

(No Model.)

A. A. PAGE.
DOOR BELL.

No. 505,277.

Patented Sept. 19, 1893.

Fig. 1

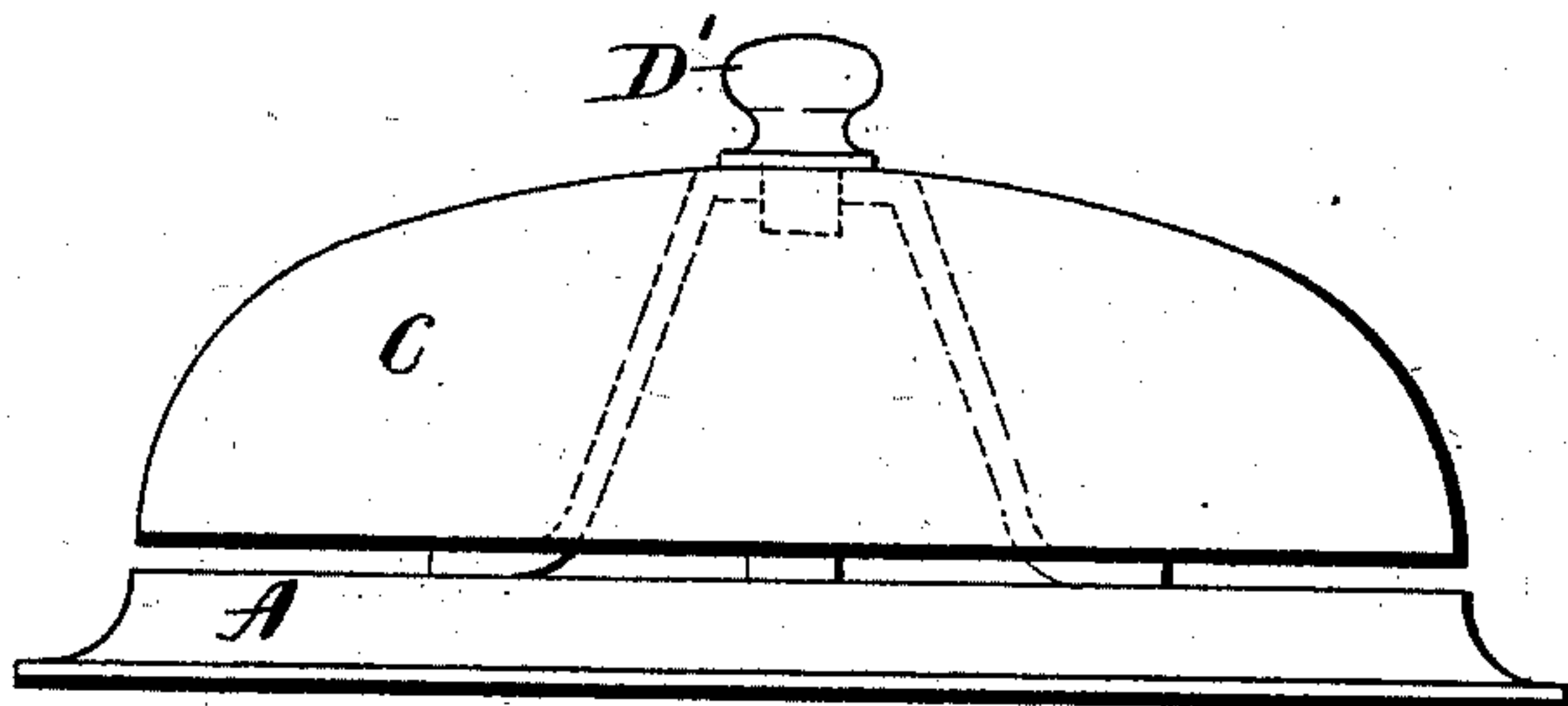


Fig. 2

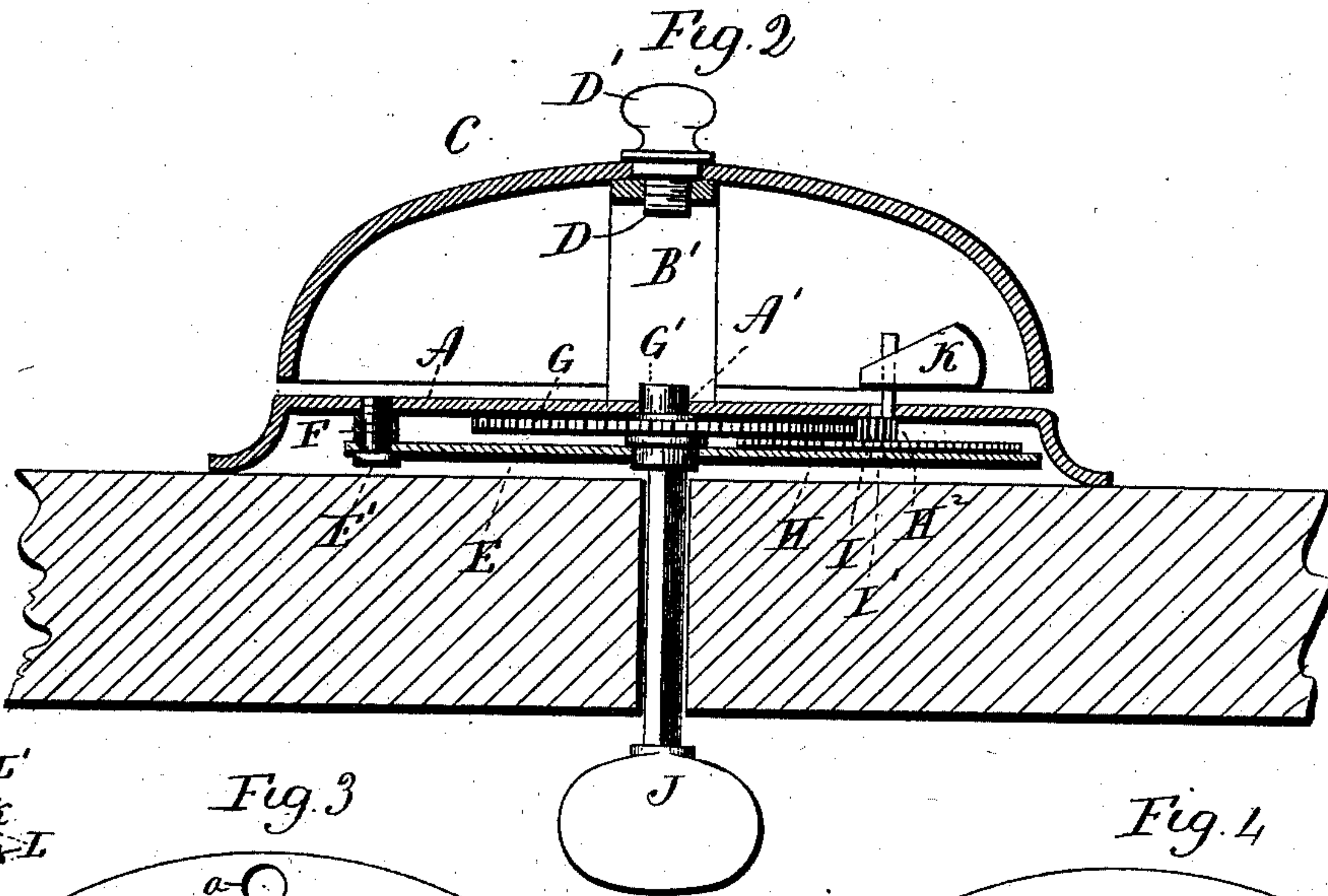


Fig. 5

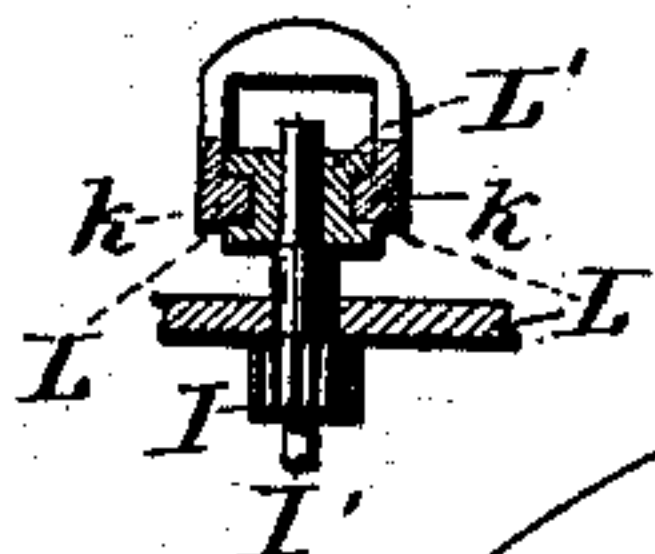


Fig. 3

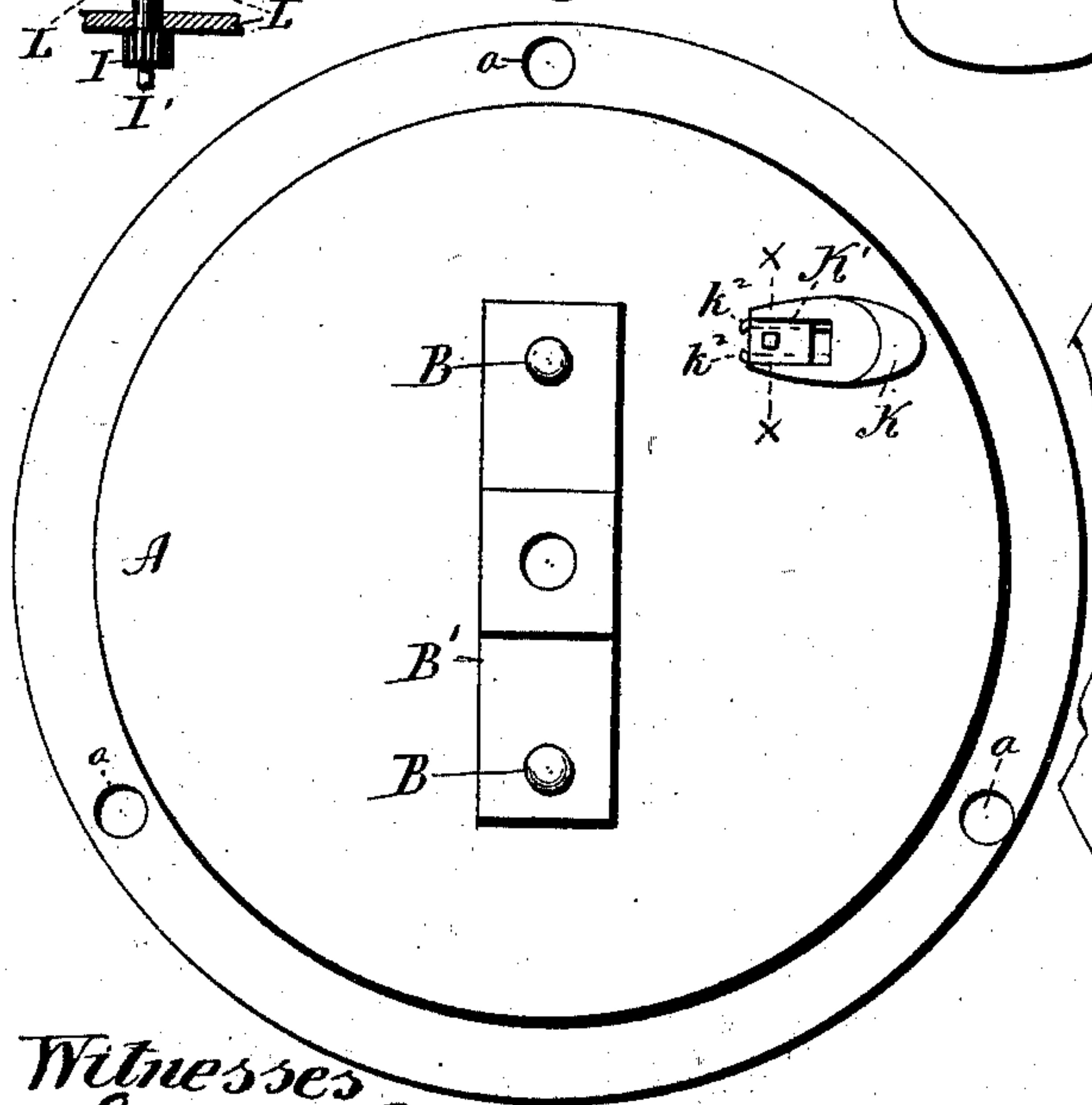
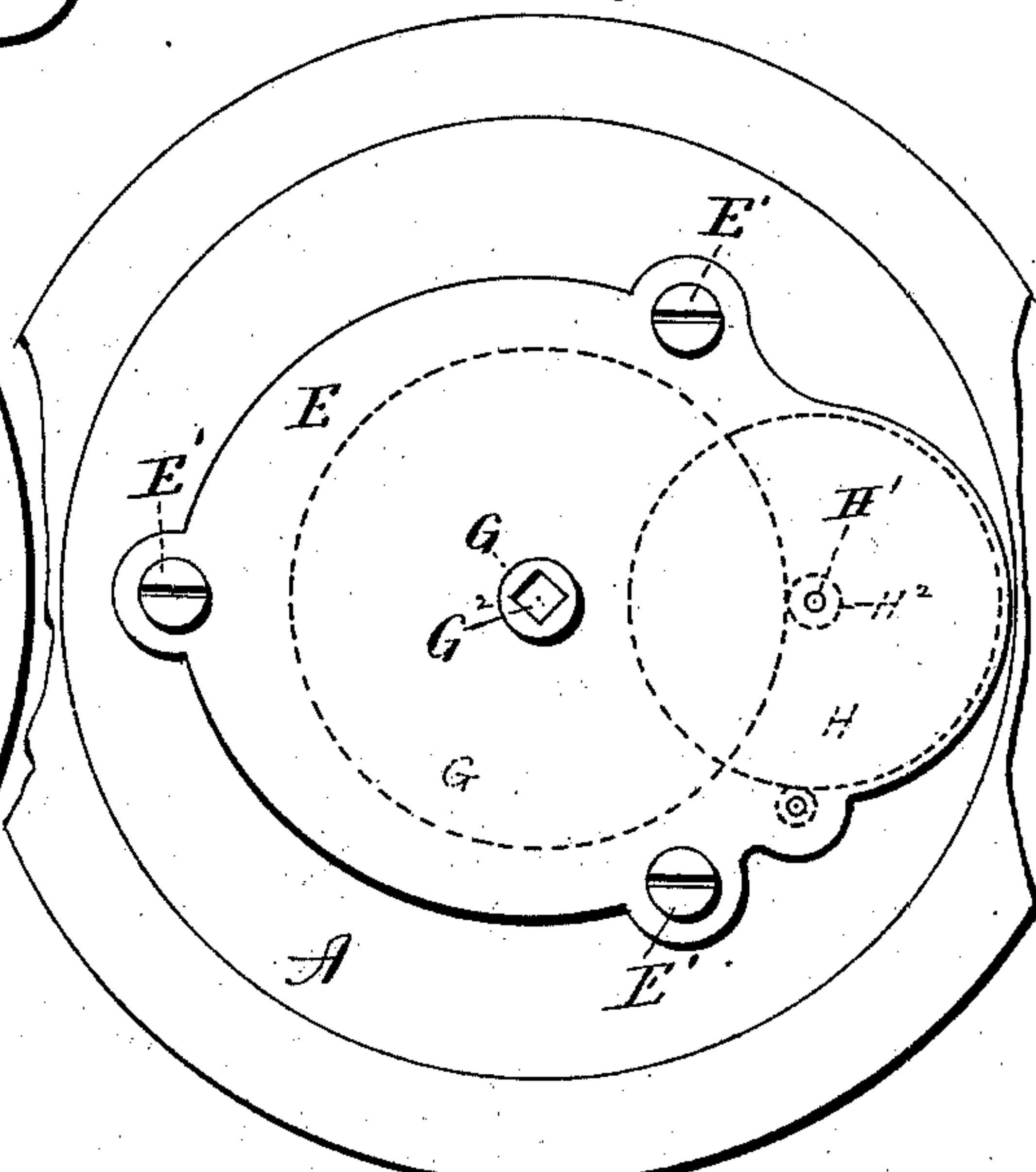


Fig. 4



Witnesses
J. N. Seymour
William D. Kellogg

Albert A. Page
By Atty. Earle & Seymour

UNITED STATES PATENT OFFICE.

ALBERT A. PAGE, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE
SARGENT & COMPANY, OF SAME PLACE.

DOOR-BELL.

SPECIFICATION forming part of Letters Patent No. 505,277, dated September 19, 1893.

Application filed February 6, 1893. Serial No. 461,145. (No model.)

To all whom it may concern:

Be it known that I, ALBERT A. PAGE, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Door-Bells; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in side elevation of a bell constructed in accordance with my invention; Fig. 2, a view thereof in vertical central section; Fig. 3, a plan view of the device with the bell removed; Fig. 4, a reverse plan view of the device; Fig. 5, a sectional view of the hammer.

My invention relates to an improvement in door-bells, the object being to produce a simple, inexpensive, and effective device, composed of few parts, which are easily assembled and taken apart, not liable to derangement, and arranged so that the train will not be exposed by the removal of the gong or bell proper.

With these ends in view, my invention consists in the construction hereinafter described, and particularly recited in the claims.

In carrying out my invention, I employ a circular hollow base A, which I preferably strike up from sheet-metal, providing its edge with openings *a*, whereby the bell is secured in place the said base virtually comprising a flat circular face, and an annular flange offsetting from the edge thereof. To the outer face of this base, I secure by rivets B B, a sheet-metal stirrup-shaped bell-support B', shaped at its upper end to form a flat bearing or seat B², upon which the bell C, is rested, the center of the said bearing having a threaded screw-hole receiving the screw D, which is passed through the central opening of the bell, and which is furnished at its outer end with a knob D', shouldered at its lower end for engagement with the bell. The said bell-support B' is placed upon the base A, so that the screw-hole in its seat or bearing is directly over an opening A', formed in the center of the base. Within the said hollow base and in a plane parallel with the plane thereof, I lo-

cate a movement-plate E, which I secure in place by means of screws E' E' E', the inner ends of which enter the base from the inner face thereof. Each of these screws carries a sleeve F, interposed between the inner face of the base and the inner face of the movement-plate, and serving to secure a space between the same and the base, for the train, all of the said sleeves being of the same length.

As herein shown, the train consists of the main-wheel G, the second-wheel H, and the pinion I, all of the said parts being supported by the base and plate. The main-wheel G, has a hub G', constructed with a squared opening G², which receives the key J, by means of which the train is actuated and the bell sounded. The outer end of the said hub has bearing in the central opening A', of the base, while its inner end has bearing in the opening E' of the movement-plate. The arbor H', of the second-wheel H, has bearing at opposite ends in the base A, and plate E, and is furnished with a pinion H², into which the main-wheel G, meshes. The said second-wheel H, meshes in turn into the pinion I, which is mounted on an arbor I', having bearing in the said plate and base, its outer end projecting through the said base, and receiving the bell-hammer. As herein shown, the bell-hammer is composed of a knocker K, and a hammer-block L', the former having sliding movement upon the latter, which is fixed to the said projecting outer end of the arbor I'. The knocker K is elongated and wedge-shaped in form, presenting a tapering appearance in side elevation, as shown by Fig. 2 of the drawings. It is constructed with a longitudinal opening K', and with two parallel corresponding ribs *k k*, extending inwardly toward each other from the opposite side walls of the said opening K', and taking into grooves L L, formed in the opposite sides of the said hammer-block L', the said block being shorter than the length of the slot K', in the knocker. The inner ends of the said ribs are continued to form two retaining-fingers *k*² *k*², which are bent toward each other to engage with the adjacent end of the block L', whereby the knocker is coupled therewith. When the train is actuated, the knocker will be thrown into rapid revolution and carried outward by

centrifugal force, so that it will strike the bell, by which it will be thrown inward, moving on the hammer-block, so as to clear the bell, after which centrifugal force will reassert itself to throw it out again in position to again strike the bell, which will throw it inward, and so on.

It will be observed that the removal of the bell proper from its support exposes no part of the mechanism of the device but the hammer, the train being located within the base of the bell, and accessible only when the same is taken off from the surface to which it is attached. With the surface to which the bell is secured, the base thereof forms a closed chamber for the train which is thus concealed and protected and also shielded from dust. When the bell is removed for putting up the device, the train instead of being exposed upon the outer face of the base, as in bells of this class as heretofore constructed, is concealed within the base and thus protected from injury or derangement at such time.

By utilizing the base as a movement-plate, I secure simplicity and cheapness of construction and economy of space, for I thus avoid the use of two movement-plates which are ordinarily required.

I would have it understood that I do not limit myself to the particular construction herein shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

I do not claim broadly locating a train within a base to which a bell is attached, as that is old.

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

1. In a door-bell, the combination with a

hollow metal base, comprising a flat face and a flange offsetting from the edge thereof, of a bell-support projecting from the face of the said base, a bell attached to the said support, a single movement-plate located within the said base in a plane parallel with the face thereof, means for attaching the said single movement-plate directly to the said inner face of the base, a train located between the inner face of the base and the said plate, and including a wheel having a hub fitted into an opening formed in the center of the face of the base, and adapted to receive a key, and an arbor projecting through the face of the base near the edge thereof; and a bell-hammer secured to the projecting end of the arbor, and striking the bell when rotated, substantially as described, and whereby the train is entirely inclosed by the base of the device, and but a single movement-plate employed.

2. In a door-bell, the combination with a bell, a support therefor, and a train, of a bell-hammer connected with the said train for rotation thereby, and composed of a hammer-block having its opposite edges longitudinally grooved, and a knocker having a longitudinal opening longer than the said block, and constructed with corresponding parallel ribs extending inward from the walls of the said opening and taking into the grooves of the hammer-block, and extended at their inner ends to form retaining fingers for coupling the block and knocker together, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ALBERT A. PAGE.

Witnesses:

WILLIAM S. COOKE,
THOMAS E. WRINN.