No. 691,961. Patented Jan. 28, 1902.

A. G. NELSON.

ALARM BELL.

(Application filed Oct. 31, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1

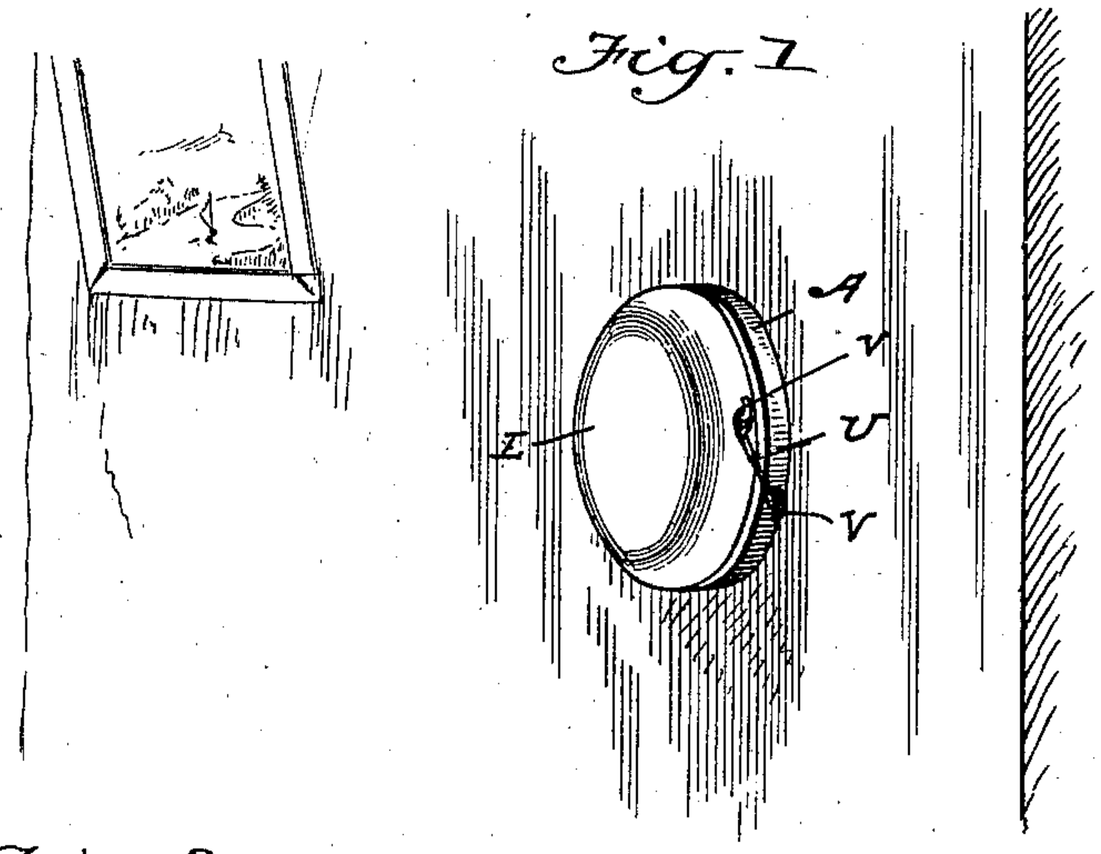


Fig. 2

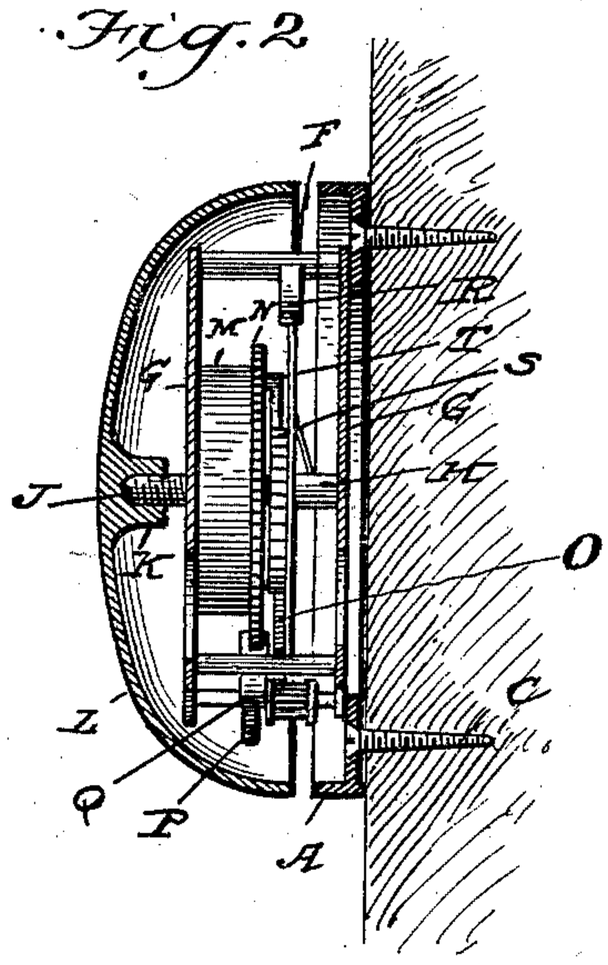


Fig. 3.

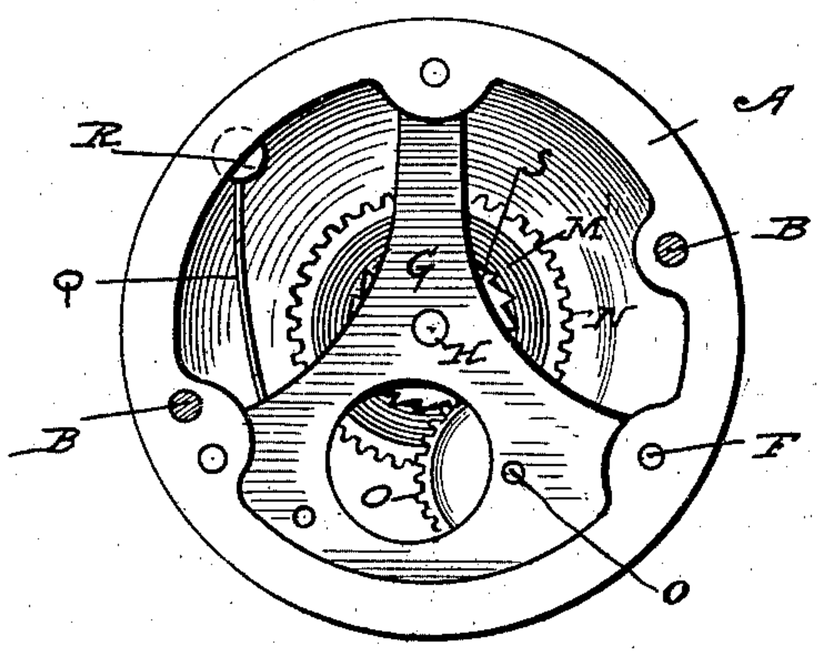
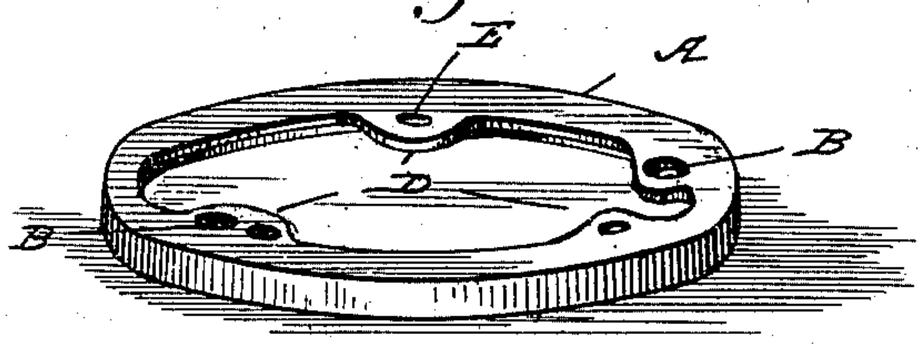


Fig. 4



WITNESSES:

O. C. Clements

May E. Moore

INVENTOR

A. G. Nelson.

BY Thos. P. Moore.

ATTORNEY

No. 691,961. Patented Jan. 28, 1902.

A. G. NELSON.

ALARM BELL.

(Application filed Oct. 31, 1900.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 5.

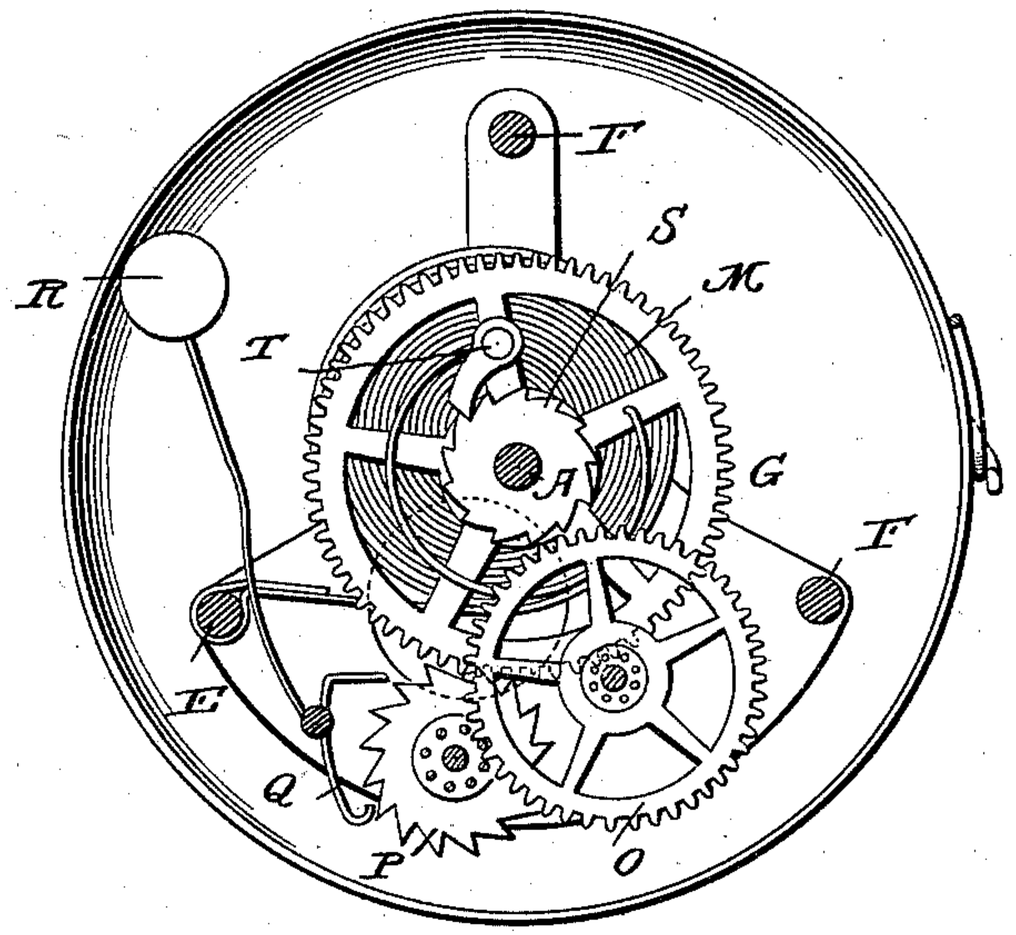


Fig. 6.

Witnesses

[illegible]

Chas. J. Emerick

Inventor

A. G. Nelson,

By Wm. J. Moore

Attorney

UNITED STATES PATENT OFFICE.

AUGUST G. NELSON, OF BRADFORD, PENNSYLVANIA.

ALARM-BELL.

SPECIFICATION forming part of Letters Patent No. 691,961, dated January 28, 1902.

Application filed October 31, 1900. Serial No. 35,004. (No model.)

To all whom it may concern:

Be it known that I, AUGUST G. NELSON, a citizen of the United States, residing at Bradford, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Alarm-Bells, of which the following is a specification.

My invention relates to improvements in alarm-bells; and the object of my invention is the provision of an extremely simple and inexpensive bell which will be of ornamental and attractive appearance and which will operate by the action of heat to release the parts and cause the alarm of fire to be instantly sounded, and thus prove a desirable and useful and practical device.

To attain the desired object, my invention consists of an alarm-bell embodying novel features of construction and combination of parts, substantially as disclosed herein.

Figure 1 represents a perspective view of the alarm-bell attached to the wall of a room. Fig. 2 represents a vertical central sectional view thereof. Fig. 3 represents a rear elevation, and Fig. 4 represents a perspective view, of the base-plate. Fig. 5 is an enlarged sectional view with parts in elevation. Fig. 6 is an enlarged perspective detail of the triangular frame detached.

In the drawings, A designates the base-plate, which has a flange, as seen in Figs. 2 and 4, and this flange has openings B to receive the fastenings C for attaching the bell to the structure and is further provided with the ears D, provided with openings E, in which are secured the studs or rivets F, carried by the three-cornered parallel-arranged frame G. From this construction it will be seen that the base-plate is of peculiar construction and provides means for attaching the same and also has the ears to which the three-cornered or angle-shaped frame is secured, and this is one of the main features of my bell—the peculiar construction of the base-plate and the three-cornered frame. I attach importance to these triangular frames, as they are not only light and strong, but they permit of the ready escape of the sound, and, besides, all of the parts being carried by these frames they can be readily removed when desired.

Journaled centrally in the frame is the shaft H, which has the extended threaded end J, which screws into the lug K on the inner face of the alarm-bell proper, L. On a shaft is wound the spring M, having the other end connected to the post of the frame, and adjacent to the spring on the shaft is secured the toothed wheel N. This toothed wheel transmits motion to the toothed wheel O on a shaft *o*, which rotates the escapement-wheel P. This escapement-wheel actuates the escapement Q, and the escapement operates the hammer R, causing it to engage the bell and sound the alarm.

The spring, it will be seen, has one end rigidly connected to the shaft and the other end secured to the frame, and when turned in one direction the spring is wound upon the shaft. The spring is retained at any winding-point by means of the spring pawl or dog T and the ratchet-wheel S, and when the spring is wound the bell proper and the base-plate are secured by the fusible connection U and the ears V, with which said connection engages. Now when the heat becomes sufficient to melt or destroy said fusible connection the bell is released from the base-plate, and under the impulse or action of the spring it is revolved and the hammer is operated by the escapement to strike the bell violently and sound the alarm.

When the alarm has been sounded and the spring unwound, it is simply necessary to turn the bell, which winds the spring, and when sufficiently wound the bell is secured to the base-plate by the fusible connection.

From this construction it will be seen that the base-plate is rigidly secured, that the bell proper is pivotally mounted thereon, and that to wind the bell ready for action it is simply necessary to turn the bell, which revolves the pivot or shaft and winds the spring upon said shaft. When wound the bell is retained from movement by the fusible connection, and when said connection is destroyed the spring imparts a rotary motion to the bell and through the medium of the two toothed wheels operates the escapement-wheel, which actuates the escapement and causes the hammer to strike the bell, the arrangement of wheels being after the manner of a clock-striking mechanism.

I claim—

The combination with a base-plate, a frame composed of two triangular plates held at a

predetermined distance apart and between which the gearing is disposed and by which it is supported, and a shaft held in said frame, of a spring wound on the shaft with one end secured to the frame, a toothed wheel, a toothed wheel meshing therewith, an escapement, a rotatable bell revolved by said mechanism operated by said toothed wheels, a hammer operated by the escapement, and a fusible connection between the base-plate and the bell for holding the latter against action until the fusible connection is destroyed, all substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

AUGUST G. NELSON.

Witnesses:
JOHN E. FENNERTY,
JULIA BENSON.