

(No Model.)

W. R. MACKAY.
BELL.

No. 523,899.

Patented July 31, 1894.

Fig. 1.

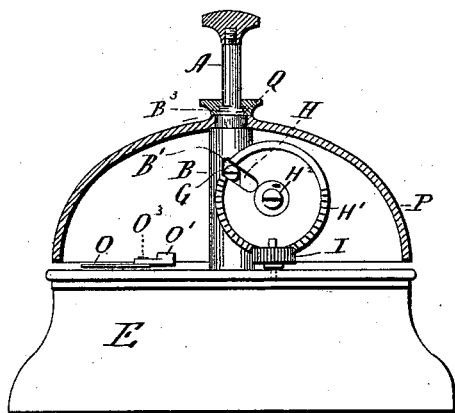


Fig. 2.

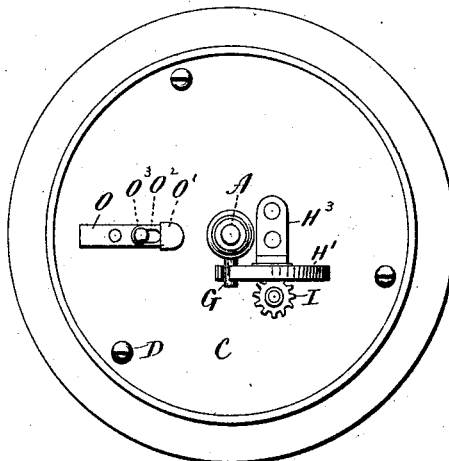


Fig. 4.

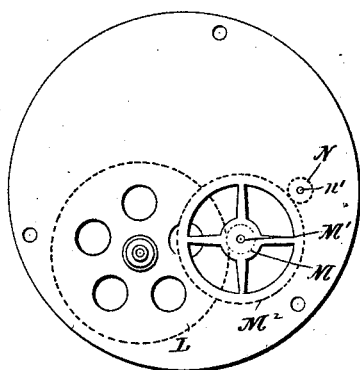
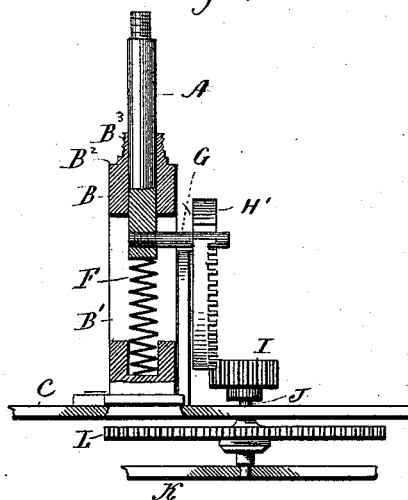


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM R. MACKAY, OF MERIDEN, CONNECTICUT.

BELL.

SPECIFICATION forming part of Letters Patent No. 523,899, dated July 31, 1894.

Application filed May 28, 1894. Serial No. 512,727. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. MACKAY, of Meriden, in the county of New Haven and State of Connecticut, have invented a new Improvement in Bells; and I do hereby declare the following, when taken in connection with the 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 vertical section of one form which a bell constructed in accordance with my invention may assume; Fig. 2, a plan view with the bell removed; Fig. 3, a broken sectional view drawn on a larger scale and designed to particularly show the push-rod, the radially slotted operating-wheel, and the connection of the latter with the train; Fig. 4, a detached reverse plan view of the movement-plate of the device.

My invention relates to an improvement in that class of call and door bells in which the bell-hammer is actuated in striking the bell by means of a spring-actuated train primarily set in motion by means of a push-rod, the object being to produce a simple, durable, convenient and effective bell of the class described, which will have few parts, and not be liable to derangement.

With these ends in view, my invention consists in a bell having certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

In carrying out my invention, I mount a push-rod A having a removable knob A' in vertical position in a tubular box B, secured by its lower end to a circular movement-plate C, attached by screws D, to an ornamental circular base E, which may be of any approved construction. A spiral spring F, interposed between the lower end of the rod A and the bottom of the box B, exerts a constant effort to lift the rod, which is provided with a laterally projecting pin G, extending outward through a vertical slot B' formed in the box, and taking into an open radial slot H, formed in the operating-wheel H', which is mounted in a vertical position upon a screw stud H², carried by a bracket H³, firmly secured by its foot to the upper face of the movement plate

C. The said wheel is provided with a peripheral flange a portion of which is cut to form a segmental series of face teeth, which mesh into a pinion I, rigidly secured to the projecting upper end of an arbor J, having bearing near its upper end in the plate C, and having its lower end set into the base K, as shown in Fig. 3. The said arbor is provided below the plate C, with a main wheel L, which meshes into a pinion M, carried by an arbor M', mounted in the plate C, and in the base K, and also carrying a wheel M², which meshes into a small pinion N, mounted upon the hammer-arbor N', which is also mounted in the said plate C and base K, and projects at its upper end above the said plate, and is provided with a horizontally arranged hammer-carrier O, furnished at one end with a hammer O', constructed with a shank O², having an elongated slot receiving a headed pin O³, mounted in one end of the said carrier. I would have it understood, however, that I do not limit myself to constructing and arranging the train and hammer as described, because the construction set forth may be widely varied, so long as it is adapted to be driven by the spring-actuated push-rod and slotted operating-wheel H'. The upper end of the box B is shouldered, as at B², to afford a bearing for the bell P, which has a central opening adapted in size to cause the bell to rest upon the said shoulder, as clearly shown in Fig. 1. The upper end of the box B is also provided with an externally threaded hub B³, over which fits a threaded jam-nut Q, employed to hold the bell in place. The means just described for supporting the bell and holding it in place may also be varied without departing from my invention.

In view of the changes suggested, and of others which may be made, I would have it understood that I do not limit myself to the exact 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. Thus, while the bell illustrated is designed for a portable call-bell to rest upon a table, it is apparent that it may be readily adapted for use by an obvious modification of its base, for a door-bell.

Having fully described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a call and door bell, the combination
with a push-rod, of a pin projecting laterally
5 therefrom, a radially slotted wheel, the slot of
which receives the said pin, a train, one mem-
ber of which meshes into the said wheel, a
bell-hammer connected with the train for ro-
tation thereby, and a bell arranged to be struck
10 by the said hammer, substantially as described.

2. In a call and door bell the combination
with a push-rod, of a vertically arranged box
in which the said rod is mounted, a spring lo-
cated within the box and arranged to exert a
15 constant effort to push the rod outward, a pin

mounted in the rod and extending outward
through a slot in the box, an operating-wheel
having an open radial slot receiving the said
pin, an operating train one member of which
is meshed into by the said wheel, a rotary bell 20
hammer driven by the said train, and a bell
arranged to be struck by the said hammer,
substantially as described.

In testimony whereof I have signed this
specification in the presence of two subscrib- 25
ing witnesses.

WILLIAM R. MACKAY.

Witnesses:

J. S. NORTON, Jr.,

C. H. WOOD.