusted to any desired distance and angle, with respect to the swinging match-carrier, as and for the purposes set forth.

HERMAN J. WOLTERS.

Witnesses:

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