

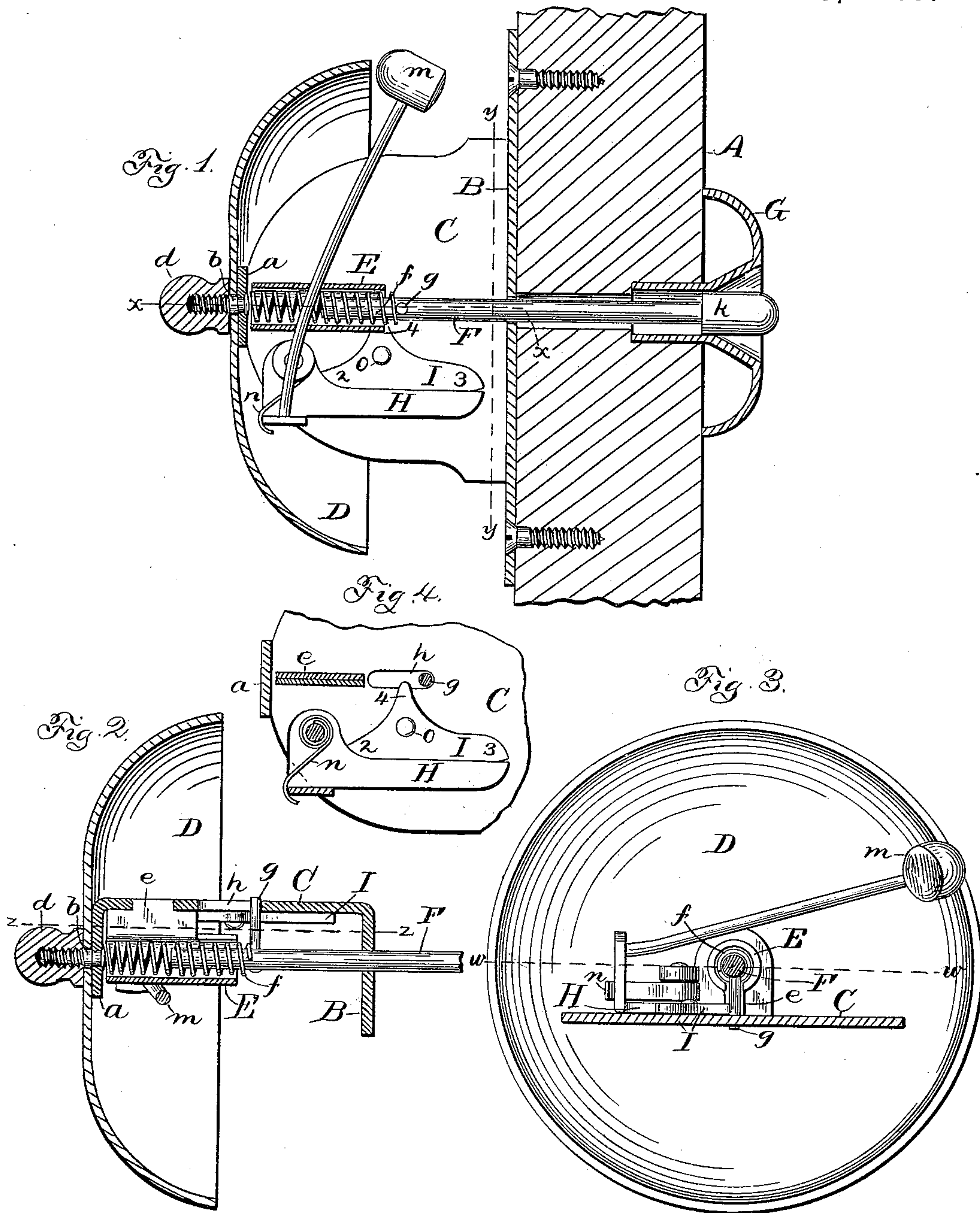
(No Model.)

H. E. RUSSELL, Jr.

SIGNAL BELL.

No. 373,416.

Patented Nov. 15, 1887.



Witnesses.
John Edwards Jr.
W. H. Whiting.

Inventor,
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UNITED STATES PATENT OFFICE.

HENRY E. RUSSELL, JR., OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO
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SIGNAL-BELL.

SPECIFICATION forming part of Letters Patent No. 373,416, dated November 15, 1887.

Application filed April 6, 1887. Serial No. 233,853. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. RUSSELL, Jr., 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 Signal-Bells, of which the following is a specification.

My invention relates to improvements in signal-bells of the class in which the bell is struck by a spring-pressed hammer; and the objects of my improvement are simplicity and economy of construction and to provide a simple and efficient mechanism for imparting a double stroke to the hammer for every reciprocating movement of the operating-rod.

In the accompanying drawings, Figure 1 is a vertical section, partly in elevation, of my bell, the plane of section being indicated by the line *ww*, Fig. 3. Said figure also represents in section a portion of the door to which the bell is attached. Fig. 2 is a horizontal section of the same, partly in elevation, the plane of section being taken on line *xx* of Fig. 1. Fig. 3 is mainly an elevation looking upon the inside of the gong, the frame or standard and operating-rod being shown in section on the line *yy* of Fig. 1; and Fig. 4 is a detached view, the same being a section on the line *zz* of Fig. 2.

A designates the door or siding upon which the bell is mounted, and B the base for securing the bell to said door. Extending from one edge of the base B and at right angles thereto is the plate-like frame or standard C, at one edge of which standard there is an angular arm, *a*, within which is the screw-post *b*, on which the gong D is mounted and secured in place by the nut *d*. The base B, the plate-like frame or standard C, and the angular arm *a* are all blanked out in a single piece of sheet metal and bent into the form shown.

E designates the tubular socket, preferably formed of sheet metal and provided with a side extension, *e*, by which it is secured to the plate-like frame C, so as to bring the body of the socket in axial alignment with the gong D. Within this socket is a spiral spring, *f*, one end of which rests against the arm *a*, while the other end surrounds the end of the oper-

ating-rod F and rests against the trip-pin *g*, which is secured to said rod and projects therefrom into a slot, *h*, in the frame C, as shown in Figs. 2 and 4. The other end of the operating-rod extends through the base-plate B, the door A, and bushing G, where it terminates in any suitable knob or handle, *k*. One side of the socket E—the side toward the frame C—is slotted for a short distance, in order to give free movement to the trip-pin *g*.

Upon the plate-like frame C, I pivot the hammer-lever H, the body of which lever is extended to one side of the slot *h* and parallel thereto, as shown in Fig. 4. The hammer *m* is also secured to said hammer-lever. A spring, *n*, is secured to the post or stud, by which the hammer-lever H is pivoted and presses upon said hammer-lever to hold it in the position shown. Upon the pivot *o*, Figs. 1 and 4, I secure a three-armed tripping-lever, I, with one edge resting against the edge of the hammer-lever H. This tripping-lever has two of its arms, 2 and 3, substantially in alignment with each other, with the arm 3 extending farther from the pivot, or, in other words, longer than the arm 2. The tripping-arm 4 stands at right angles to the arms 2 and 3, and is beveled alike on both sides and has its end projecting partly over the slot *h*, and consequently into the path of the trip-pin *g*.

By pushing upon the operating-rod F in a direction to compress the spring *f*, the trip-pin *g* strikes the tripping-arm 4 of the tripping-lever I, and presses the short arm 2 against the hammer-lever H and moves the same in a direction to draw the hammer away from the gong. As soon as the trip-pin *g* passes the tripping-arm 4, the spring *n* throws the parts H I into their normal position, thereby imparting one stroke to the gong. Upon the operating-rod being released the spring *f* forces it into its former position, and in doing so the trip-pin *g* strikes the tripping-arm 4, thereby impinging the long arm 3 against the hammer-lever H and moving it against its spring. As soon as the pin *g* passes the arm 4, the spring *n* returns the parts H I and imparts another stroke of the hammer to the gong. By making the arms 2 and 3 of the tripping-lever of the proper relative length,

the hammer *m* will have the same-length of stroke for either movement of the operating-rod.

I claim as my invention—

- 5 In a signal-bell, the combination of the operating-rod having a trip-pin, *g*, a spring for moving said rod in one direction, a three-armed tripping-lever, *I*, pivoted on a fixed axis with one arm in the path of said trip-pin,
10 the pivoted hammer-lever *H*, with one edge

resting against the other two arms of said tripping-lever *I*, said hammer-lever having the hammer *m*, and the spring for returning said hammer-lever, substantially as described, and for the purpose specified.

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Witnesses:

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