

Door-Alarms.

No. 150,776.

Patented May 12, 1874.

Fig. 1.

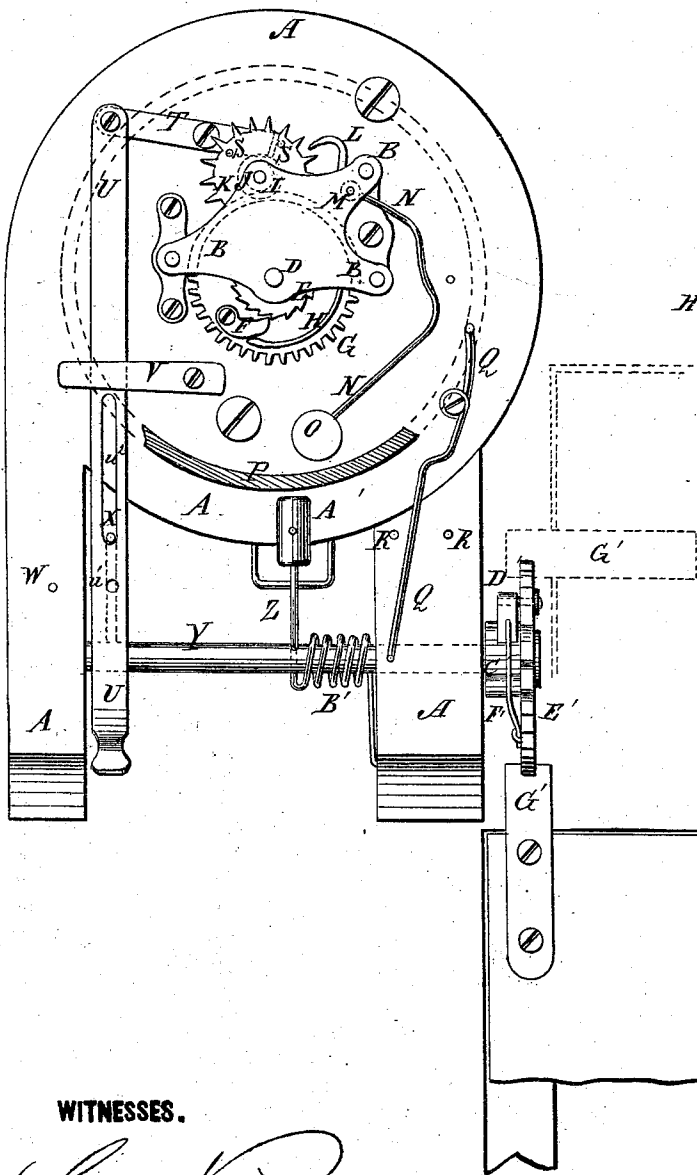
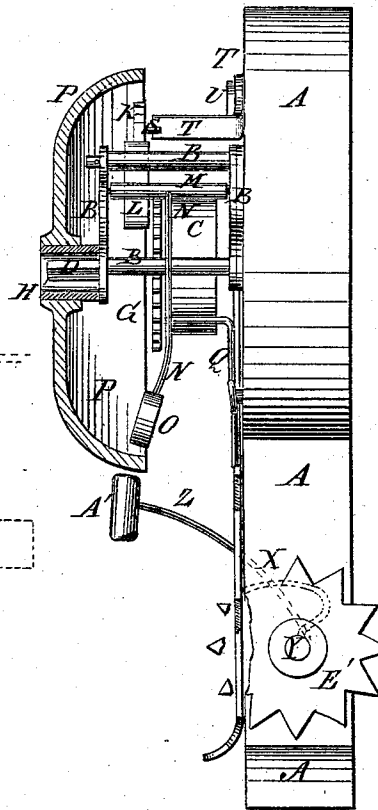


Fig. 2.



WITNESSES.

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IMPROVEMENT IN DOOR-ALARMS.

Specification forming part of Letters Patent No. **150,776**, dated May 12, 1874; application filed March 28, 1874.

To all whom it may concern:

Be it known that I, ABRAHAM NEVLING, of Glen Hope, in the county of Clearfield and State of Pennsylvania, have invented a new and useful Improvement in Door-Alarms, of which the following is a specification:

Figure 1 is a front view of my improved door-alarm, a portion of the gong being shown in section, and the rest being removed. Fig. 2 is a side view of the same, the gong being shown in section.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved door-alarm, which, in addition to striking a bell when the door is opened, as an ordinary or day alarm, may be set to sound a continuous alarm when the door is opened, and thus serve as a night-alarm. The invention consists in the combination of the bar or arm to be attached to the door, the toothed wheel, the spring-pawl, the ratchet-wheel, the shaft, and its coiled spring with the hammer and the gong; in the combination of the curved arm, the sliding bar, the lever, and the circle of pins with the clock-work and its hammer, and with the device for operating the alarm from the door, and its hammer.

A is the base-plate of the alarm, which is designed to be attached to the door-casing. To the upper part of the base-plate A is attached a small frame, B, consisting of two plates connected by three or more posts. To one of the posts of the frame B is attached one end of a spring, C, which is coiled around, and its other end is attached to, the shaft D, which revolves in bearings in the plates of the frame B. The outer end of the shaft D projects, and is squared off to receive a key for turning it to wind up the spring C. To the shaft D is rigidly attached a ratchet-wheel, E, upon the teeth of which takes hold the pawl F, which is pivoted to the gear-wheel G, and is held forward against the ratchet-wheel E by a spring, H, also attached to said gear-wheel G. The gear-wheel G runs loosely upon the shaft D, and its teeth mesh into the teeth of the small gear-wheel, I, attached to the shaft J, which revolves in bearings in the plates of the frame B, and to which is also attached a larger gear-wheel, K, the teeth of

which act upon the pallet of the verge L, which is attached to a shaft, M, which works in bearings in the plates of the frame B, and to which is also attached the end of the rod N, to the free end of which is attached the hammer O. The rod or arm N is bent into such a position that the hammer O may strike the gong P as it is vibrated by the movement of the verge L. Q is a lever, which is pivoted to the base-plate A, and its upper end is so formed that when the lever is operated, it may strike against the hammer-rod N, and push the hammer O inward away from the gong P when it is not desired to have said hammer operate; as, for instance, in the day-time. The lower end of the lever Q projects down into such a position that it may be conveniently reached and operated, and its movement is limited by two pins, R, attached to the base-plate A. To the side of the gear-wheel R is attached a circle of pins, S, to strike against the end of the lever T, to hold the wheel R against the action of the spring C, and thus keep the hammer O from being vibrated. The lever T is pivoted to the base-plate A, and to its outer end is pivoted the upper end of the bar U, which passes down along the face of the base-plate A, and is held against said plate by a spring-keeper, V, also attached to said base-plate. In the lower part of the bar U is formed a hole, w^1 , to receive a pin, W, attached to the lower part of the base-plate A, to lock the said bar in position to hold the forward end of the lever T against the pins S of the gear-wheel K. The lower part of the bar U has a slot, w^2 , formed in it to receive the curved arm X, attached to the shaft Y, which works in bearings in the lower part of the base-plate A. The middle part of the lower end of the base-plate A is cut away to give space for the attachments of the shaft Y to operate. To the shaft Y is attached an arm, Z, to the free end of which is attached a hammer, A', to strike against the gong P, and serve as an ordinary or day alarm. The shaft Y is turned forward, to throw the hammer A' against the gong P, by the spring B', which is coiled around the said shaft Y. One end of the coiled spring B' is attached to the shaft Y, and its other end is attached to the base-plate A. The end of

the shaft Y toward the door projects, and has a ratchet-wheel, C', placed upon it, upon the teeth of which the engaging end of the pawl D' takes hold. The pawl D' is pivoted to the side of the toothed wheel E', and is held down upon the teeth of the ratchet-wheel C' by a spring, F', also attached to the toothed wheel E'. The toothed wheel E', when turned in one direction, runs loosely upon the shaft Y, and when turned in the other direction carries the shaft Y with it until stopped by the coiled spring B', which spring, when the toothed wheel E' is released, projects the hammer A' against the gong P, and sounds an alarm. G' is a short bar, which is designed to be attached to the door in such a position that when the said door is closed, the said bar may strike the teeth of the wheel E', and turn it in the direction in which it runs free. As the door is opened, the bar G' turns the wheel E' in the direction to coil the spring B' and draw back the hammer A', so that the alarm may be sounded as the bar G' slips from the teeth of the wheel E'. The bar G' may operate upon the upper or lower side of the wheel E', according as it is applied to a left or right hand door. The gong P is screwed upon a hollow stud, H', attached to the outer plate of the frame B, and into which the squared end of the shaft D projects. The cavity of the hollow stud H' should be of such a size as to allow the key for winding up the spring C to be readily inserted.

For day use, when it is not desired to have

the continuous alarm operate, the lever Q is adjusted to hold the hammer N O away from the gong P, and the sliding bar U is placed upon the pin W.

For night use, and at other times when it is desired to have the continuous alarm operate, the lever Q is adjusted to release the hammer N O, and the sliding bar U is removed from the pin W, and so adjusted that the point of the curved arm X of the shaft Y may pass through the slot u^2 of the said bar U. When thus arranged, as the wheel E' is turned by the opening door the arm X will draw the slide U downward, releasing the gear-wheel K, and allowing the hammer N O to be vibrated by the action of the spring C, sounding a continuous alarm.

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

1. The combination of the bar or arm G', toothed wheel E', spring-pawl F' D', ratchet-wheel C', shaft Y, and spring B' with the bell-hammer Z A' and gong P, substantially as herein shown and described.

2. The combination of the curved arm X, sliding slotted bar U, lever T, and pins S with the clock-work and its hammer, and with the device E' F' D' C B' Y and its hammer Z A, substantially as herein shown and described.

ABRAHAM NEVLING.

Witnesses:

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ISAAC HECKMAN.