J. S. CRANE.
Gong-Bell.

No. 213,176. Patented Mar. 11, 1879.

Fig. 1.

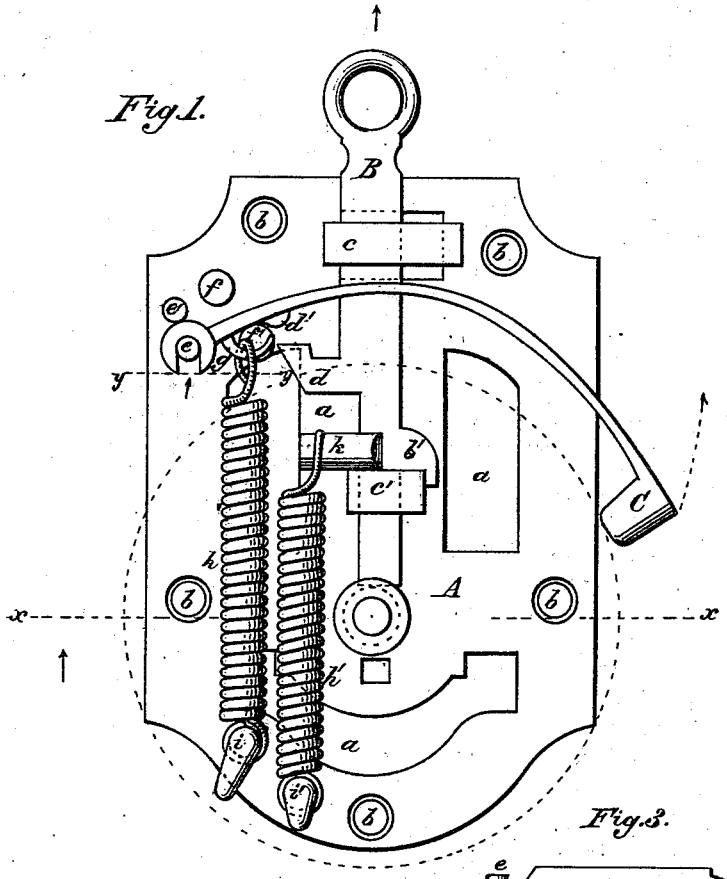


Fig. 3.

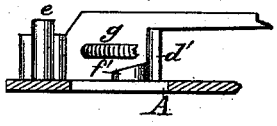
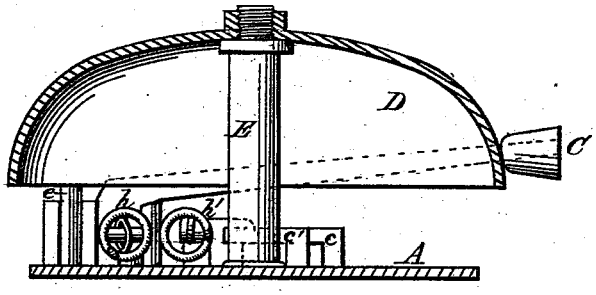


Fig. 2.



Attest:
H. H. Schott.
Levi Bacon

Inventor:
Jos. S. Crane
per J. A. Easterbrook
attys

UNITED STATES PATENT OFFICE.

JOB S. CRANE, OF NEWARK, NEW JERSEY, ASSIGNOR TO THOMAS W. LANGSTROTH, OF SAME PLACE.

IMPROVEMENT IN GONG-BELLS.

Specification forming part of Letters Patent No. **213,176**, dated March 11, 1879; application filed January 28, 1879.

To all whom it may concern:

Be it known that I, JOB S. CRANE, of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Gong-Bells; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to improve that class of bells used as signals upon cars, steamboats, and in many other places where audible signals are needed, by simplifying their construction, and thus lessening their cost, while the durability and efficiency of the instrument is increased; and the invention consists in certain details of construction, which will be hereinafter fully described, and then specifically pointed out in the claims.

Figure 1 of the drawings is a plan of the base-plate, which carries the bell and its operative mechanism, the bell being removed so as to show the devices by which the hammer is actuated. Fig. 2 is a transverse section on the line *x x* of Fig. 1, and shows the relative positions of the bell and base-plate. Fig. 3 is a section through the line *y y*, Fig. 1.

A represents the metallic base-plate, which may be cast with openings *a* to reduce its weight, and is further pierced with holes *b* for the reception of the screws by which it is attached to the car or other structure on which it is to be used. It is also provided with loops *c* and *c'*, cast with the plate, which act as guides to the draw-bar B. This draw-bar is provided with a ring at its outer end, to which the cord or wire by which the bell is operated is attached, and projecting from it on opposite sides is the stop *b'*, which limits its movement in one direction, and the stop-pawl *d*, which not only limits the movement in the opposite direction, but by its action upon the projection *d'* of the hammer C draws back the latter, causing it to strike the bell whenever a pull is made upon the draw-bar. This hammer is preferably cast in one piece of metal with its handle, thus reducing its cost, and is pivoted upon the stud *e*, which projects from the base-plate by an open bearing, and is prevented from leaving the stud *e* when the hammer is moved by the pin *e'*, inserted into the plate A at such a distance as to allow free movement of the hammer upon the stud.

Another short stud, *f*, is cast upon or otherwise secured to the plate A, in the rear of the hammer-handle, and prevents the latter from being thrown too far back by a sudden pull or jerk of the draw-bar, while the stud *f'* prevents the hammer from touching the bell when in a state of rest; but when the hammer is drawn back and then suddenly let go the elasticity of its handle allows the momentum to carry it on and into forcible contact with the bell. A curved projection, *g*, is formed on the hammer-handle, to which one end of the coiled-wire spring *h* is secured, the other end of the spring being attached to the spur *i*, cast upon or otherwise secured to the base-plate A. This spring serves to retract the hammer after it has been drawn out by the action of the draw-bar upon the projection *d'*, causing it to strike the bell D. This bell is supported upon the pillar E, which rises from and is secured to the base-plate A by riveting or other suitable means.

In order to retract the draw-bar after it has been drawn out, a spring, *h'*, is attached to the projection *k* upon the draw-bar at one end, the other being secured to the spur *i'*, projecting from the base-plate.

It will be observed that the loop *c'* is open at one side, while the loop *c* is much wider than the draw-bar, thus allowing the latter to oscillate or play edgewise to a considerable extent. This play allows the draw-bar to be retracted by the spring *h'* after it has been drawn outward in striking the bell, as the inclined edge of the stop-pawl *d*, striking the projection *d'*, oscillates or throws the bar to one side, thus allowing the stop-pawl to pass the projection *d'* upon the hammer-handle, after which the draw-bar is drawn to the side of the loop *c* by the action of the spring *h'*, so as to place the stop-pawl within and opposite the projection *d'* in readiness for another blow of the hammer.

This arrangement greatly simplifies the con-

struction of the apparatus, reducing the number of parts used, and leaving them strong and capable of enduring long use without breakage or derangement of the working parts.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent, the following:

1. The bed-plate A, provided with the open and elongated loops *c* and *c'*, in combination with the oscillating draw-bar B, having upon one side the stop *b'* and upon its opposite side the projection *k* and stop-pawl *d*, the latter being arranged to strike against the projection *d'* in actuating the hammer C, substantially as set forth.

2. The oscillating draw-bar B, provided with the projection *k*, stop *b'*, and stop-pawl *d*, in combination with the retracting-springs *h h'* and swinging spring-handled hammer C, having projection *d'* and hook *g*, all constructed and arranged to operate as shown and described.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

JOB S. CRANE.

Witnesses:
WILLIAM A. THOMAS,
JAMES A. HEDDEN.