

(No Model.)

E. OLSEN.
SIGNAL BELL.

No. 571,013.

Patented Nov. 10, 1896.

Fig. 1

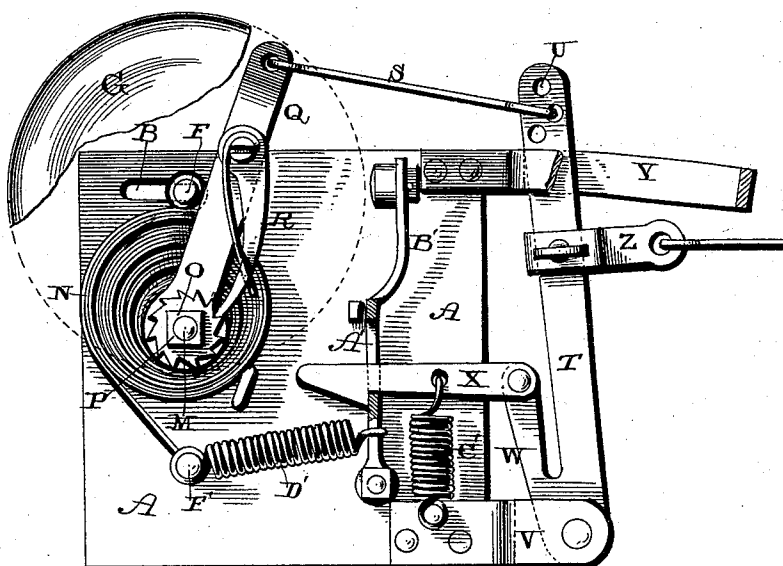
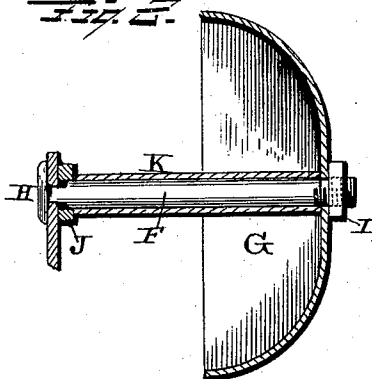
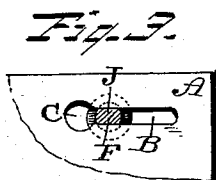


Fig. 2



Witnesses
b. J. Williamson
Wm. Osgood,

Inventor
Englebrecht Olsen.
per Cha. H. Fowler,
Attorney.

UNITED STATES PATENT OFFICE.

ENGLEBRECHT OLSEN, OF WALKERVILLE, MONTANA.

SIGNAL-BELL.

SPECIFICATION forming part of Letters Patent No. 571,013, dated November 10, 1896.

Application filed August 4, 1896. Serial No. 601,636. (No model.)

To all whom it may concern:

Be it known that I, ENGLEBRECHT OLSEN, a citizen of the United States, residing at Walkerville, in the county of Silver Bow and State of Montana, have invented certain new and useful Improvements in Signal-Bells; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

My invention relates to certain new and useful improvements in signal-bells which are to be operated at a distance by means of a cord or wire and in which the bell is only operated when the lever is moved a certain regulated distance.

My invention consists in, first, a bell-post which is adjustable in relation to the hammer, so that bells of different sizes and constructions may be used as circumstances may require; second, in the arrangement and combination of parts, which will be more fully described hereinafter, whereby a signal-bell that is certain and positive in action is produced.

In the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of a signal-bell embodying my invention, portions being broken away for the sake of clearness. Fig. 2 is a vertical section taken through the bell and a portion of the supporting-plate alone. Fig. 3 is a detail view showing the manner of adjusting the bell back and forth in relation to the hammer.

A represents a supporting-plate upon which the other portions of the signal-bell are mounted and which may be of any desired shape, size, or construction. Through this plate A, near one corner, is made a slot B, which extends horizontally from the opening C, through which the bell-post F is inserted. From this opening C the slot extends horizontally any desired distance, according to the number of bells G, differing in size and construction, that are to be used. The bell-post F is provided with an enlarged head H at its rear end, and is made screw-threaded at its other end to receive the clamping-nut I, by means of which the bell G is held in position. As the slot B is smaller than the opening C, through which the post is introduced, the inner end of the post next to the head H is

reduced in size, as shown at J in Figs. 2 and 3, so that it can be adjusted back and forth in the slot at will, according to the adjustment necessary in relation to the hammer. Over the post F is passed the supporting-sleeve K, against which the bell G is clamped in position.

In case it is desired to use a bell which will produce a certain ring or volume of sound, the post F is adjusted in the slot B so that the hammer will make the necessary contact with it; but should it be necessary or desirable to substitute a bell of another size or construction which will give a recognizable sound or volume, a bell of one size or construction can be removed and another substituted therefor, the post F being adjusted in the slot B for this purpose.

All of the alarm-bells now in use are adapted for only a single bell, and hence bells of different sizes, which will give different sounds that are easily recognized, cannot be used.

By my construction a number of different bells can be used as circumstances may require, each one giving a different sound that is easily recognized.

Secured rigidly to the plate A, in any desired relation to the slot B, is a short rigid shaft M, carrying a hub or sleeve upon which a spring N, of any suitable construction, and a ratchet-wheel O are fixed. Pivoted upon this shaft M just inside of the ratchet O, which is held in position by means of a nut P, is placed the lever Q, which carries the spring-actuated pawl R, which engages with the ratchet O and holds the spring N at any desired tension, according to the force it is desired to exert in operating the bell. By turning the ratchet upon the rod or shaft M the spring N, which has one end secured to the hub or sleeve which works loose on the stud M, is wound until the desired amount of tension is obtained, and this spring serves to return the lever to position as soon as it is left free to move.

Loosely attached to the upper end of the lever Q is the connecting-rod S, which connects the pull-lever T to the one Q. In the upper end of this lever T is a series of perforations U, in any one of which the end of the rod S may be fastened according to the length of stroke that the lever T is to make. This lever T is pivoted at its lower end upon

the extension V. Secured to the plate A and forming part of the lever T is the arm W, upon the upper end of which the lever X is pivoted. The lever T is guided in its movements by a loop Y, secured rigidly to the upper corner of the plate A. Passing down over the upper end of the lever T is the slide Z, which is vertically adjustable upon the lever, and to which slide the pull cord or wire is fastened. The slide is adjusted vertically upon the lever according to the amount of pull that is to be exerted in operating the lever T in order to ring the bell.

The lever X has its free end to pass through the slot A' in the hammer-lever B', and this free end is held pressed down against the bottom of the slot by means of the spring C', as shown. The free end of the lever X is provided with a shoulder, which catches against the inner side of the hammer-lever B' at the bottom of the slot for the purpose of drawing the hammer back until the lever X slips off, and then the hammer is drawn against the bell G by the spring D'. The ends of the springs N and D' are both secured to the same projection F', which projects from the plate A for that purpose.

When the lever T is drawn backward, the lever X is also moved, and this movement of the lever X serves to draw the hammer B' backward until the shoulder upon the lever X slips from the hammer-lever, and then the spring D' draws the hammer forward so as to strike the bell. Unless the lever T is drawn back its full distance the lever X will not slip from the hammer-lever B', and hence the bell will not be rung. As soon as the pull of the operating cord or wire is relaxed the lever Q, by means of the spring N, instantly returns the levers T and X to position, when the shoulder upon the lever X at once reengages the hammer-lever B', and is ready to

repeat the stroke. As the reengagement of the parts is entirely automatic, the bell can be rung any desired number of times and as rapidly as the operator desires.

Having thus described my invention, I claim—

1. In a signal-bell, a post for the support of the bell, and which is adjustable back and forth in relation to the hammer, combined with suitable means for operating the hammer, substantially as shown.

2. In a signal-bell, a slotted supporting-plate, a post for the support of the bell, and which is adjustable back and forth in the slot, and the bell which is removably secured to the post, combined with means for operating the hammer of the bell, substantially as described.

3. In a signal-bell, a supporting-plate provided with a slot B, and an opening C, at one end of the slot, the post F, having the reduced portion J to fit in the slot B, and a sleeve applied to the post, combined with the bell G, nut I, and a means for operating the hammer substantially as set forth.

4. In a signal-bell, the supporting-plate, provided with the slot B, C, the post F, that is adjustable therein, and the bell which is clamped upon the post, combined with the spring-actuated lever Q, carrying the spring-pawl R; the ratchet O, spring N, connecting-rod S, levers T, X, hammer B', and the springs C' D', all combined and arranged to operate substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ENGLEBRECHT OLSEN.

Witnesses:

W. H. ROBERTS,
FRANK MARSLAND.