

H. A. DIERKES.

DOOR-BELL.

No. 174,210.

Patented Feb. 29, 1876.

Fig. 1.

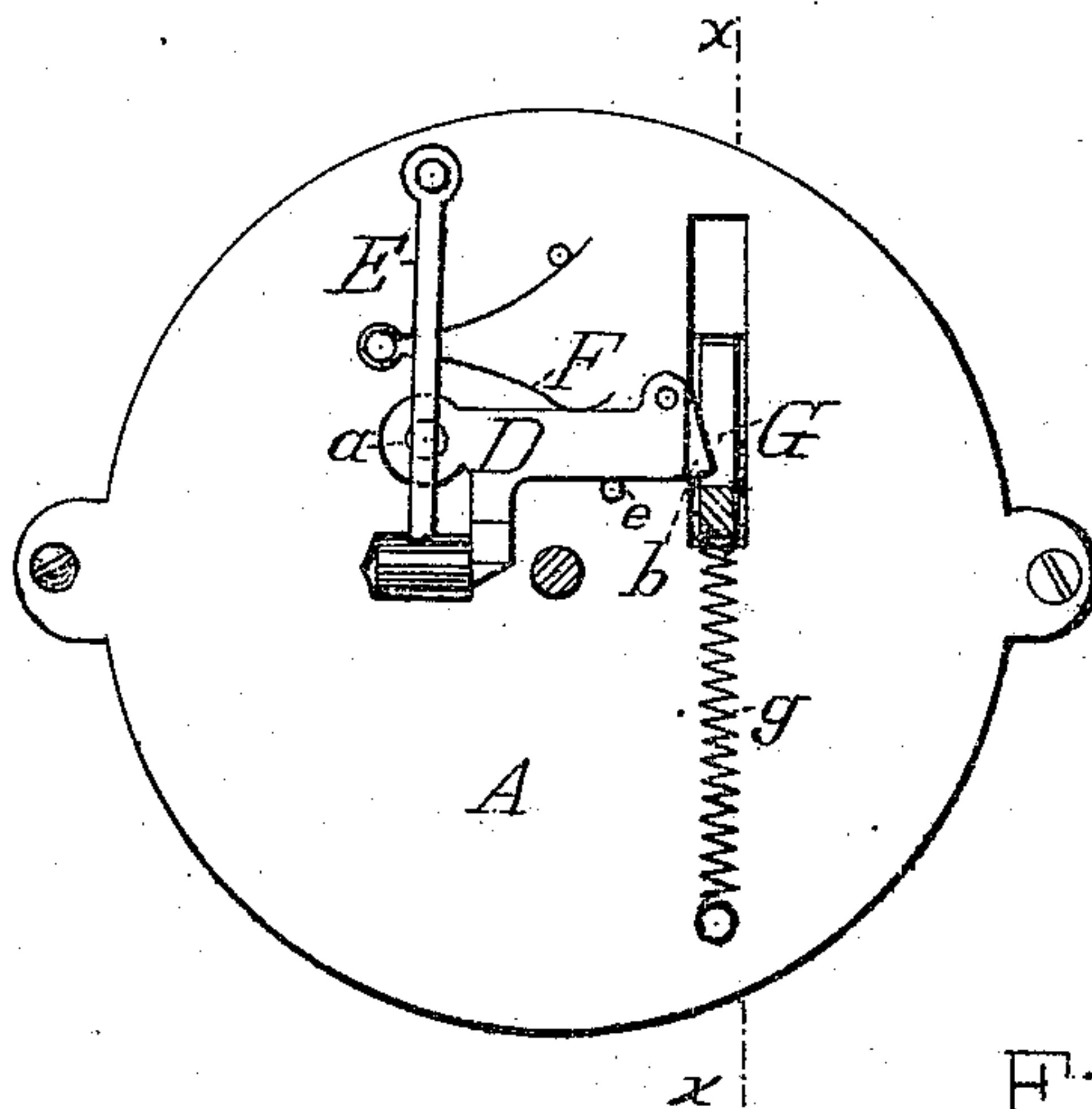


Fig. 2.

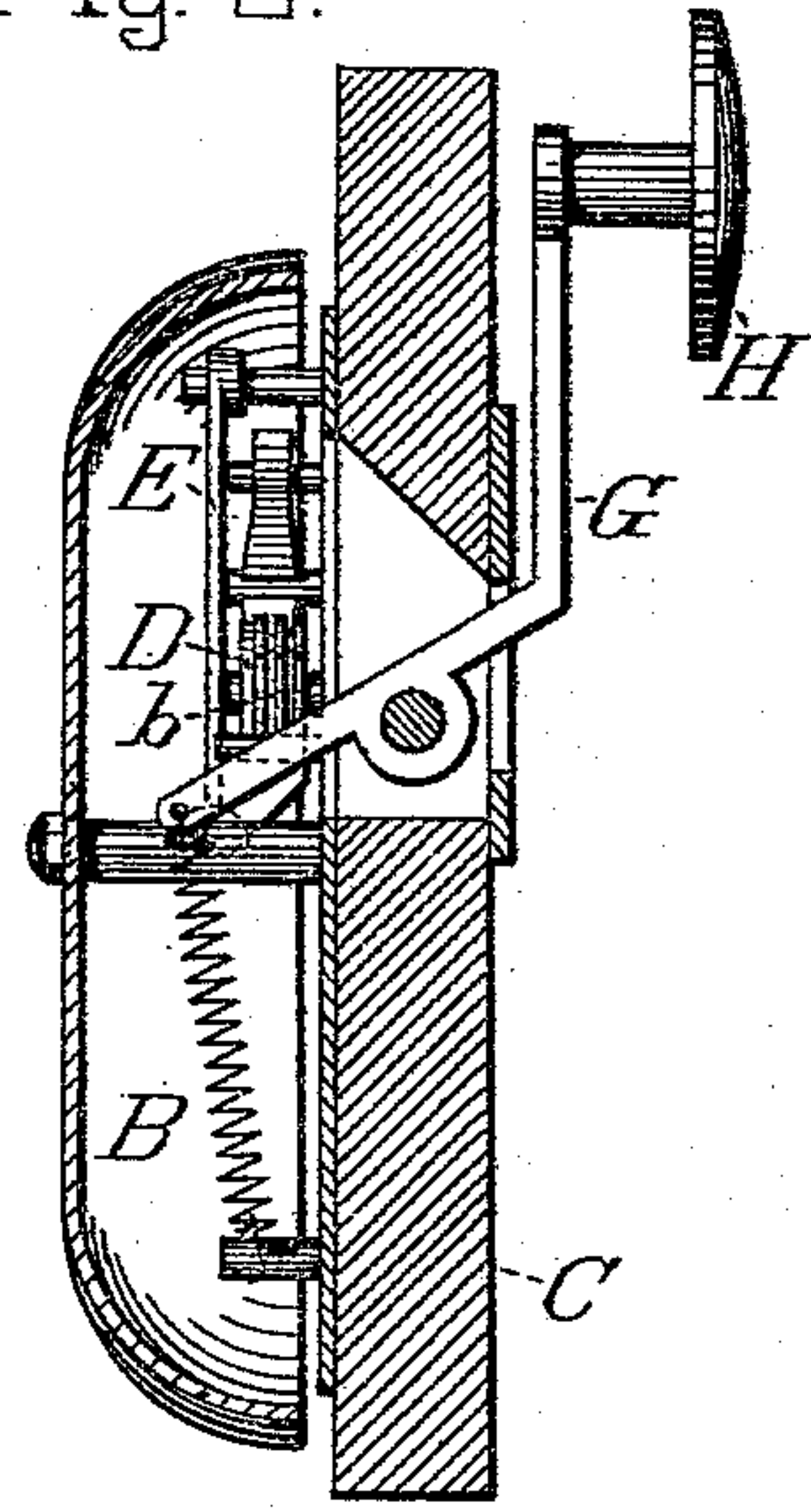
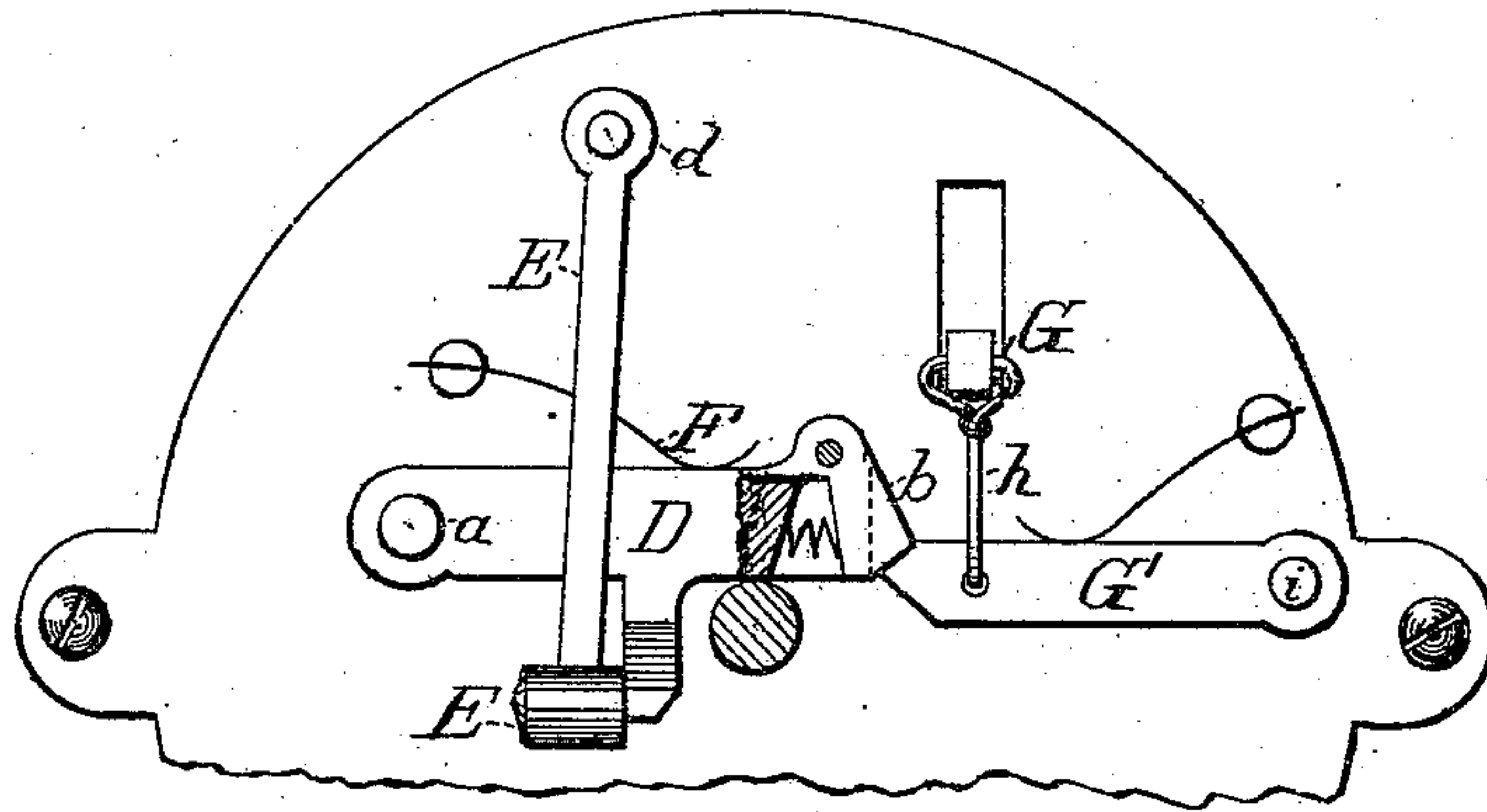


Fig. 3.



Witnesses:

Arthur C. Fraser.
Thomas J. Keighan

Inventor:

Henry A. Dierkes;
By his Attorneys:
Burke & Fraser.

UNITED STATES PATENT OFFICE.

HENRY A. DIERKES, OF NEW YORK, N. Y.

IMPROVEMENT IN DOOR-BELLS.

Specification forming part of Letters Patent No. 174,210, dated February 29, 1876; application filed August 2, 1875.

To all whom it may concern:

Be it known that I, HENRY A. DIERKES, of the city, county, and State of New York, have invented certain Improvements in Door Calls or Bells, of which the following is a specification:

This invention relates to mechanism for operating a spring-follower, in connection with a loosely-suspended hammer, through the medium of a lever or levers acting directly upon a trip on the said spring-follower, as will be hereinafter described.

In my Letters Patent for an improved door-bell, dated December 15, 1874, No. 157,802, I have shown and claimed a spring-follower operating a loosely-suspended hammer, but the follower is actuated by a rotating spindle. In this present application I still retain the spring-follower and suspended hammer; but the manner and mechanism of operation is entirely different from that shown in my patent above mentioned.

In the drawings, Figure 1 is an elevation of the base-plate, upon which the operative parts are mounted. Fig. 2 is a vertical section of the bell and the devices for operating it, taken in the plane of the line *xx* in Fig. 1. Fig. 3 is a modification of my device, showing a slightly-different arrangement of the levers.

A is a base-plate, upon which is mounted an ordinary bell, B. The base-plate may be secured to the inner face of a door, C. A spring-follower, D, is pivoted to the base-plate at *a*, and on its front or free end is provided with an escapement, consisting of a suitable trip, *b*. A detailed view of a good form of trip is shown in Fig. 3, in which a spring, *c*, behind the said trip, tends to throw it habitually forward. A loosely-suspended hammer, E, is attached to the base-plate at some suitable point, *d*, and hangs in close proximity to the follower D, but not attached in any way thereto. The follower D is provided with a spring, F, so arranged as to keep the said follower habitually pressed down against a stop, *e*. A lever, G, of any desired form, passes through the door, and is pivoted, in any suitable or convenient manner, either to the door, or to a face-plate. I prefer to construct this lever with the outer end turned upward, and provided with a suitable knob, H, but this is not essen-

tial. In this construction the inner end of the lever G is provided with a spring, *g*, which keeps it habitually drawn down, the said inner end of the lever resting immediately below the trip *b* on the follower D.

The operation is as follows: When the knob H is pulled from the outside of the door the inner end of the lever G rises and engages the trip *b*, which is carried up, bearing with it the free end of the follower D. A certain amount of upward movement causes the lever to slip past, and escape from, the trip, and the spring F throws the follower down smartly against the stop *e*. In falling some part of the follower will strike against the bell-hammer E, and throw it smartly against the bell, from whence it will fall back, by its own weight, to its normal position. Then, when the knob H is released, the spring *g* will draw down the inner end of the lever G, the trip *b* giving way to allow it to pass and assume its former position. It is then ready for another stroke.

In the modification shown in Fig. 3 the method of operation is substantially the same, the only difference being that the lever G may be situated anywhere, and be connected, by a wire or link, *h*, with a supplementary lever, G', pivoted to the base-plate at any point, *i*. This latter lever is held down by a suitable spring, and its free end is arranged to engage the trip *b*, as plainly shown, the same general result being produced as in the arrangement above described.

By my method of constructing a spring-follower for actuating a bell-hammer it can be operated either externally, as in a door-bell, or internally, as in bells operated through the medium of wires and levers, the only requisite being some suitable mechanism acting on the trip to lift the spring-follower and suddenly release it. The device of the loosely-suspended hammer E and a spring-follower operating thereon is not new. This is shown in my patent before mentioned. Nor is the use of a lever acting more or less indirectly on some form of escapement new, as these features may be found in numerous bells of this class; but the arrangement of these parts is more or less complex, and differs greatly from the device shown in this application.

The essential feature of my present inven-

tion consists in a spring-follower provided with an escapement or trip, arranged to be acted upon directly by a lever or levers of some kind, in connection with a loosely-suspended hammer.

Having thus described my invention, what I claim as new is—

In combination with a loosely-suspended hammer, E, a spring-follower, D, provided at its free end with a trip, b, said trip being so

arranged as to be operated upon directly by a suitable lever or levers, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HENRY A. DIERKES.

Witnesses:

SAM. TRO. SMITH,

ARTHUR C. FRASER.