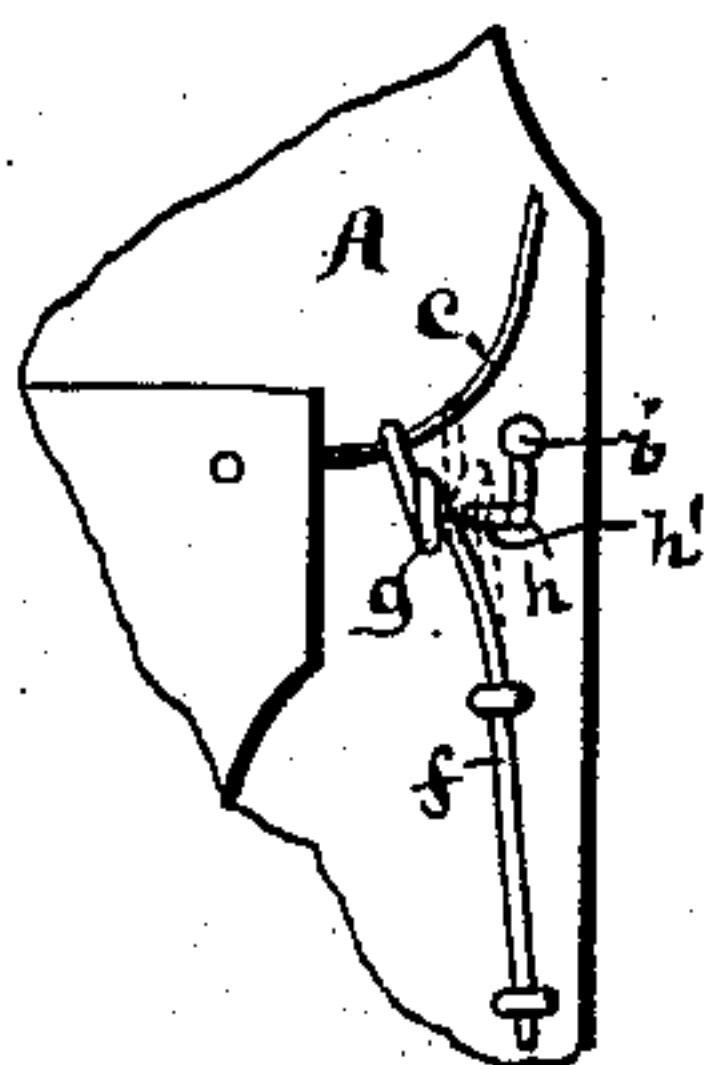
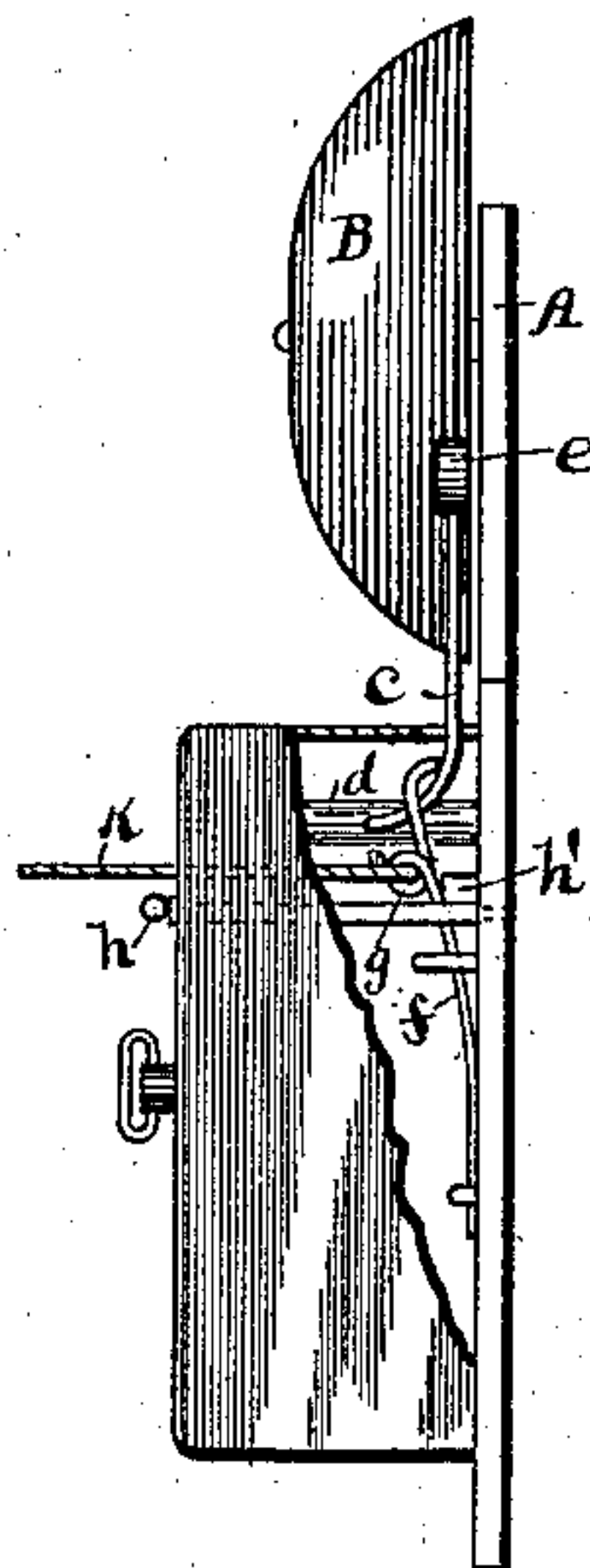
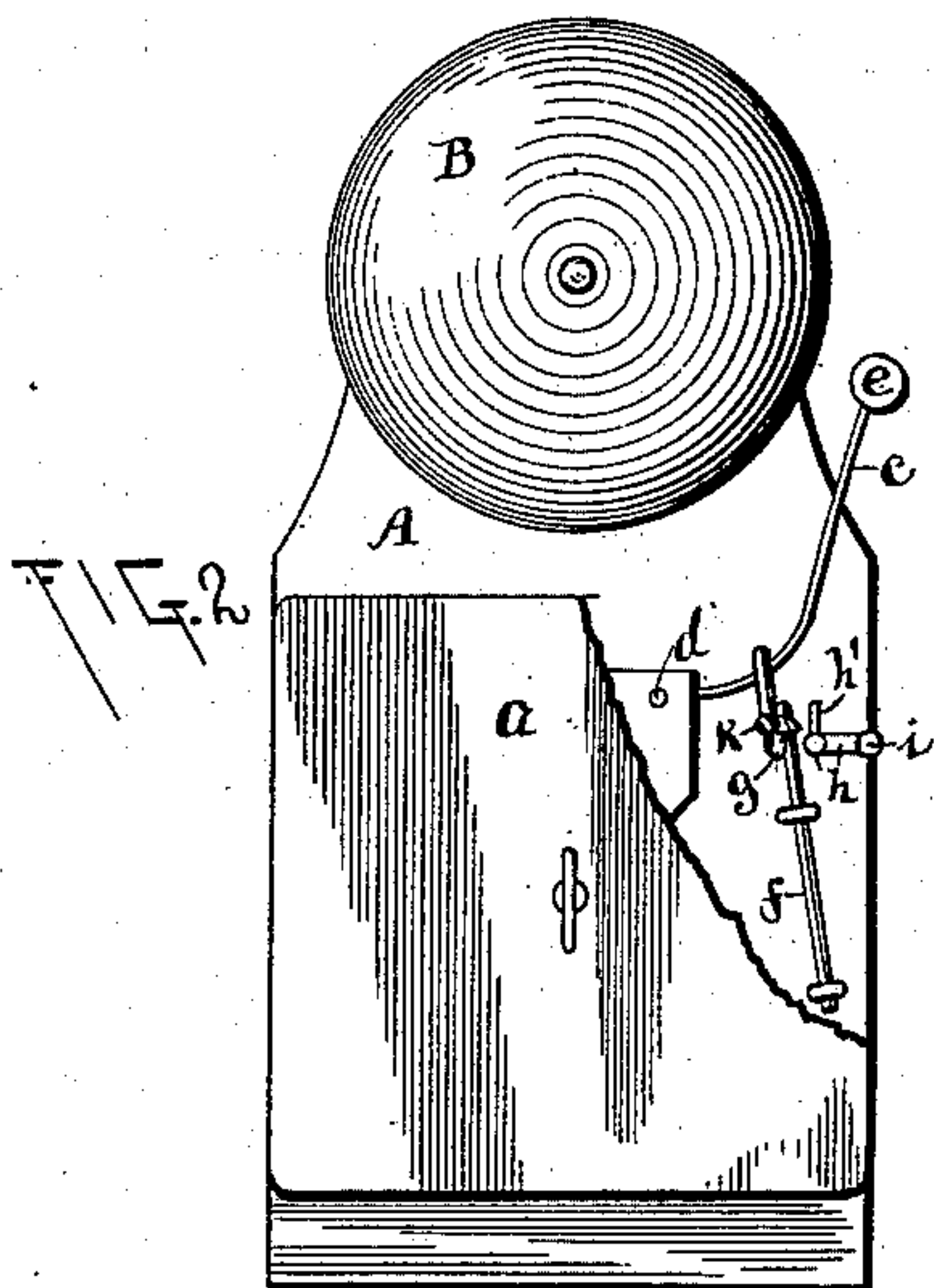
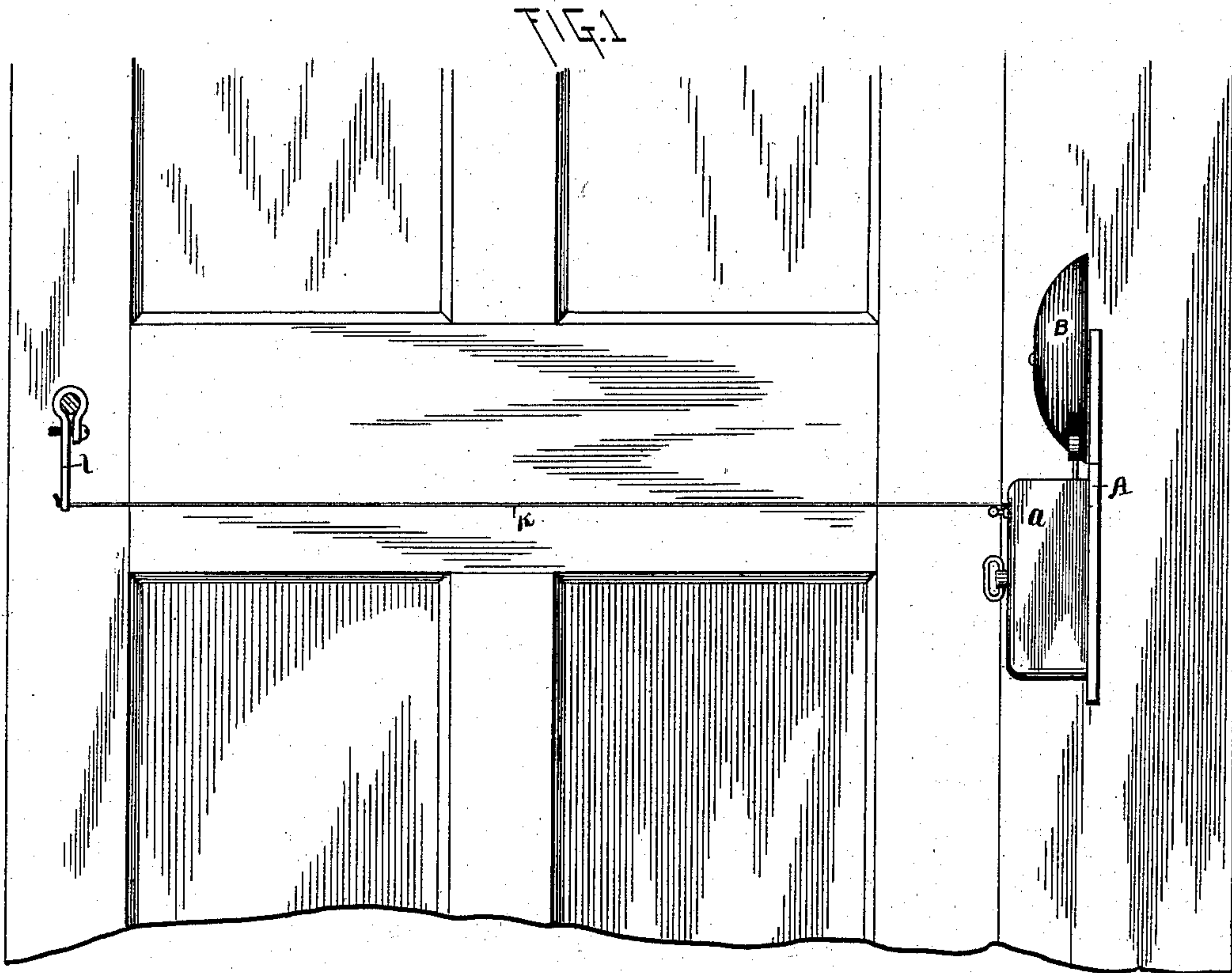


(No Model.)

G. C. GRUBER & T. D. WOGAN.
BURGLAR ALARM.

No. 407,654.

Patented July 23, 1889.



WITNESSES:

Geo. B. Frouel
H. L. Shepherd.

INVENTOR

George C. Gruber
Thomas D. Wogan
By C. C. Shepherd
ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE C. GRUBER AND THOMAS D. WOGAN, OF MARITS, OHIO.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 407,654, dated July 23, 1889.

Application filed March 29, 1889. Serial No. 305,295. (No model.)

To all whom it may concern:

Be it known that we, GEORGE C. GRUBER and THOMAS D. WOGAN, citizens of the United States, residing at Marits, in the county of Morrow and State of Ohio, have invented a certain new and useful Improvement in Burglar-Alarms, of which the following is a specification.

Our invention relates to the improvement of burglar-alarms, and has particular relation to that class of alarms in which a tapper is made to vibrate against a bell through the movement of a lever-escapement produced by two or more gear-wheels actuated by an ordinary clock-spring in the usual manner.

The objects of our device are to so connect the tapper-arm of the ordinary form of a device of this class with the knob of a door as to admit of the bell being rung by turning said door-knob; to provide means in connection therewith whereby the tapper may be allowed to vibrate when the door-knob is turned until the spring-actuated tapper-operating mechanism has run down, or to provide for the ringing of the bell only while the door-knob is being turned, and to accomplish these objects in a simple and effective manner. These objects we accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a view of the inner face of a portion of a door and door-frame, showing our improved alarm connected therewith. Fig. 2 is a front elevation of the alarm, showing a portion of the boxing broken away and showing the tapper held away from the bell. Fig. 3 is a side elevation of the same with a portion of the boxing broken away, and showing the tapper released for ringing; and Fig. 4 is a front view, in detail, showing the position of the tapper-arm and its spring-holding rod when the tapper is in position for ringing.

Similar letters refer to similar parts throughout the several views.

A represents the bell-frame, and *a* the mechanism boxing, which is of the usual form and which has connected therewith any ordinary form of bell-tapping operating mechanism.

B represents the bell, which is supported in the usual manner from the upper portion of the bell-frame.

c represents the tapper-arm, consisting of a wire connected with a shaft *d*, oscillated or vibrated by the operating mechanism in the usual manner. From this shaft the tapper-arm is bent outward a short distance, thence upward, and terminating on one side of the bell in a tapper-head *e*, as shown.

f represents a spring-rod, preferably formed of a piece of spring-wire. This rod has its lower portion secured to the front face of the bell-frame within the boxing *a*, and, extending upwardly, has formed in its upper portion a loop *g*, from which it extends upwardly a short distance and terminates in a short rearward bend or hook. This hook-shaped upper end is, as shown, adapted to engage with the outwardly-bent portion of the tapper-rod *c*, and when so engaged holds the tapper away from the bell, as shown in Fig. 2 of the drawings.

h represents a horizontal key extending through the boxing and having its inner end pivoted in a pin-socket formed in the inner surface of the bell-frame *a* on the outer side of and near the spring-rod *f*. Adjoining the surface of the bell-frame the key is provided with a projecting lug *h'* and has on its outer end, which projects through the face of the boxing *a*, in which it is pivoted, a suitable handle or finger-piece *i*.

To the loop *g* of the spring-rod *f* is secured one end of a suitable cord or wire *k*, which passes outward therefrom through an opening in the outer side of the boxing. The remaining end of this cord is secured, as shown, to the lower end of a spring clamping-strip *l*, the latter consisting of a metallic strip having its upper end so bent as to be made to embrace the knob-stem of the door. This clamp has its upper end provided with a transverse hole, opposite which is formed in the body of the clamping-strip a screw-hole. The clamp having been adjusted over the stem of a door-knob, it may be firmly secured thereto by means of a screw *m*, made to pass through said clamp-strip holes.

The operation of our device is as follows: The bell-frame is secured to a door-frame or other convenient point, as shown in Fig. 1 of the drawings, and the knob-stem clamp clamped, as above described, to the knob-stem of the door. The tapper-operating mech-

anism contained within the boxing having been wound up in the usual manner, the hook-shaped free end of the spring-rod *f* being made to engage with the taper-rod, thereby
5 holds it from the bell and prevents its movement, and the key *h* being so turned that its lug is not projecting inward against the spring-rod, it will be seen that the turning of the door-knob will cause a corresponding
10 movement of the clamping-strip and cord *k*, the movement of the latter operating to draw the spring-rod *f* out of its engagement with the taper-arm and allow the latter to vibrate against the bell. When the door-knob is re-
15 leased from the grasp of the hand, the tension of the spring-rod *f* will cause it to drop back into engagement with and again lock the taper.

In case it is desired that the bell be rung
20 continuously until its operating mechanism is run down, when the knob is turned the key *h* is first so turned that its lug will press the upper portion of the spring-rod *f* to one side, as shown in Fig. 4 of the drawings. The
25 spring-rod being in this position and the door-knob being turned, it will be seen that the former, when thus drawn away from the taper-arm, will, when the turning of the knob

is discontinued, drop back again in line with its original position, as shown in Fig. 4, 30 and in so doing will rest against the lug of the key and be prevented from contact with the taper-arm. Thus it will be seen that the vibration of the taper will be allowed to continue until the operating mechanism is 35 run down.

Having now fully described our invention, what we claim, and desire to secure by Letters Patent, is—

In a burglar-alarm, the combination, with 40 a bell-frame, spring-actuated taper-operating mechanism, and bell connected with said frame, of the outwardly and upwardly bent taper-arm, spring locking-rod *f*, its upper free end being adapted to be made to engage 45 with said taper, as described, key *h*, having lug *h'*, door-knob-stem clamp *l*, and cord or wire *k*, connecting said clamp and spring-rod *f*, substantially as and for the purpose specified.

GEORGE C. GRUBER.
THOMAS D. WOGAN.

In presence of—

I. T. McLAIN,
B. G. MASTERS.