C. S. NICKELSON.

Door Bell.

No. 50,616. Patented Oct. 24, 1865.

Fig. 3.

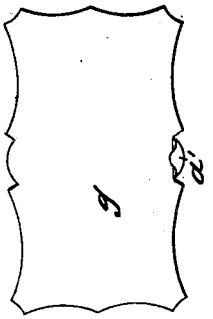


Fig. 4.

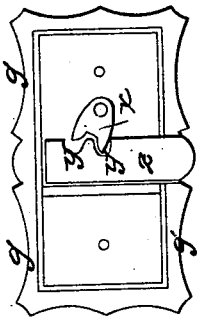


Fig. 1.

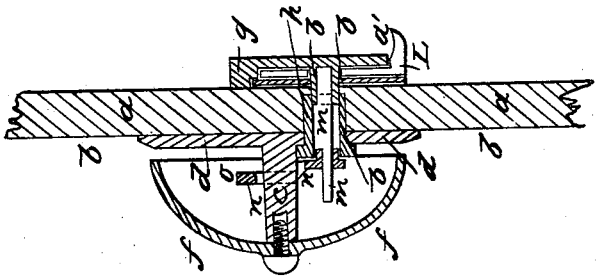
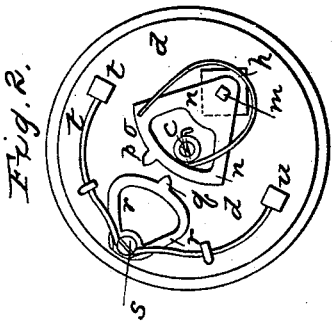


Fig. 2.



Witnesses:
Wm Thurn
Hlw Tusch

Inventor:
C. S. Nickelson
By Munn & Co
attys.

UNITED STATES PATENT OFFICE.

C. S. NICKELSON, OF CANTON, NEW YORK.

DOOR-BELL.

Specification forming part of Letters Patent No. **50,616**, dated October 24, 1865.

To all whom it may concern:

Be it known that I, C. S. NICKELSON, of Canton, in the county of St. Lawrence and State of New York, have invented new and useful Improvements in Door-Bells; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The present invention relates to improvements in the mode of operating and manner of arranging the operating devices for the hammer or hammers of bells, which are particularly applicable to door-bells, and therefore in the following description will be described in reference thereto, although it will be evident they can be applied to other and various purposes.

In the accompanying plate of drawings my improvements are illustrated, Figure 1 being a central vertical section of a door, showing a bell applied thereto upon its inside, with my my improved arrangement of devices for operating it; Fig. 2, a view of the operating devices, with the bell removed; Figs. 3 and 4, detail views, to be hereinafter referred to.

a a in the drawings represent a door broken away, upon the inside *b* of which, to and upon a post, *c*, of a fixed plate, *d*, is secured a bell, *f*, made of any desired size and metal; *g*, a door-plate secured to the outside of the door, on which may be engraved or otherwise similarly indicated any desired name or number, this door-plate being held upon the door by means of a thimble, *h*, inserted in a suitable aperture made in the door to receive it from its inside, which thimble screws over the loose enlarged portion or end *l* of the bolt *m* upon the inside of the door-plate, made of sufficient length to extend entirely through and project from the inside of the door under its bell *f*, the thimble coming to a firm bearing against the fixed plate *d*, before referred to.

Upon the inner end of the bolt *m* a spring-crank, *n*, is secured, made of a sector shape, at and upon the arc or circular portion *o* of which is a projecting lug, *p*, which, as the sector-shaped crank is swung in the right direction, impinges against a lug, *q*, upon a similar sector-shaped but smaller spring crank-arm, *r*, turning upon a fulcrum, *s*, at its center, or nearly so, of the fixed plate *d*, thereby swinging the said arm *r* and causing its hammer *t* to strike and sound the bell, while upon the backward play of the crank *n* again operates the crank *r*, but in an opposite direction, ringing or sounding the bell again, but this time with the other bell-hammer, *u*, both hammers being connected with the said crank *r* through shafts or handle-rods *v v*, or in any other suitable manner to accomplish the same result.

To impart the necessary movement to the crank *n* to cause it to operate the hammers, as described, upon the end of the bolt *f*, within the door-plate, is a projection-arm, *x*, toothed upon its outer end, with which teeth the notches *y y* of the sliding bar *z*, arranged within a suitable guideway or groove upon the back side of the door-plate, engage, so that as the said bar is pulled downward, by grasping or bearing down upon the handle *a'* of the same the desired effect or movement upon the crank-arm is produced, as is evident without further explanation.

From the above description it is obvious that a very compact, simple, and novel arrangement of parts for operating a bell is produced, and one particularly applicable to doors for houses, &c., in connection with a door-plate, it being necessary to cut or bore only one small aperture through the door for securing the door-plate thereto and forming a communication with the bell, the advantages and importance of which are evident.

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

1. The crank-arms *n* and *r*, bolt or pin *m*, and sliding bar *z*, arranged, connected, and operating together substantially in the manner and for the purpose described.

2. The combination, with the door-plate *g*, of the sliding or operating bar *z*, having a handle, *a'*, for actuating the hammer or hammers of the bell *f*, said bar being connected with them through the devices described, and arranged within the door-plate as specified.

The above specification of my invention signed by me this 28th day of August, 1865.

C. S. NICKELSON.

Witnesses:

M. M. LIVINGSTON,

ALBERT W. BROWN.