

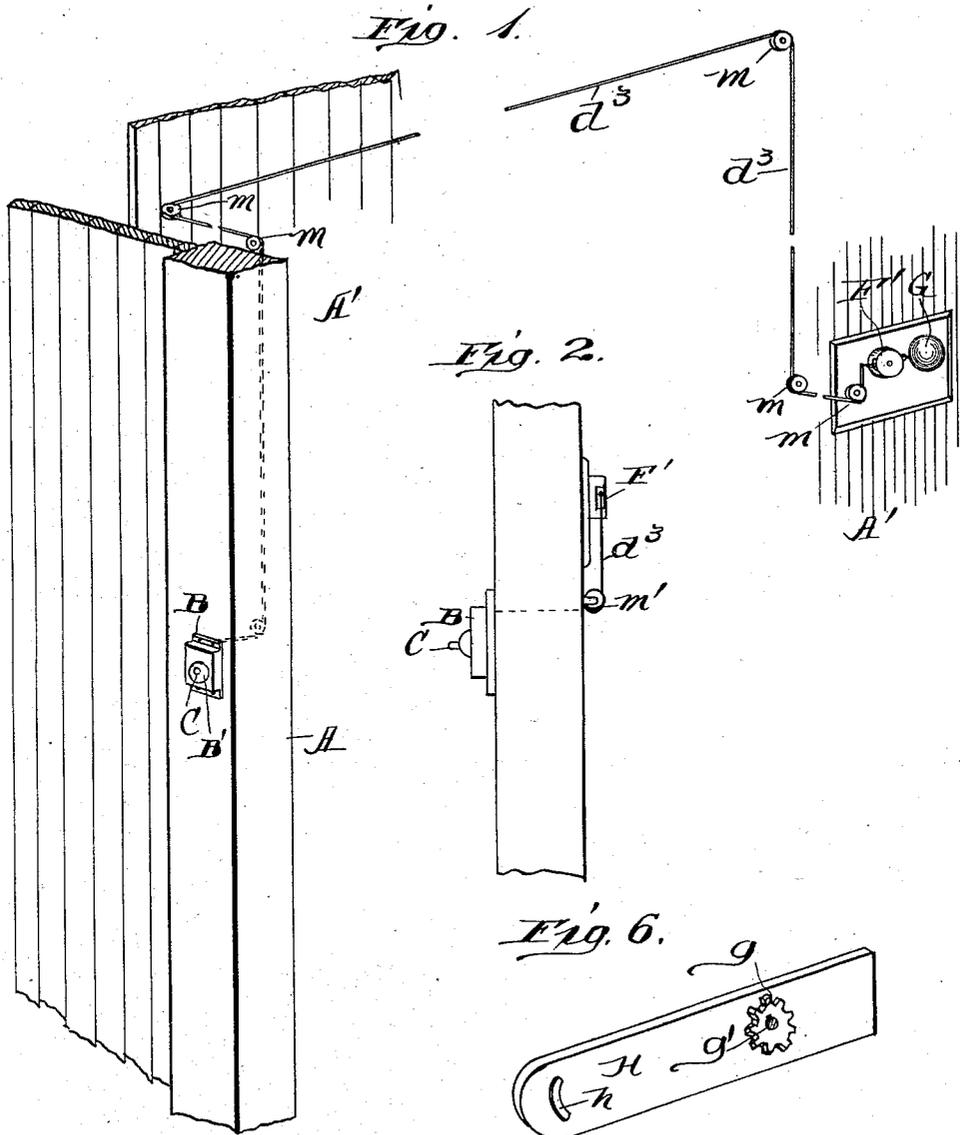
No. 717,865.

PATENTED JAN. 6, 1903.

E. H. JUHLIN.
ALARM GIVING MECHANISM.
APPLICATION FILED OCT. 27, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

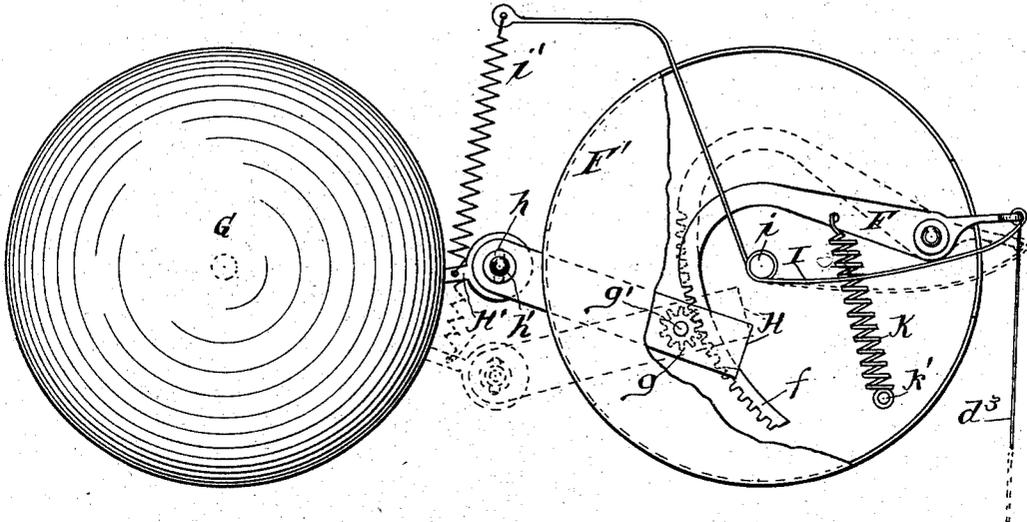


Fig. 4.

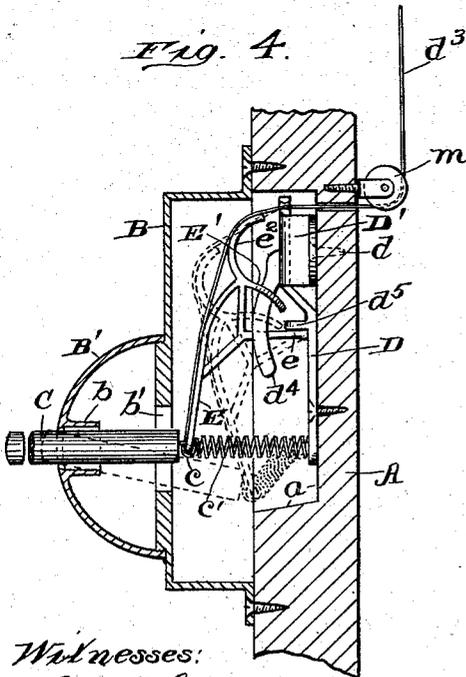
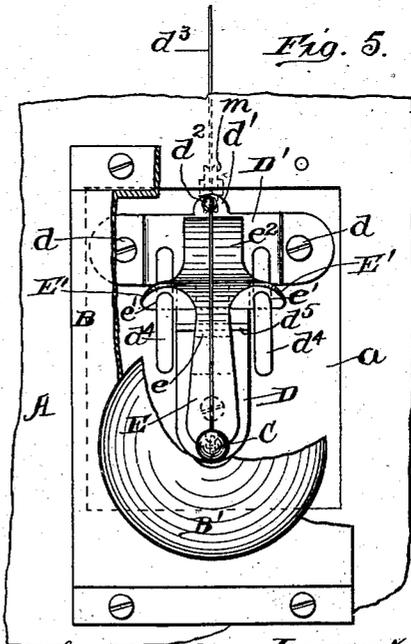


Fig. 5.



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ALARM-GIVING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 717,865, dated January 6, 1903.

Application filed October 27, 1902. Serial No. 128,878. (No model.)

To all whom it may concern:

Be it known that I, ERIK H. JUHLIN, a subject of the King of Sweden and Norway, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Alarm-Giving Mechanism, of which the following is a specification.

This invention relates to improvements in a mechanism to be used for ringing door-bells or operating buzzers and the like; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of my invention is to afford a mechanism for ringing door-bells or operating other alarms which shall be simple and inexpensive in construction, strong, durable, and effective in operation.

Another object of the invention is to provide a mechanism of the above-described character which shall be so constructed that it may be used to give an alarm at a considerable distance from the push-button, or the mechanism and bell may be directly applied to the jamb or casing of the doorway.

Still another object is to produce a push-button mechanism or wire-tightening device which shall have great leverage, thus insuring positive action of the bell-ringing mechanism with a minimum of pressure on the push-button.

A further object of the invention is to so construct the mechanism that it may be connected to a mechanical bell of the well-known or ordinary type made in such a way as to ring in imitation of an electric bell.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a diagrammatic perspective view of a portion of the walls of a building, showing my improved alarm-giving mechanism in place thereon and illustrating the bell as being located at some distance from the push-button mechanism and showing the connect-

ing-wire shortened for the convenience of illustration. Fig. 2 is a view in elevation of a portion of a door-casing, showing the apparatus applied directly thereto. Fig. 3 is a plan view of the bell and the mechanism for operating the lever of the bell-ringing device. Fig. 4 is a side view, partly in section and partly in elevation, of the push-button or wire-tightening mechanism. Fig. 5 is a plan view thereof, showing a portion of the casing for the same broken away; and Fig. 6 is a detached perspective view of one of the levers used in the mechanism for operating the lever of the bell-ringing device.

Similar letters refer to like parts throughout the different views of the drawings.

A represents a portion of a door-casing of a building, and A' the walls thereof. Secured to the outer surface of the jamb or casing A is a box-like casing B, which incloses the push-button or wire-tightening mechanism. This casing is provided with a rounded portion B', which has an open extension b at about its center for the reception and operation of the push button or pin C, which passes through an opening b' in the casing B and is connected at its inner end to the wire-tightening lever, as will be presently explained.

Secured, by means of screws d, to the door-casing A and usually in a recess a therein is a supporting-plate D, which is provided at its upper end with a transverse and raised or outwardly-projecting portion D', having at its middle a lip or lug d', provided with an opening d², through which the wire d³ passes. The upper surface of the transverse portion D' of the plate D is provided with two parallel arms d⁴, which extend downwardly and are slightly curved, as is clearly shown in Fig. 4 of the drawings. The plate D is provided near the lower portion of the transverse part D' with an outwardly-extending rib or lug d⁵, against which an arm e on the wire-tightening lever rests. This wire-tightening lever comprises a tongue-like portion E, having near its upper end an inwardly-extending transverse portion E', which is provided with openings e' to receive the arms d⁴ on the transverse portion of the plate D, as is clearly shown in Fig. 5 of the drawings. The inner end of the push button or pin C is pivotally

connected to the lower end of the lever E by means of a link *c*, which passes through a suitable opening in said lever. Connected at one of its ends to the lower end of the plate D is a spring *c'*, the other end of which is connected to the lower end of the lever E, as shown. By reference to Figs. 4 and 5 of the drawings it will be seen that the upper portion of the lever E projects some distance from the transverse portion E' and is rounded, as at *e*², so that the wire *d*³, which is secured at one of its ends to the lower end of the lever E, will rest on said rounded portion, as well as on the outer surface of the tongue-like portion of the lever, thus avoiding any danger of the wire being cut or damaged by the lever and at the same time affording the latter a strong leverage on the wire. The other end of the wire *d*³ is connected to one end of a lever F, which is fulcrumed on a suitable casing F', secured to the wall or other suitable support near the bell G, which may be of the ordinary or any preferred construction and which is also secured to the wall or other suitable support. The lever F is provided on its inner portion with a toothed rack-bar *f*, which meshes with a pinion *g*, fixed on a lever H, which is fulcrumed to the casing F' by means of a shaft *g'*, which also constitutes the shaft of the pinion *g*, as is shown in Figs. 3 and 6 of the drawings. The outer portion of the lever H is provided with a transverse slot *h*, in which is located a bolt *h'*, which connects the lever H with the lever H' of the bell-ringing device (not shown) and which may be of the ordinary or any preferred kind.

Secured at one of its ends to the outer end of the rack-bar lever F is a double-acting spring I, which is secured at about its middle by being coiled around a stem or pin *i* on the middle portion of the casing F', which casing is provided in its sides with openings through which the levers F and H, as well as the other end of the spring I, extend. That end of the spring I opposite the end which is secured to the lever F is connected, by means of a spring *i'*, to the lever H' for the purpose of retracting said lever after it has been thrown to the position indicated by dotted lines in Fig. 3 of the drawings. Secured at one of its ends to the lever F, between its fulcrum and the rack-bar *f*, is a spring *k*, which is secured at its other end to a pin *k'* on the casing F'.

In Fig. 1 of the drawings I have shown the push-button or wire-tightening mechanism and the bell as being located at a considerable distance apart, and when such is the case the wire *d*³, which connects the wire-tightening mechanism and the mechanism for operating the lever of the bell-ringing device, should pass over suitable pulleys *m*, arranged at suitable points, so as to support the wire without undue friction.

In Fig. 2 the same construction as above de-

scribed is employed, except that all of the pulleys but one, *m'*, may be dispensed with.

From the foregoing and by reference to the drawings it will be seen and clearly understood that by pressing the push button or pin inwardly the wire-tightening lever E will be turned on its arm *e*, which arm acts as a fulcrum therefor and is preferably bifurcated and made integral with the said lever, as is clearly shown in Fig. 4 of the drawings. In this operation the wire *d*³ will be tightened, thus causing the rack-bar lever F and the lever H to assume the positions shown by dotted lines in Fig. 3 of the drawings. As soon as the pressure is removed from the push button or pin the double-acting spring I and the springs *i'* and *k* will cause said levers to be retracted or to assume their normal positions, as shown by continuous lines in said figure of the drawings. The spring *c'* of the push-button mechanism will force the lower end of the lever E and the push-button outwardly as soon as the pressure is removed from the latter, as is apparent.

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

1. In an alarm-giving mechanism, the combination with the supporting-plate having a raised transverse upper portion provided with downwardly-projecting curved arms, of a spring-pressed wire-tightening lever having a fulcrum-arm to rest on said plate and provided with a transverse upper portion having openings to receive the arms on said plate, a spring-actuated rack-bar lever suitably fulcrumed, a pinion journaled to mesh with the said rack-bar, a lever fixed to the pinion, a spring-actuated lever for the bell-ringing device loosely connected to the lever on the pinion, and a connection uniting the wire-tightening lever and rack-bar lever, substantially as described.

2. The combination with the supporting-plate having curved arms projecting downwardly from its upper portion, of a spring-actuated lever having a bifurcated fulcrum-arm to rest against the plate and provided with a transverse upper portion having openings to receive the arms on said plate, a push button or pin loosely connected to one end of said lever, a rack-bar lever suitably fulcrumed and connected to the first-named lever, a pinion journaled to mesh with said rack-bar, a lever fixed to the pinion, a lever for the bell-ringing device loosely connected to the lever on the pinion, and a double-acting spring connected at one of its ends to the rack-bar lever and at its other end to the lever of the bell-ringing device, substantially as described.

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