

(Model.)

L. E. WILLIAMS.

BURGLAR ALARM AND DOOR BELL.

No. 279,064.

Patented June 5, 1883.

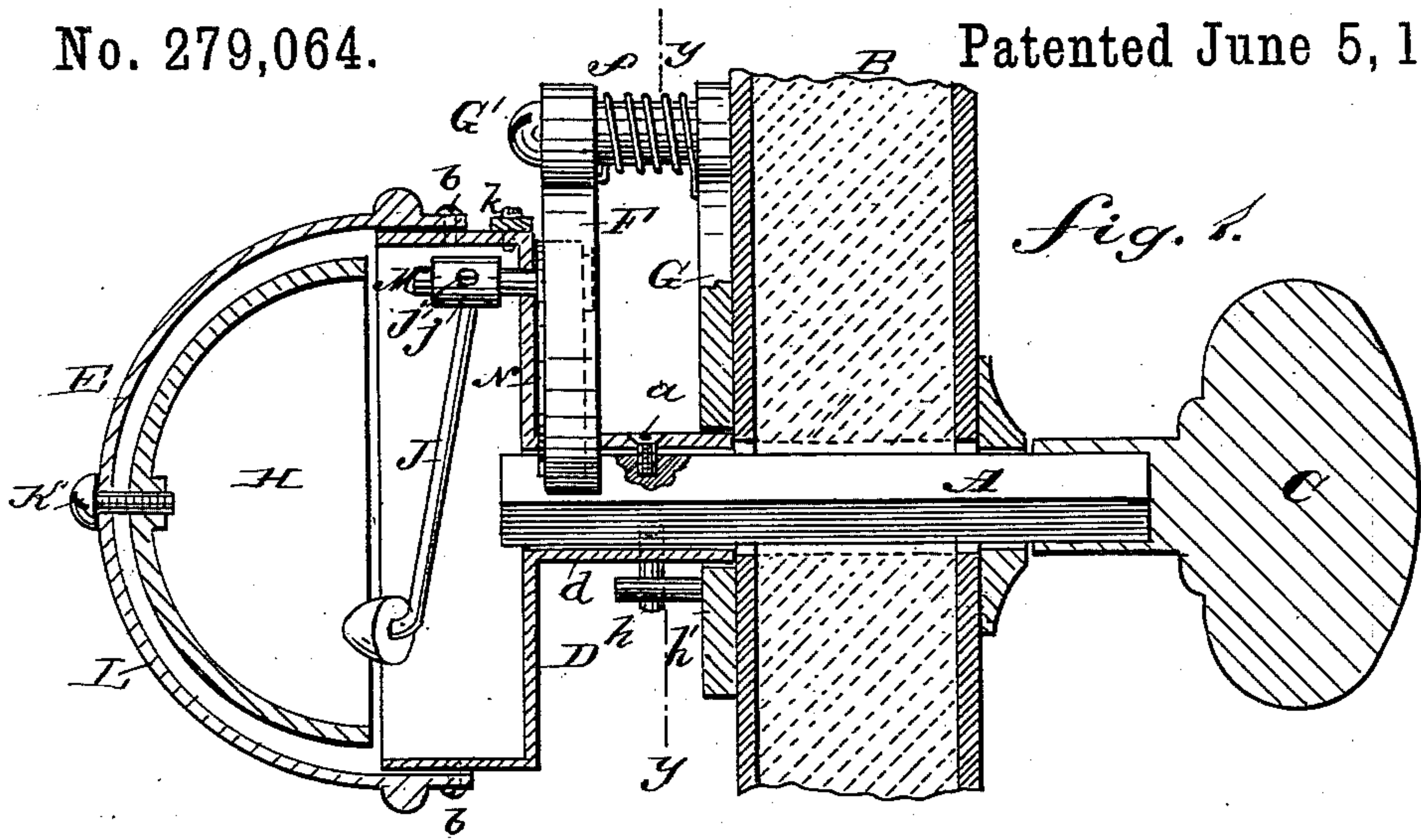


Fig. 1.

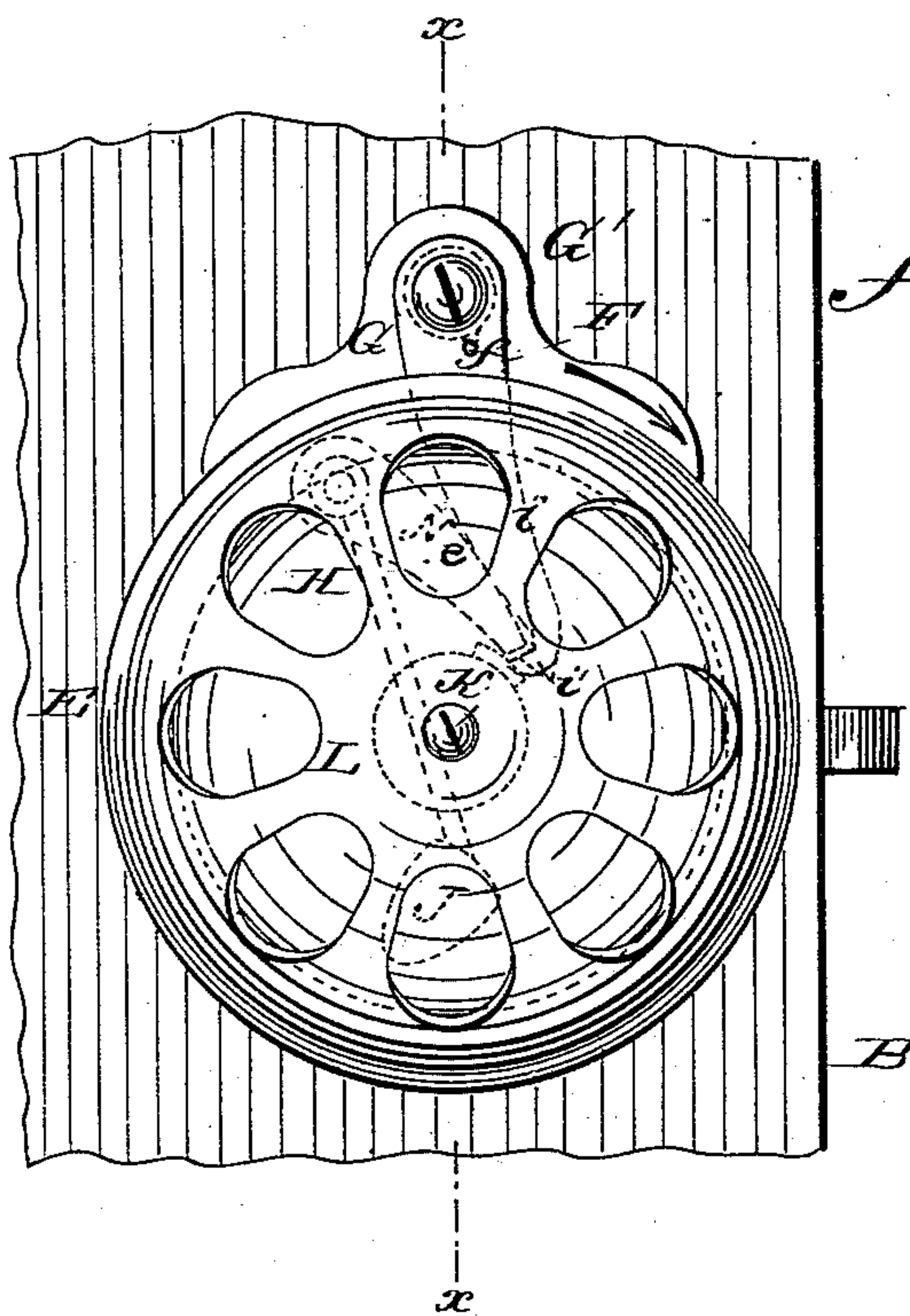


Fig. 2.

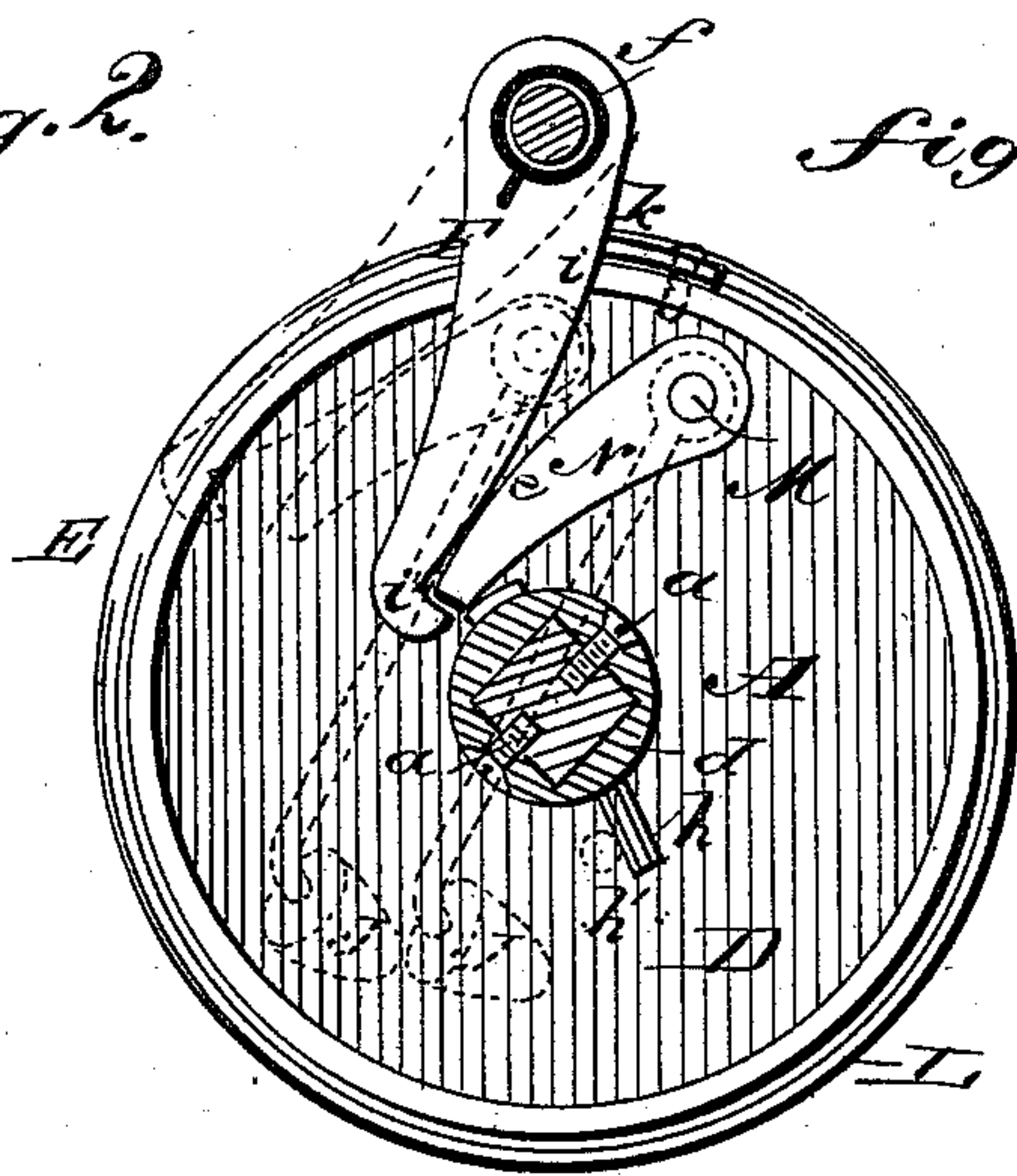


Fig. 3.

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LEWIS E. WILLIAMS, OF PEEKSKILL, NEW YORK.

BURGLAR-ALARM AND DOOR BELL.

SPECIFICATION forming part of Letters Patent No. 279,064, dated June 5, 1883.

Application filed August 28, 1882. (Model.)

To all whom it may concern:

Be it known that I, LEWIS E. WILLIAMS, of Peekskill, in the county of Westchester and State of New York, have invented a new and Improved Gong Door-Knob, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation taken on the line *x x* of Fig. 2, showing my invention attached to the door-lock spindle in position for use. Fig. 2 is a front elevation of my invention, and Fig. 3 is a sectional elevation taken on the line *y y* of Fig. 1.

My invention relates to improvements in that class of door-alarms in which a gong is attached to the lock-spindle inside of the house, so that the turning of the lock-spindle to withdraw the bolt operates the hammer and sounds an alarm.

The invention consists in the peculiar construction and arrangement of parts, as herein-after fully described, and pointed out in the claims.

A is the square door-lock spindle, which passes through the door B in the ordinary manner. To the outer end of this spindle is secured the outside door-knob, C, which is of ordinary form, and to the inner end of the spindle is secured the gong-knob by means of the screws *a a*, which pass through the sleeve *d* of the casting D into the spindle A.

The knob E is adapted to be attached to any door-lock spindle in place of the ordinary knob, and is to be used in connection with the spring-actuated dog F, placed upon the screw or stud *G'* of the plate G, secured to the door B, for causing the gong H to be struck by the hammer J when the spindle A is turned by either the inside or outside knob.

The knob E is composed, mainly, of the said casting D, which is preferably a circular cupped casting, as shown in Figs. 1 and 2, the gong H, which is by preference semi-spherical in form, and the semi-spherical ornamental casting L, in which the gong is held by the screw K, and which fits over and is secured by the screws *b b* to the casting D, and which thus serves as a casing and guard for the gong H.

The hammer J is secured by means of the sleeve *j* and set-screw *j'* to the pin M, which passes through the casting D, and upon the outer end of this pin is secured the lever or arm N, with the lower end of which the dog F is adapted to engage for drawing the hammer back for striking the gong. The inner edge or face of the dog F is made convex, as shown at *i*, and it is notched at its lower end, as shown at *i'*, and the adjacent edge or face of the arm N is made convex, as shown at *e*.

f is the coiled spring placed upon the screw or stud *G'* for holding the dog F pressed downward, and *h h'* are stops secured, respectively, in the sleeve *d* of the casting D and in the plate G, as shown clearly in Fig. 1, for limiting the backward axial movement of the spindle A.

The operation of the knob is as follows: Normally (in the arrangement shown) the knob E will be held by the action upon the spindle A of the mainspring of the lock, turned to the left, so that the lower end of the arm N will stand just in front of the lower notched end of the dog F, (the position shown in full lines in Fig. 3,) and the lower end of this dog F will be held by the coiled spring *f*, pressed down upon the arm N, as shown in full lines in said Fig. 3. Now, upon applying the hand to the knob E and turning it to the right, or to the knob C and turning it to the left, the spindle A and casting D will be turned in that direction, carrying the lower end of the arm N first against the notch *i* of the dog F, thus locking the dog and arm together. The revolution of the knob-spindle and casting D being continued, the rotary movement of the latter will cause the arm N to force the lower end of the dog F outward and upward against the pressure of the spring *f*, and the dog F in turn will cause the outer end of the arm N to be carried outward and upward, turning the pin M and withdrawing or raising the hammer J, ready to deliver its blow, all as indicated in dotted lines in Fig. 3. The simultaneous outward and upward movement of the outer or free ends of the dog F and arm N will continue until the convex face *e* of the arm, acting against the convex face *i* of the dog, will disengage the end of the arm N from the notch *i* of the dog F, whereupon the spring *f* will force the dog F suddenly down upon the arm N, and, by it and the pin M, cause the hammer

J to strike the gong. It will be understood that at the time the arm N leaves the notch *i* and the hammer strikes the gong the knob will be held by the hand against the action of the mainspring of the door-lock, so that upon releasing the knob the knob-spindle, &c., will be carried back by the said mainspring to their original position, ready to repeat the operation, the backward movement being limited and stopped at the proper place by the stops *h* and *h'*.

Upon the casting D is pivoted the plate *k*, which may be turned so that its free end will come against the dog F when the knob is turned and force the dog back away from the arm N, and thus throw the striking mechanism out of action. Instead of this plate *k*, a stop might be attached to the plate G for throwing the striking mechanism out of action, if desired; and although I have shown in the drawings my gong door-knob adapted to ring only upon turning the knob in one direction, it is obvious that the striking mechanism might be made double-acting, so that it would strike upon turning the knobs either to the right or left, and not depart from the main feature of my invention; and instead of using the plate G, the stud G' and the stop-pin *h'* might be attached directly to the door and accomplish the same result.

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

1. The combination, with the plate G, having

the stud G' and adapted to be secured to the door, and the casting D, secured to the lock-spindle and carrying a gong, of the spring-actuated dog F, pivoted to the said stud, and the pin M, journaled in the casting and provided with the arm N outside of the casting and the hammer J within the same, substantially as herein shown and described.

2. The combination, with the casting D, attached to the lock-spindle and carrying a gong, of the dog F, made convex at *i*, and having its lower end notched and pivoted to the door, and the pin M, journaled in the said casting, and provided with the arm N outside of the casting and the hammer J within the same, the said arm N being made convex at *e*, substantially as herein shown and described.

3. The combination, with the casting D, secured to the lock-spindle and provided with the stop *h'*, of the plate G, secured to the door and provided with the stop *h*, and means, substantially as herein shown, for operating the hammer, as set forth.

4. The combination, with the dog F, pivoted to the door, the casting D, secured to the lock-spindle, the hammer J, and the arm N, of the plate *k*, pivoted to the casting D, and adapted to have its free end turned into engagement with the dog F, substantially as and for the purpose set forth.

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Witnesses:

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EUGENE B. TRAVIS.