

(No Model.)

C. M. BURGESS.
DOOR BELL.

No. 507,992.

Patented Nov. 7, 1893.

Fig. 1.

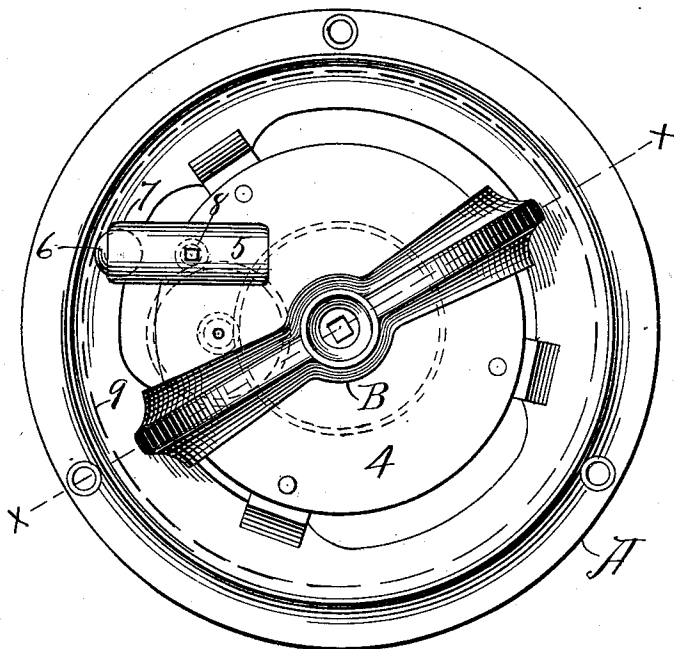


Fig. 2.

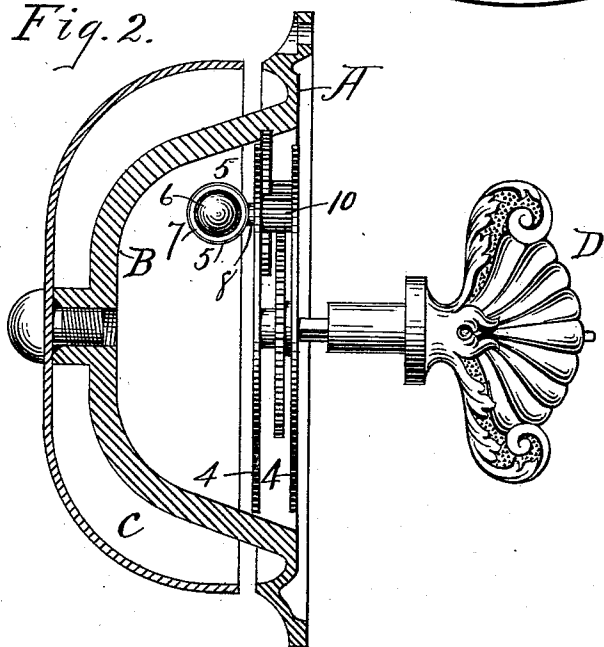
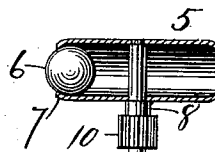


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES M. BURGESS, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE
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DOOR-BELL.

SPECIFICATION forming part of Letters Patent No. 507,992, dated November 7, 1893.

Application filed May 20, 1893. Serial No. 474,885. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. BURGESS, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Door-Bells, of which the following is a specification.

My invention relates to improvements in door bells, and the objects of my improvement are simplicity of construction and efficiency in operation, and especially to produce a revolving hammer which will work with the least friction.

In the accompanying drawings: Figure 1 is a front elevation of my door bell with the gong removed. Fig. 2 is a sectional view of the frame and gong on the line *xx* of Fig. 1, the other parts being shown in elevation, and Fig. 3 is a horizontal section of the hammer carrier together with a side elevation of the ball hammer and hammer shaft.

A designates the base or frame of my bell from which projects the arch or bridge B upon which is mounted the bell or gong C in any ordinary manner. Upon this frame A, I also mount the movement plates 4 in any suitable manner and provide the same with a train of gearing for rotating the hammer carrier 5. This hammer carrier is preferably in the form of a tube and within one or both ends of the carrier I arrange the hammer 6 which consists of a ball or sphere loosely confined within the chamber of the hammer carrier in any proper manner, as for example, by contracting the mouth or outer end of the hammer carrier, as at 7, so that its inner diameter is a little less than the full diameter of the ball hammer 6. The ball chamber in the hammer carrier should also be confined to one side of the axis or shaft 8 upon which the carrier revolves. This is very cheaply and conveniently done by letting the hammer shaft extend through the hammer carrier as best shown in Fig. 3. The circle of broken lines at 9, in Fig. 1, indicates the inner surface of the gong which is removed from said figure in order to better show the parts.

The particular mechanism for driving the hammer carrier is not material to my invention, but I prefer to employ a train of gearing connected with the pinion 10 of the hammer

shaft, the same being operated by the rotary handle D having its shank inserted within a suitable hub of the first wheel. I prefer to provide the hammer carrier with only one hammer, but it is evident that another hammer may be inserted at the opposite end of the carrier if desired. By turning the handle D in either direction a rapid revolving motion is imparted to the hammer carrier and the ball hammer 6 immediately rolls under the action of centrifugal force to the outer end of the ball chamber with its summit projecting therefrom so as to strike the inner surface of the gong as illustrated in Fig. 1. The ball hammer then immediately rebounds and rolls inwardly so as to clear the gong as the hammer carrier proceeds, but immediately rolls outwardly again ready to strike the gong at the next revolution, and so on repeatedly as long as may be desired.

By my improvement, the hammer is given the greatest possible freedom so that it moves quickly out and in, whereby I am enabled to revolve the hammer carrier at a high speed and still have the hammer act quickly so as not to drag upon the bell. The movement is operated with the greatest ease and while I prefer to place the hammer carrier in substantially the position illustrated in Fig. 1 (if the bell is arranged vertically as when secured upon a door) the parts work with such freedom that they may be operated when the frame is turned so as to bring the hammer carrier at any position with reference to the upper edge of the frame.

While I have described my invention as an improvement in door bells, or a bell that is to be secured in a stationary position, it is evident that the same mechanism may if desired, be applied to an ordinary portable call bell, an alarm bell, or any other bell that is to be struck with repeated blows in quick succession.

I claim as my invention—

1. In a bell, the hammer carrier in the form of a tube with its end contracted, said tube being centrally pivoted along its minor axis on a rotating shaft, a ball hammer confined within said tube and adapted to project from the outer end thereof, and mechanism for rapidly rotating said hammer carrier on said

axis to roll said hammer outwardly by centrifugal force, substantially as described and for the purpose specified.

2. In a bell, a ball hammer and the revolving hammer carrier centrally pivoted along
5 its minor axis on a rotating shaft, which has a rapid rotary motion and having a ball cham-

ber whose confining walls are wholly on one side of said axis, substantially as described and for the purpose specified.

CHAS. M. BURGESS.

Witnesses:

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