

(Model.)

J. H. LUCKHURST.
Burglar Alarm.

No. 238,135.

Patented Feb. 22, 1881.

Fig. 1.

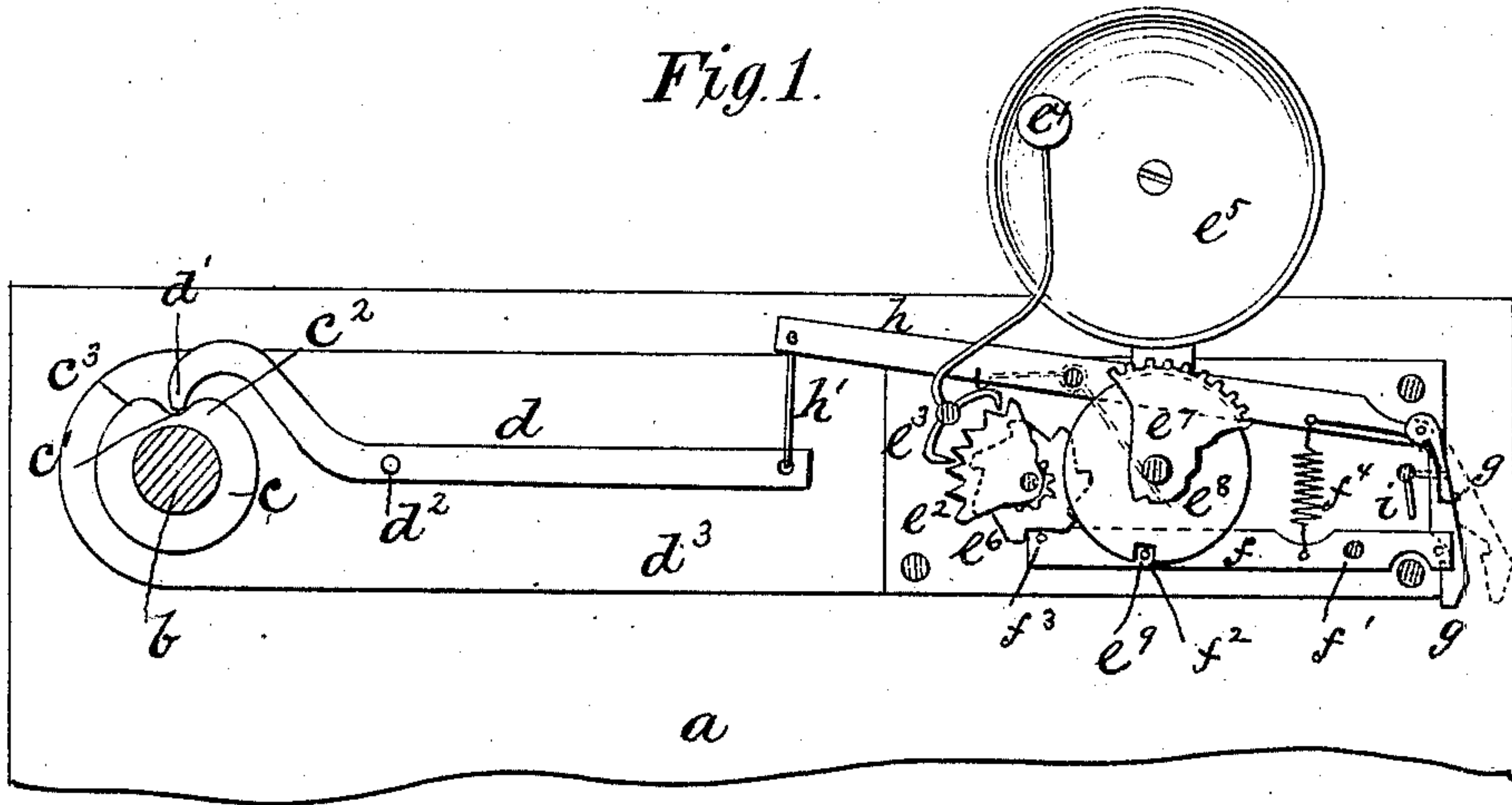


Fig. 2.

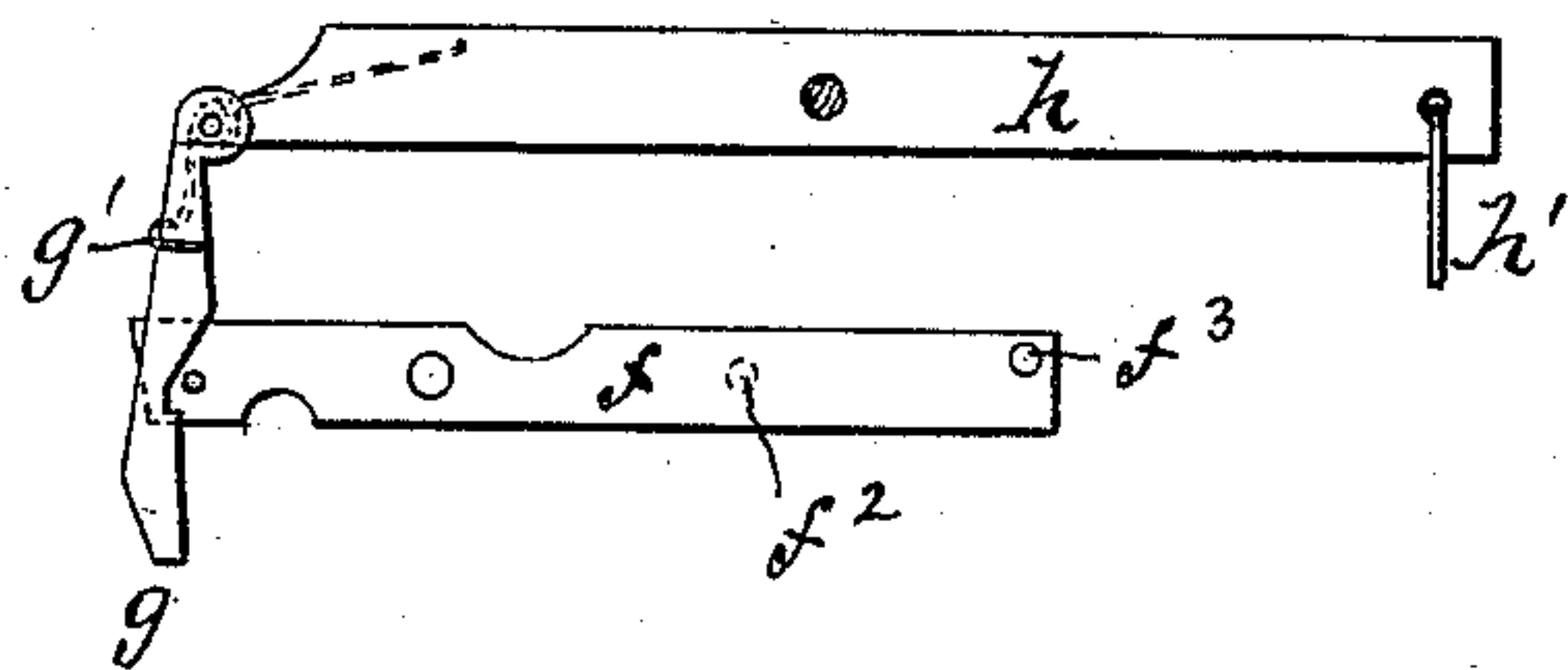


Fig. 3.

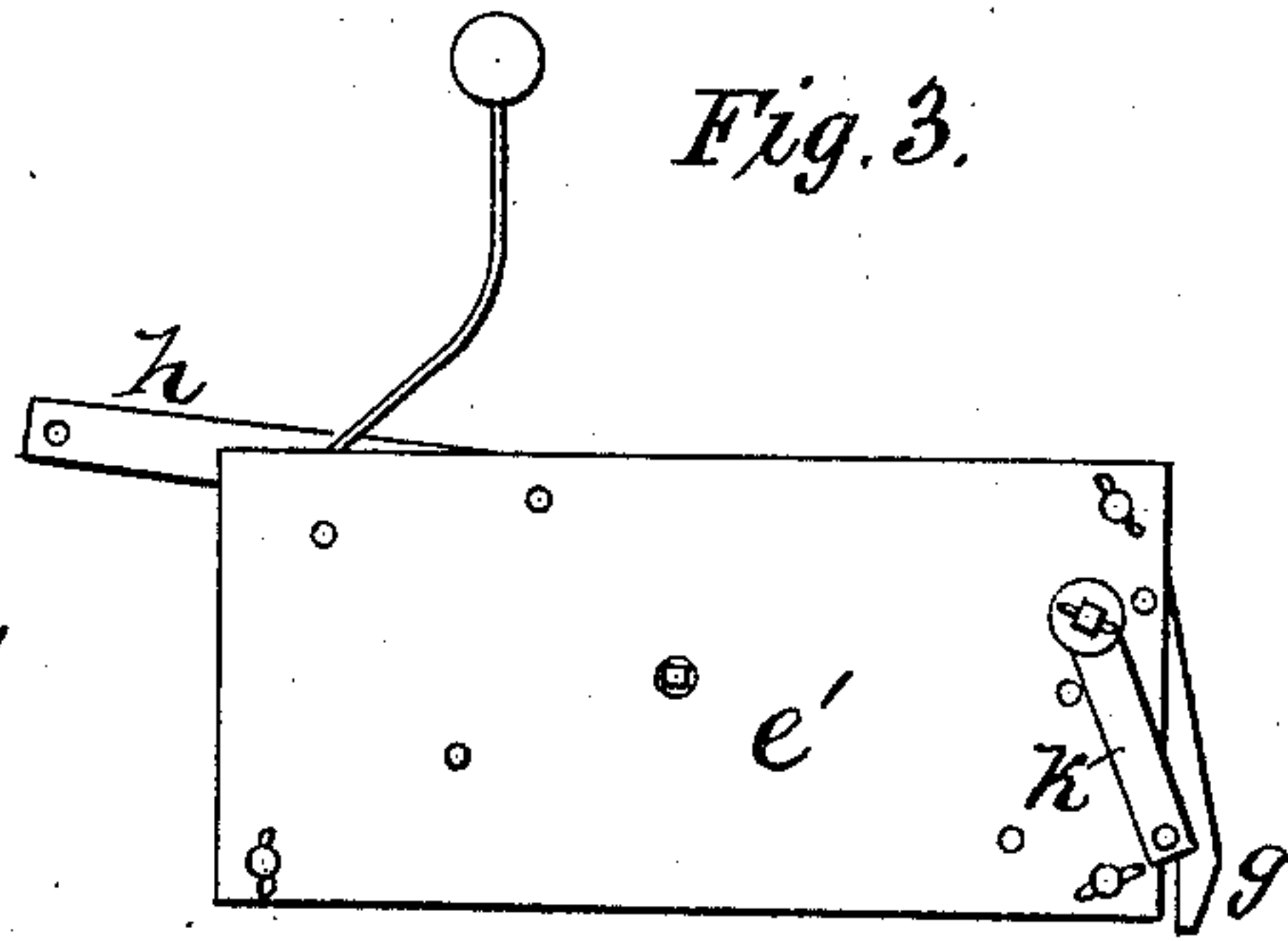


Fig. 4.

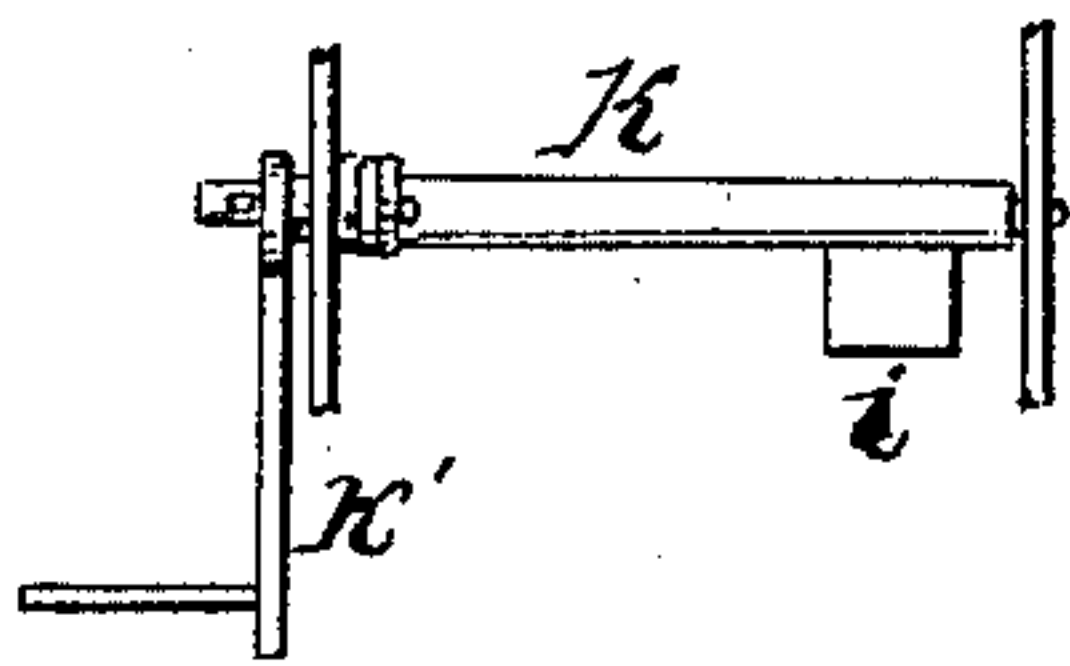
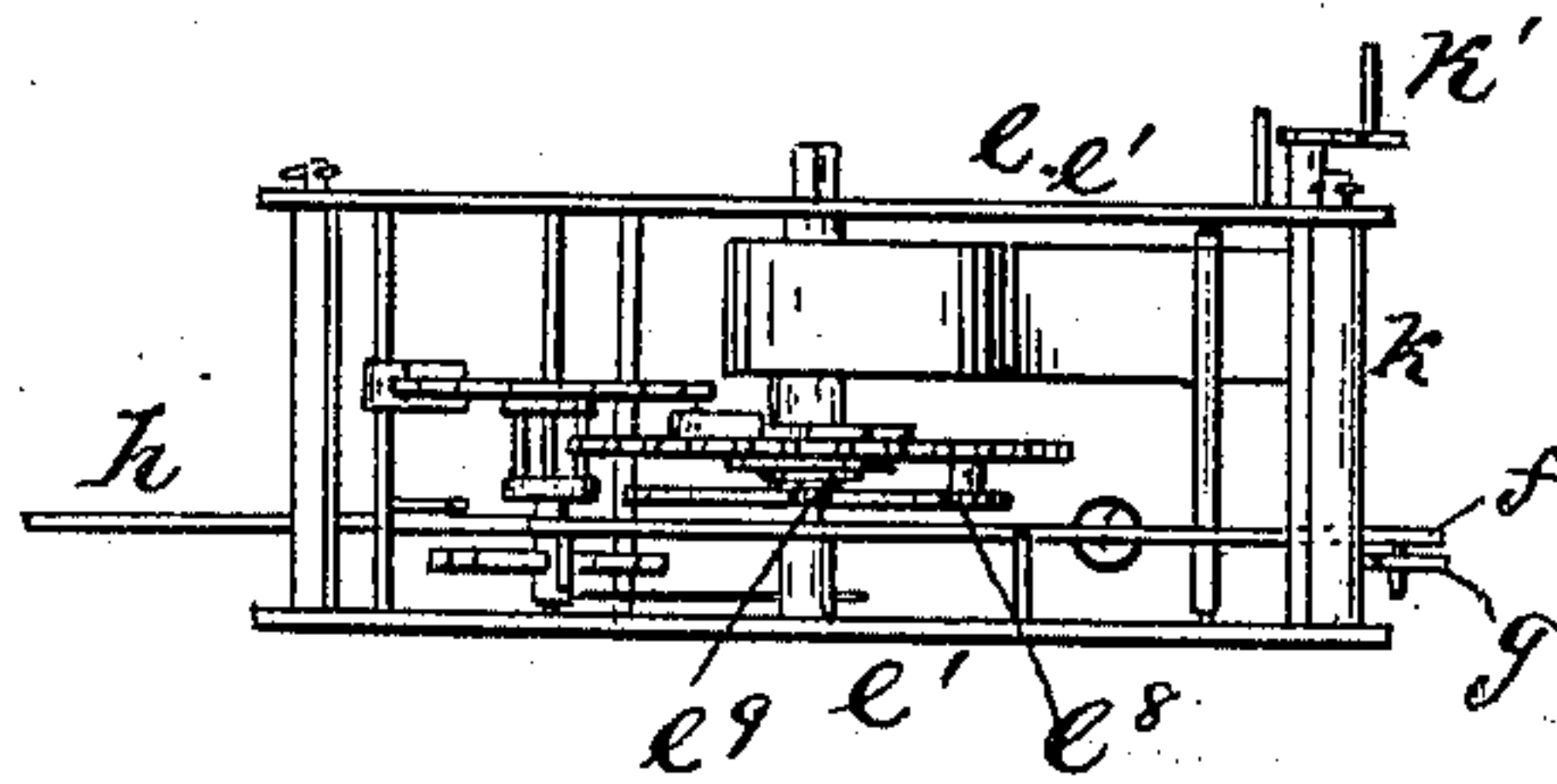


Fig. 5.



Witnesses:
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Att'ys.

UNITED STATES PATENT OFFICE.

JAMES H. LUCKHURST, OF RAHWAY, NEW JERSEY, ASSIGNOR OF ONE-HALF TO DAVID F. COLES, OF SAME PLACE.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 238,135, dated February 22, 1881.

Application filed October 12, 1880. (Model.)

To all whom it may concern:

Be it known that I, JAMES H. LUCKHURST, a citizen of the United States, residing at Rahway, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Burglar-Alarms for Doors, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention has for its object to furnish a burglar-alarm which may be applied to the locks of the ordinary house-door as well as to locks in other localities; and it consists in the construction and arrangement of the several parts hereinafter explained and claimed.

In the drawings, Figure 1 is a side elevation of a portion of a door having my invention attached thereto. Fig. 2 shows the levers which are to be pivoted in the frame of the clock-train. Fig. 3 is a side elevation of the frame of the clock-train. Fig. 4 is the cam for uncoupling the levers, and Fig. 5 shows a view of the under side of the clock-train.

a represents a portion of a door to which my invention is applied.

b is the spindle of the lock, the knob being removed to show the ring *c*, which is placed thereon and against the door.

In the drawings I have not shown the lock, which may be of any ordinary construction.

The ring *c* and the alarm mechanism may be applied on the same side of the door with the lock, or on the opposite side, but not shown in the drawings. When applied on the same side, the end of the lever *d* is bent so as to pass around the end of the lock to the spindle; or it may be carried between the lock and the door in suitable recesses or mortises formed for the purpose. The ring or collar *c* has a V-shaped detent or recess, *c'*, formed in its periphery, and on a line radial to the center of motion of the spindle *b*. The sides are slightly rounded or beveled outward from the angle or bottom of the detent, so as to provide cam-surfaces *c² c³*, as shown.

The lever *d* has its outer end bent so that its point *d'* rests in the detent *c'*. The lever *d* is also pivoted at or near its middle on a pin, *d²*, which projects from the door, or, by preference, from a base-plate, *d³*, fixed to the door.

e is a clock-train held between the side plates, *e' e'*, and is fixed to the door *a* near to the lock, so that it can be connected readily to the end of the lever *d*. *e²* is the pallet-wheel, and *e³* is the pallet, to which is attached the hammer *e⁴*, for ringing the bell *e⁵*.

On the arbor of the pallet-wheel *e²* is fixed a ratchet-wheel, *e⁶*, and on the arbor of the main wheel *e⁷* is fixed a disk, *e⁸*, in the periphery of which there is formed a notch, *e⁹*. There may be a series of notches, *e⁹*, formed around the periphery of the disk *e⁸*.

f is a pawl pivoted on an arbor, *f'*, and is provided at one end with the pins *f² f³*, which engage the notch *e⁹* in disk *e⁸* and the ratchet-wheel *e⁶*. I have provided both these stops *f² f³* for greater certainty of action; but it will be seen that either one will answer to stop the action of the clock-train. The pawl is operated by a spring, *f⁴*. The opposite end of the pawl is engaged by a swinging arm, *g*, which is pivoted to the end of a lever, *h*, which extends to and connects with the end of the lever *d* by a link, *h'*.

The arm *g* may be uncoupled from the end of the pawl *f* by turning a small cam, *i*, fixed on a shaft, *k*, operated by a crank, *k'*. The arm *g* is held by a spring, *g'*.

The operation of the device is very simple. If the knob of the door be turned in either direction, the end of the lever *d* will be lifted by the cam on the ring *c*. The lever *h* will be acted upon and the arm *g* drawn upward, which movement disengages the pawl *f* and permits the clock-train to run and give the alarm on the bell *e⁵*.

In daylight, or other time when it is not desired to have an alarm made, the arm *g* is uncoupled from the pawl *f* by turning the cam *i* outward, as shown in dotted lines, Fig. 1.

The detent *c'* being radial to the center of motion of the spindle, and the point *d'* bent so as to rest in the detent and in the said radial line, there is given a delicacy of touch and nicety of operation not found in ordinary

burglar - alarms. Little or no resistance is added against the turning of the knob, and it is impossible to "feel" the lock to find out whether an alarm is connected therewith.

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

1. The combination, with the collar *c*, placed on the lock-spindle *b*, and constructed with a
10 triangular slot or detent, *c'*, so formed as to provide two outwardly-diverging cam-surfaces *c² c³*, and the alarm mechanism arranged in the casing *e'*, of the lever *h*, pivoted in the casing *e'*, the swinging lever *g*, pivoted to the
15 inner end of the lever *h*, link *h'*, and lever *d*, pivoted to the door or plate *d³*, and having one end connected to the outer end of the lever *h* by the link *h'*, and having its opposite end bent

over the collar and its point placed in the bottom of the triangular slot or detent *c'*, in contact with the inner or lower ends of the cam-surfaces *c² c³*, substantially as set forth. 20

2. The combination, with the clock-train and the pawl *f*, of the swinging arm *g*, lever *h*, and the necessary levers to connect with the lock, 25 substantially as set forth.

3. The combination of the following elements: the lever *h*, the coupler *g*, pawl *f*, springs *f⁴* and *g'*, and uncoupler *i*, all arranged in the casing *e*, substantially as set forth. 30

In testimony whereof I affix my signature in presence of two witnesses.

JAMES H. LUCKHURST.

Witnesses:

NELSON C. KING,
WM. J. SURGANTY.