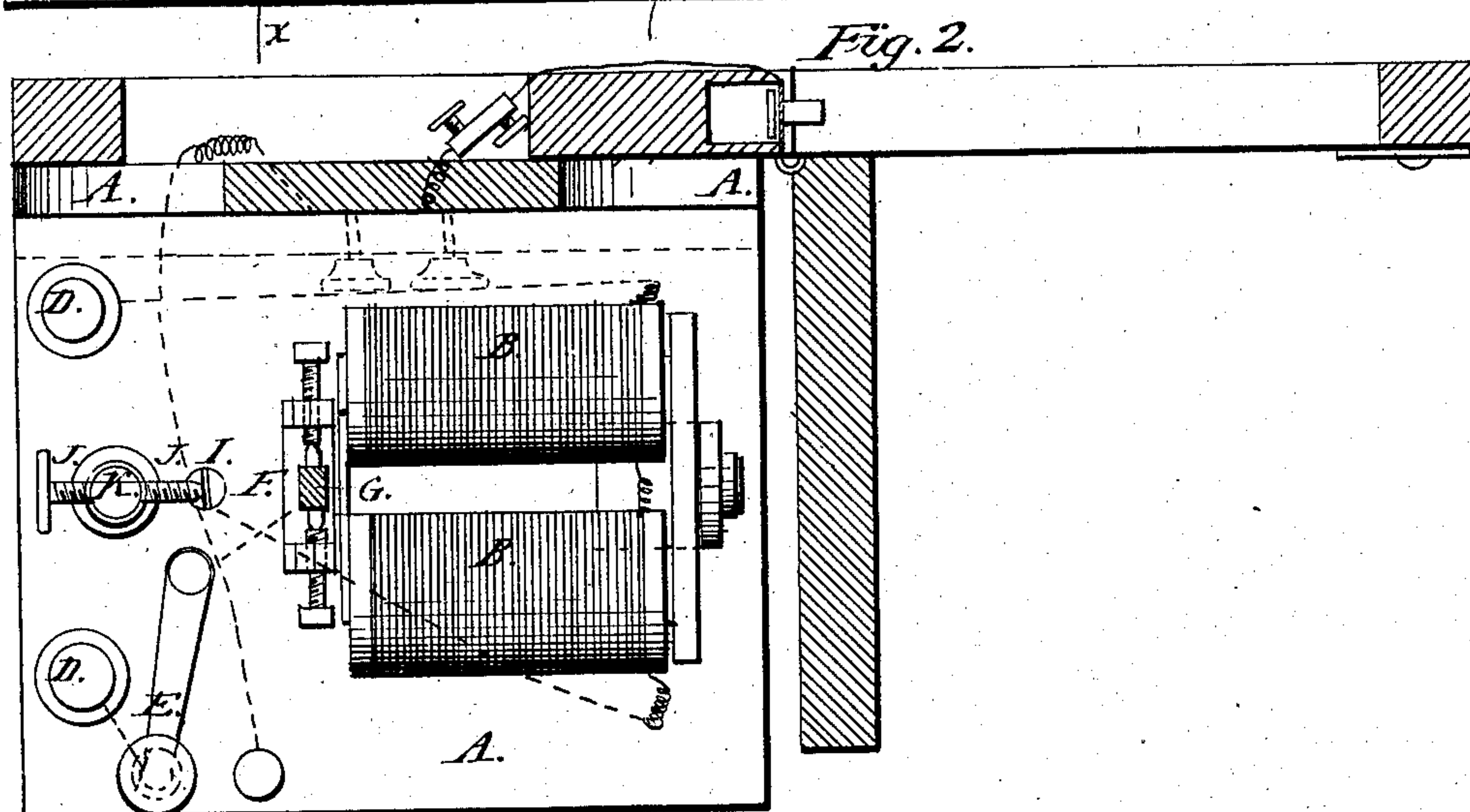
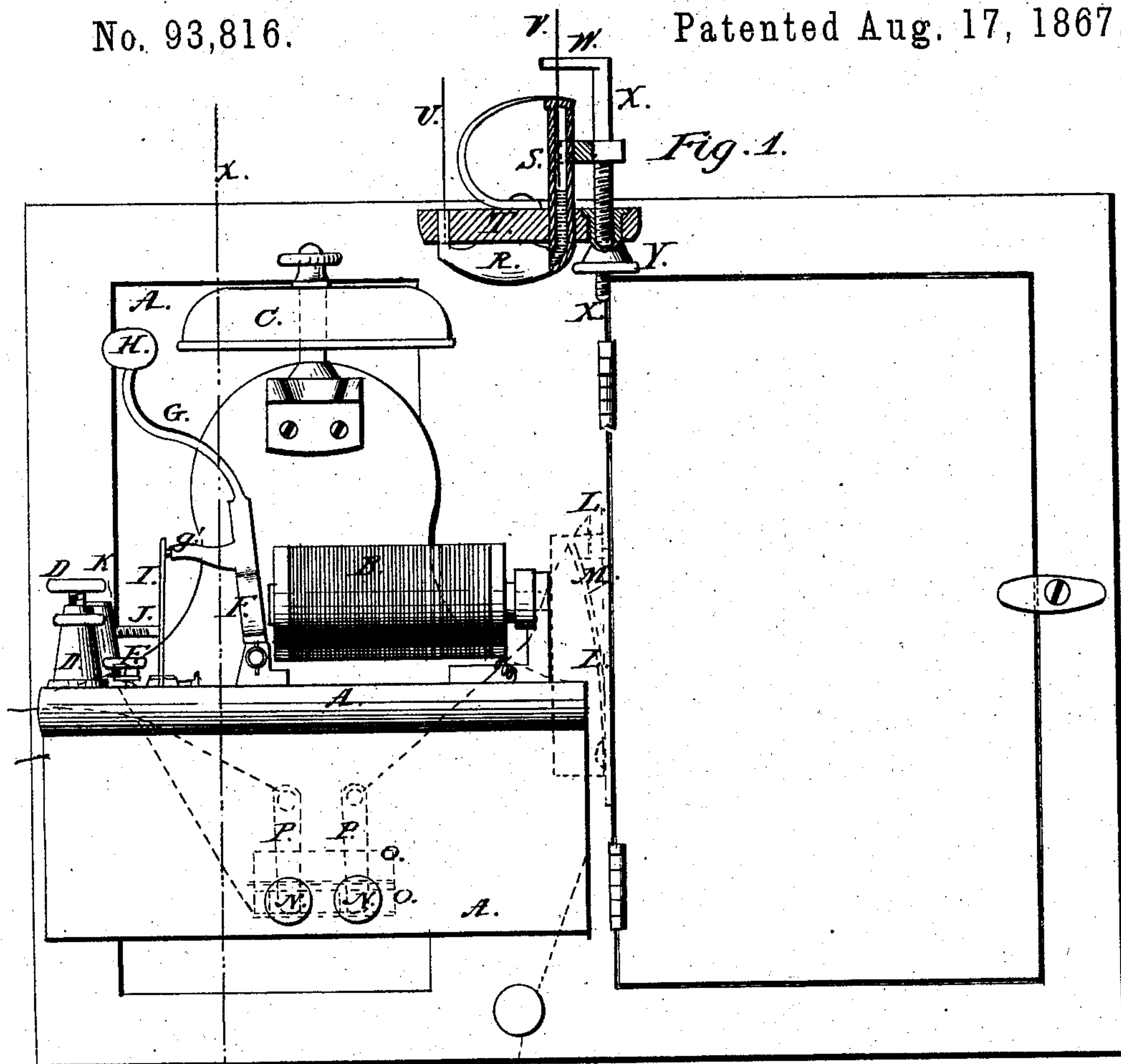


E. FONTAINE.
ELECTRICAL FIRE AND BURGLAR ALARM.

No. 93,816.

Patented Aug. 17, 1867.



Witnesses:

Orinichman
Jr. & Co.

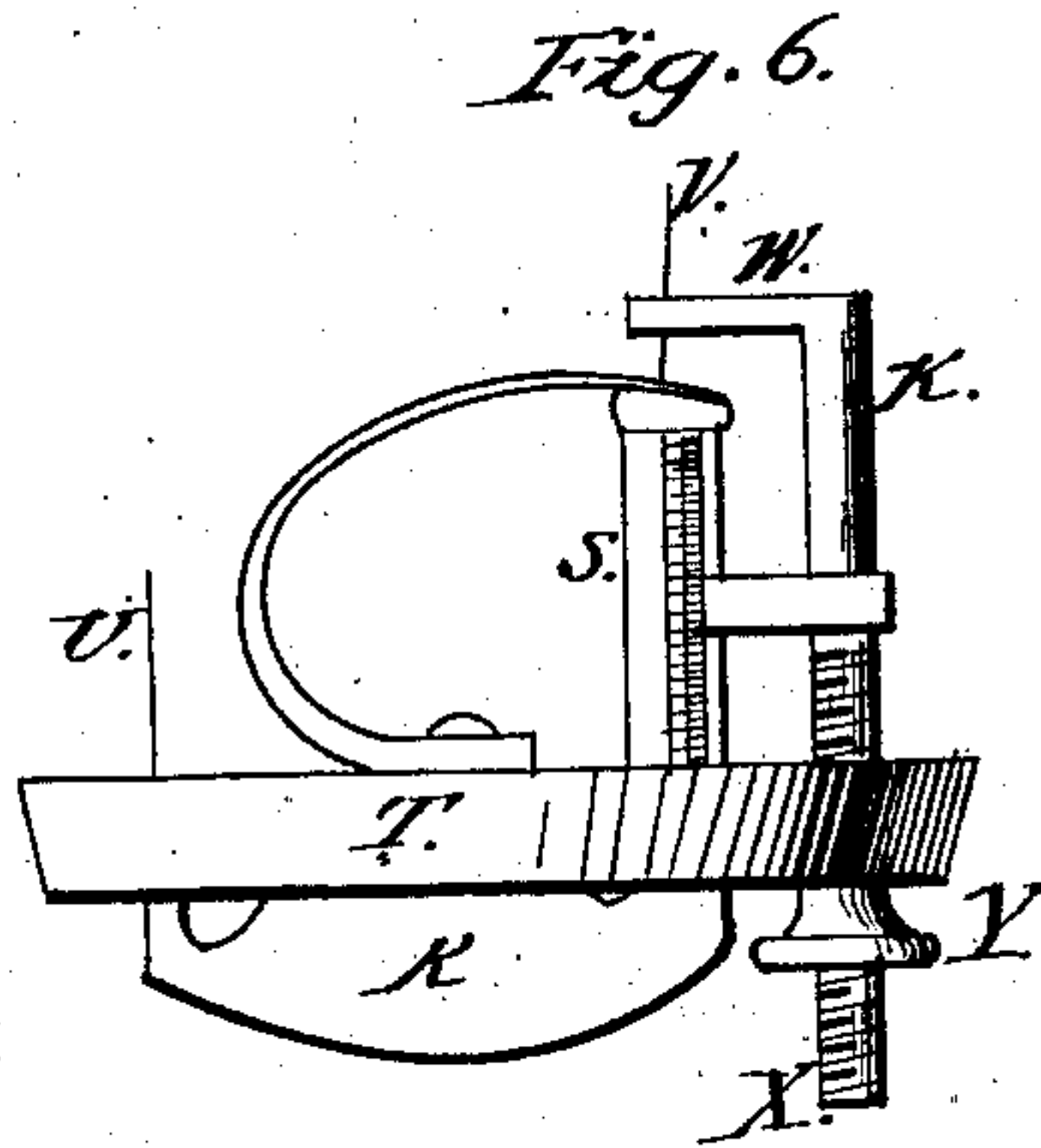
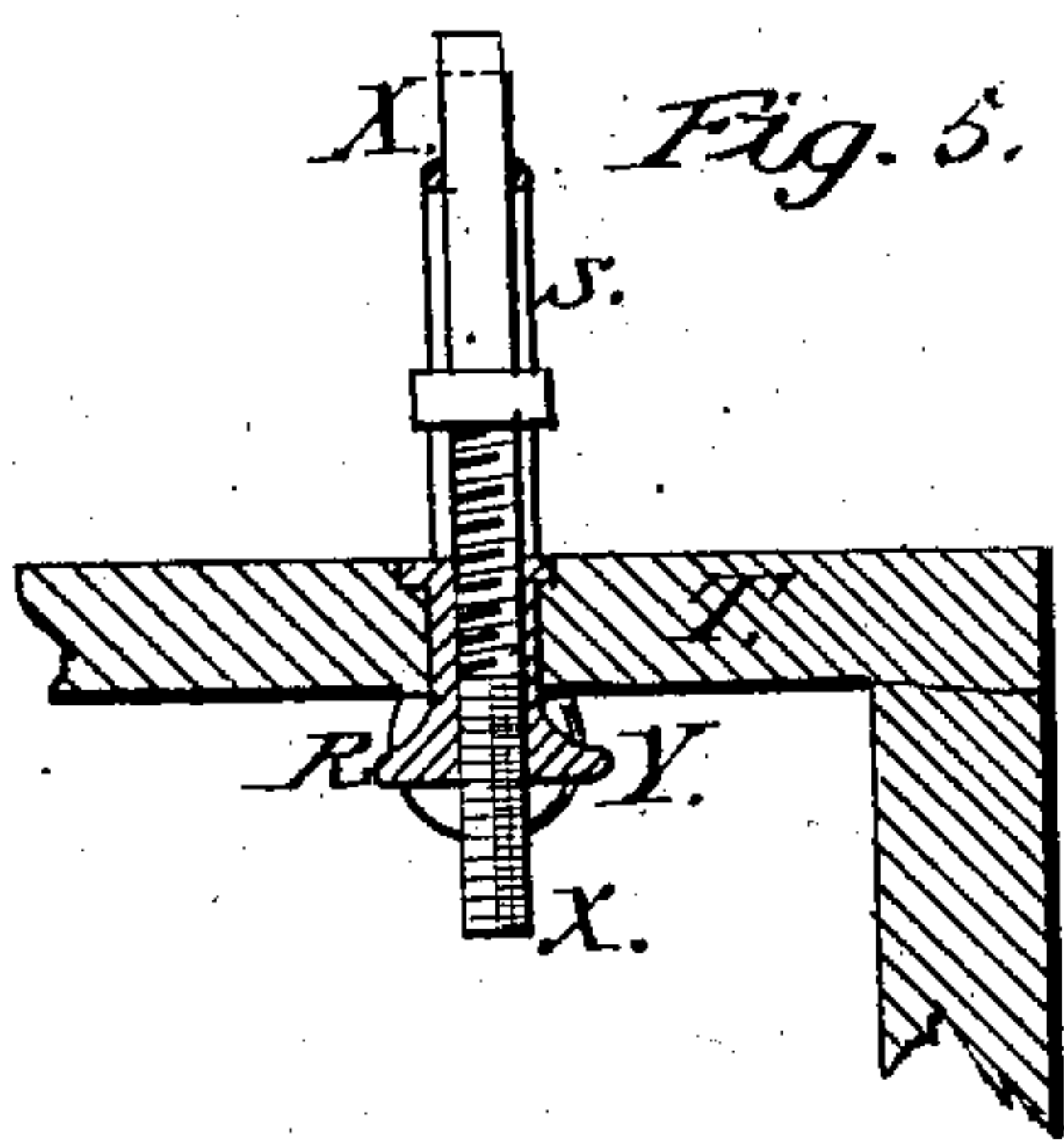
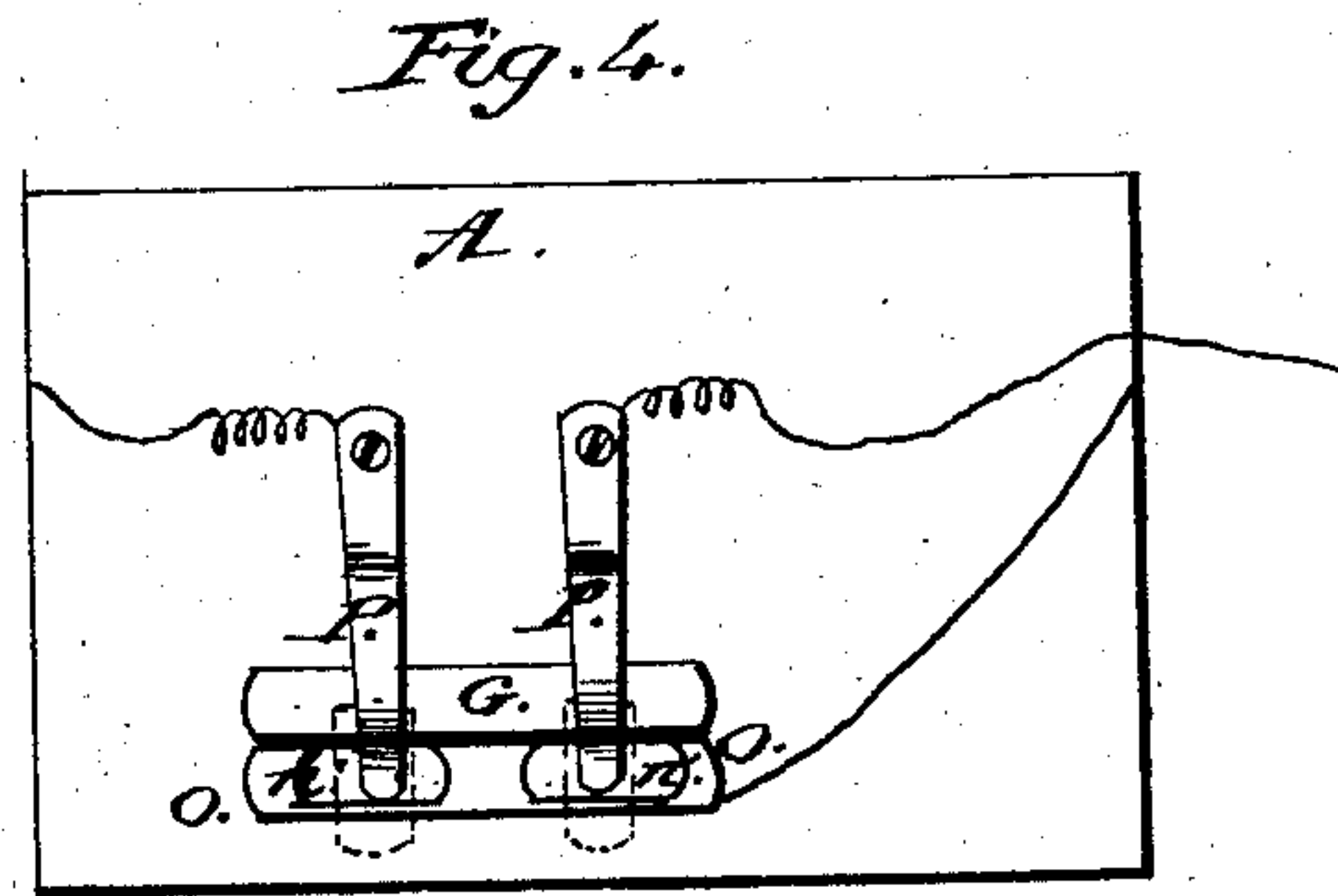
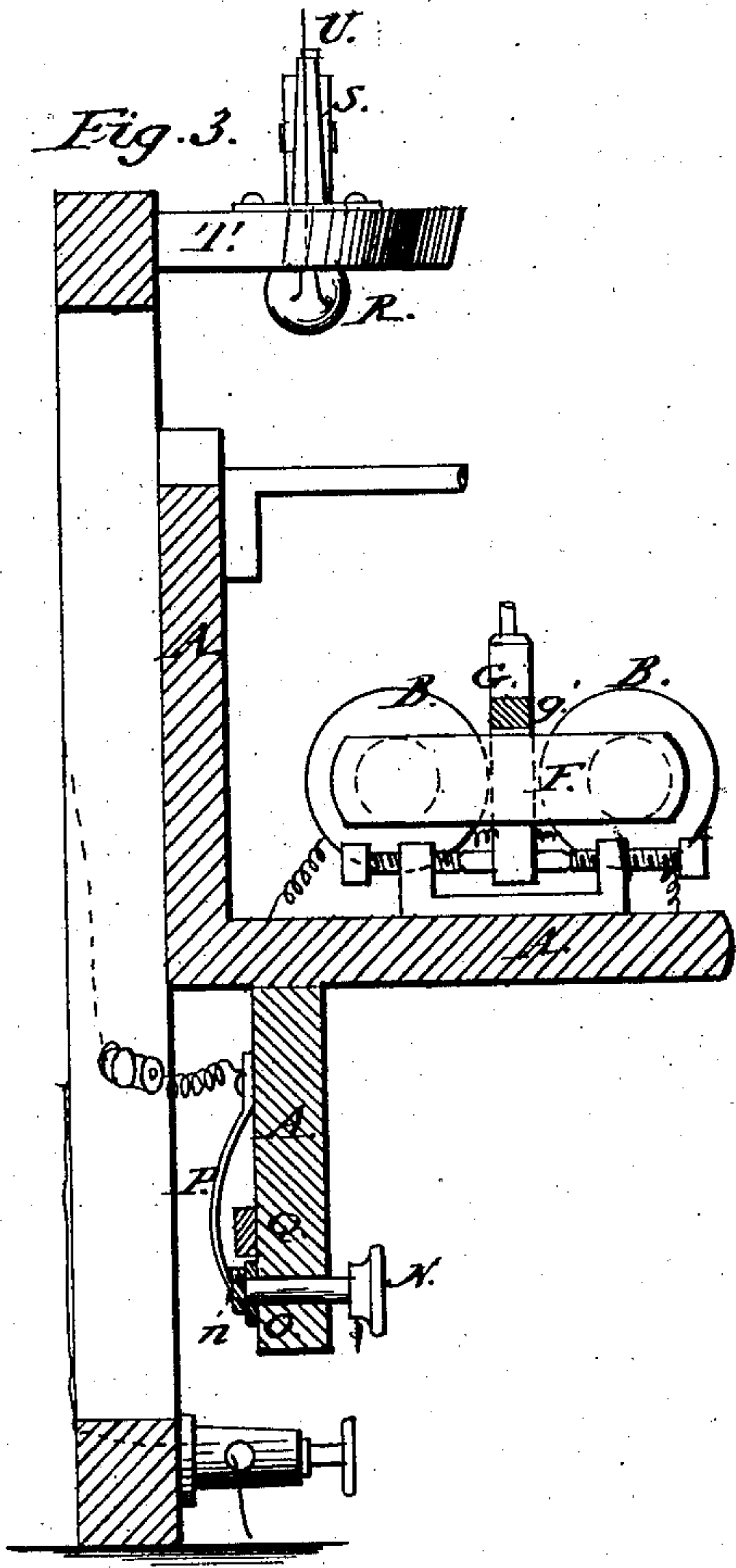
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EUGENE FONTAINE, OF FORT WAYNE, INDIANA.

Letters Patent No. 93,816, dated August 17, 1869.

IMPROVEMENT IN ELECTRIC FIRE AND BURGLAR-ALARMS.

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

To all whom it may concern:

Be it known that I, EUGENE FONTAINE, of Fort Wayne, in the county of Allen, and State of Indiana, have invented a new and useful Improvement in Electric Fire and Burglar-Alarms; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, Sheet I, is a front view of my improved apparatus, as connected with a door.

Figure 2, Sheet I, is a horizontal section of the same.

Figure 3, Sheet II, is a vertical section of the same, taken through the line *xx*, fig. 1.

Figure 4, Sheet II, is a detail view of my improved device for breaking the circuits.

Figure 5, Sheet II, is a detail sectional view of my improved fire-alarm.

Figure 6, Sheet II, is a side view of the same.

Similar letters of reference indicate corresponding parts.

My invention has for its object to improve the construction of electric fire and burglar-alarms, so as to make them more convenient in use, and more reliable and effective in operation; and

It consists in the construction and combination of the various parts of the apparatus, as hereinafter more fully described.

A is a stand, designed to be secured in some suitable position in the bedroom, or some other place, whence the alarm can be readily heard.

To the stand A are attached a helix, B, bell C, posts and screws D, to secure the wires, and a switch-key, E, about the construction of which parts there is nothing new.

F is the armature, which is pivoted to supports attached to the stand A, and to which is attached the lower end of the hammer-arm G, to the upper end of which is attached the hammer H, in such a position that when the armature F is drawn into contact with the poles of the magnet, the hammer H will strike and ring the bell.

The hammer H is so weighted, and the arm G is so formed, that the hammer will drop away from the bell by its own weight.

G is an arm formed upon the hammer-arm G, which, when the hammer H drops away from the bell, comes in contact with the spring I, which rests against the screw J, passing through the post K, with which the wires that form the circuit are connected.

The circuit-wires pass to each door and window, in the casing of which they are connected with two

springs, L, to one of which is attached a catch, M, which projects through a hole in the case of the window or door, so as to rest against said window or door in such a way, that when the window or door is closed, it may press the catch M back, and break the circuit.

But should the door or window be opened, the elasticity of the spring L, to which the catch M is attached, will force the said catch M outward, and bring it in contact with the other spring L, completing the circuit, and sounding the alarm.

As the door or window is closed, it will push the catch M in, breaking the circuit.

N are keys, the stems of which pass through the stand A, and have cross-heads, *n'*, formed upon their inner ends, which, when the circuit is closed, rest upon the metal bar O; and upon them rest the free ends of the springs P, with which the circuit-wires leading to the catches L M are connected.

If, now, an alarm is sounded, by pushing the keys N inward, and turning them one-quarter around, so that the end of the cross-head *n'* may rest upon the non-conducting bar Q, the circuit of one catch, L M, will be broken, so that by trying the different keys N until the one is reached that stops the alarm, the window or door that has been opened will be indicated.

R is a thermometer-bulb, the stem, S, of which is divided off into a scale in the ordinary manner.

The bulb R is attached to a plate, T, which is designed to be attached to the ceiling of a room.

U is a platinum wire, one end of which is connected with the circuit-wire leading to the alarm, and the other end of which passes in through the lower end of the bulb L, so as to be in contact with the mercury within said bulb.

V is a platinum wire, the upper end of which is connected with the circuit-wire, and the lower end of which passes in, through the stem of the thermometer, through a rubber-block, or other air-tight stuffing-box.

The upper part of the wire V is rigidly attached to an arm, W, attached to or formed upon the upper end of the bar X, which passes through the plate T, and upon the lower end of which is cut a screw-thread, fitting into the thumb-nut Y, swivelled to the plate T, so that by turning the nut Y, the bar X, and with it the platinum wire V, may be raised or lowered, so as to bring the lower end of said wire opposite any desired division-mark of the stem S.

As the stem S is concealed from view, a corresponding scale should be marked upon the lower part of the bar X, so that the position of the wire V may be adjusted, by adjusting the relative positions of the bar X and nut Y.

If, now, the lower end of the wire V is adjusted to any division-mark, as, for instance, the one indicating 100°, as soon as an increase of temperature has expanded the mercury to that point, the circuit will be completed, and the alarm sounded.

The circuit-wires should be provided with keys N, to enable the room from which the alarm has been sounded to be at once indicated.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. So weighting and arranging the bell-hammer G H that it may drop away from the bell C after each stroke, by its own weight, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the keys N, having cross-heads *n'*, formed upon the inner ends of their stems,

metal bar O, non-conducting bar Q, and springs P, with the wires of the circuit, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the thermometer-bulb and stem R S, platinum wires U and V, sliding-bar X, having a screw-thread and scale formed upon its lower end, and swivelled nut Y, with each other, and with the circuit of an electric alarm, substantially as herein shown and described, and for the purpose set forth.

The above specification of my invention signed by me, this 22d day of May, 1869.

EUGENE FONTAINE.

Witnesses:

FRANK BLOCKLEY,
JAMES T. GRAHAM.