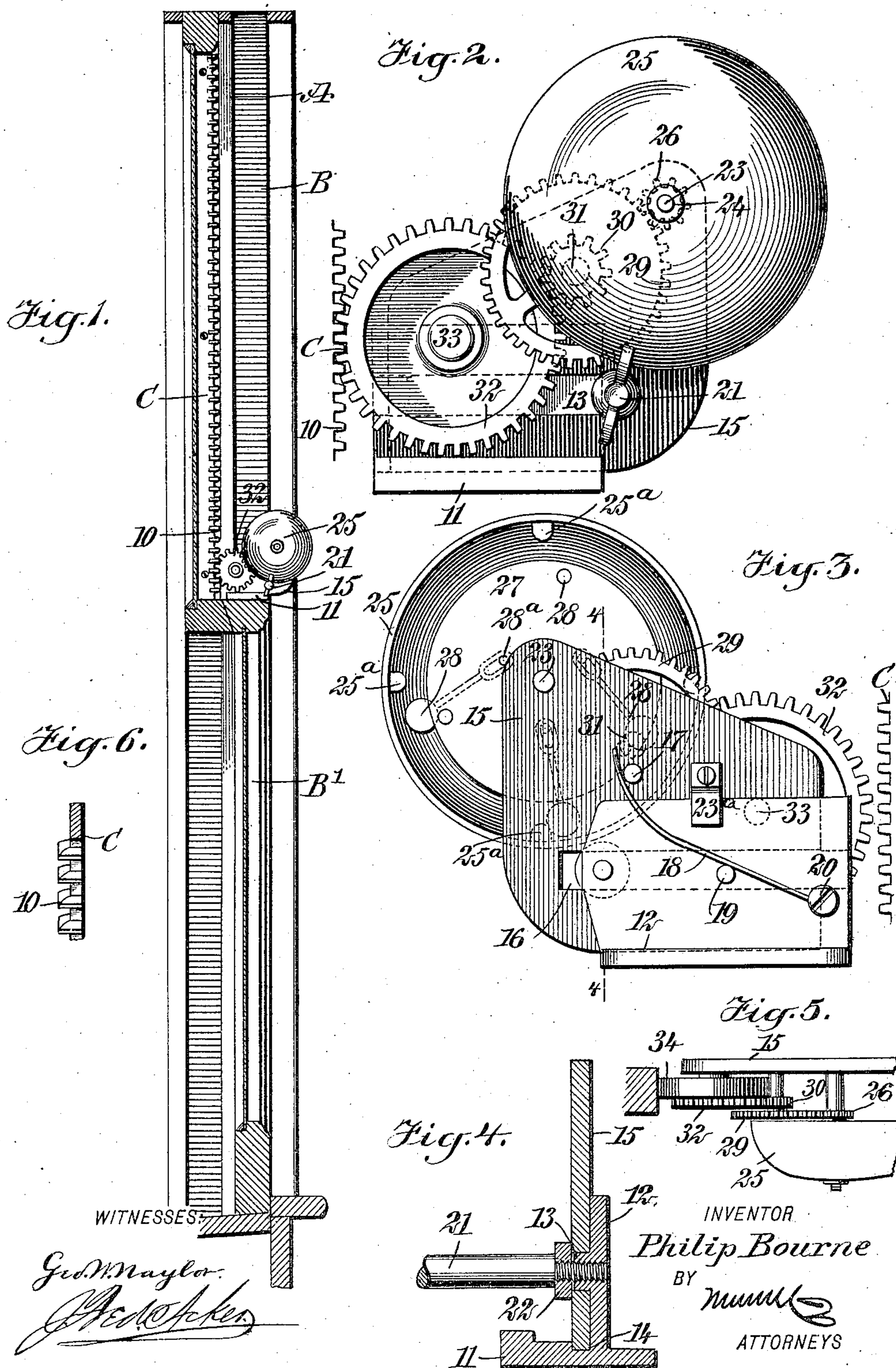


No. 844,241.

PATENTED FEB. 12, 1907.

P. BOURNE.
AUTOMATIC ALARM.
APPLICATION FILED NOV. 11, 1905.



UNITED STATES PATENT OFFICE.

PHILIP BOURNE, OF NEW YORK, N. Y.

AUTOMATIC ALARM.

No. 844,241.

Specification of Letters Patent.

Patented Feb. 12, 1907.

Application filed November 11, 1905. Serial No. 286,930.

To all whom it may concern:

Be it known that I, PHILIP BOURNE, a citizen of the United States, and a resident of the city of New York, (borough of Brooklyn,) in the county of Kings and State of New York, have invented a new and Improved Automatic Alarm, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide an alarm device especially applicable to windows and which can be readily set at the right-hand or the left-hand side of a window, the said device being adapted for attachment to the lower sash and for rack or frictional engagement with the upper sash, whereby the upper or lower sash, under ordinary conditions, cannot be raised or lowered without sounding an alarm.

A further purpose of the invention is to so construct the alarm device that it may be carried entirely out of engagement with the upper sash and be locked out of such engagement whenever desired, at such time permitting the free movement of either sash without sounding an alarm.

A further purpose of the invention is to construct an article of the character described in a very simple, economic, and durable manner and so that it may be applied to window-sashes by a person of but comparatively little experience.

Another purpose of the invention is to so construct the rack employed in connection with the body of the device that the said rack will offer the least possible resistance to the gear forming a part of the body structure and with which it may mesh.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section through a window-frame and the upper and lower sash, illustrating the application of the improvement thereto. Fig. 2 is an inner face view of the improved automatic alarm drawn upon a larger scale than that shown in Fig. 1. Fig. 3 is an outer side elevation of the improved alarm device drawn upon the same scale as that shown in Fig. 2. Fig. 4 is a detail sectional view through the said

device, taken practically on the line 4 4 of Fig. 3. Fig. 5 is a sectional plan view of a side stile for an upper sash and a plan view of alarm-actuating gears connected with a friction-wheel in contact with the stile and working the gears when the sash is reciprocated, and Fig. 6 is a detail perspective view of the improved rack employed in connection with the body portion of the device.

A represents a window-frame of any approved type, provided with an upper sash B and a lower sash B'. At either the right-hand or the left-hand side of the upper sash B at the inner face of the side stile adjacent to the glass pane a vertical rack C is secured in any suitable or approved manner, extending from the meeting-rail practically to the upper stile, as is shown in Fig. 1. This rack C is of peculiar construction, as is illustrated in Fig. 6, inasmuch as the teeth 10, which are usually at the front portion of the rack-bar, extend around to the inner side, and the top and bottom of said teeth 10 are beveled more or less so as to enable the device, to be hereinafter described, to be operated on said rack with the least possible amount of friction.

The alarm device, which is shown particularly in Figs. 2 and 3, consists of a base-plate 11, adapted to be secured in any suitable or approved manner to the upper face of the meeting-rail of the lower sash B', and said base-plate 11 is provided with an upright member 12, which member 12 at its inner face, about midway between its top and bottom, is provided with a horizontal rectangular rib 13, as is best shown in Figs. 2 and 4. The said base-plate 11 adjacent to the inside face of the upright 12 is provided with a horizontal channel or recess 13, as is also shown in Fig. 4.

A cheek-piece 15, which is in the nature of a plate, is adapted to slide in the channel 14 of the base-plate 11, as is shown best in Fig. 4, and this cheek piece or plate 15 is provided with a longitudinal slot 16, which slot receives said rib 13 on the upright member 12 of the base-plate 11, as is shown in Figs. 2, 3, and 4. The slot 16 extends out through the inner edge of the said cheek piece or plate 15, as is indicated by dotted lines in Fig. 3, so that the cheek piece or plate 15 has sliding movement on the base section or plate 11 of the said alarm device.

A post 17 extends out from about the central portion of the cheek plate or piece 15, as

is shown in Fig. 3, and the free end of a spring 18 is curved upwardly and has bearing against the under side of said post 17, which spring 18 intermediate of its length has bearing on a second post 19, extending outward from the upright member 12 of the base 11, as is illustrated in Fig. 3, and the inner end of the spring 18 is secured to the upright member 12 of the base in any suitable or approved manner, by means of a screw 20, for example, as is also shown in Fig. 3. The tendency of the spring 18 is to force the cheek piece or plate 15 in direction of the side stile of the upper sash when the alarm device is in position on the meeting-rail of the lower sash.

The cheek piece or plate 15 may be held in an inner position or away from the upper sash to a greater or a lesser extent by any suitable form of a locking device. That shown in the drawings and which is preferred consists of a thumb-screw 21, which is made to enter the rib 13 on the upright member 12 of the base and likewise the said upright member to a greater or lesser extent, as is shown in Fig. 4, and the nut 22, which is screwed upon the threaded portion of the thumb-screw 21, has bearing against the inner face of the rib 13 and the inner face of the adjustable cheek piece or plate 15.

At what may be termed the "inner" upper portion of the cheek piece or plate 15 a horizontal post 23 is secured, extending inward from the said cheek-piece, and on the outer end of this post a gong 25 is secured in any suitable or approved manner. On the said post 23, between the gong 25 and the cheek-piece 15, a sleeve 24 is mounted to turn, which sleeve is provided with an attached pinion 26 and a disk 27, the disk 27 being nearest the gong 25, as is shown in Fig. 3, and upon the inner face of this disk 27 the shanks of hammers 28 are adjustably pivoted by means of suitable pins 28^a, so that as the disk 27 is revolved these hammers will engage with the gong to strike an alarm one after the other, the gong being usually provided with inner projections 25^a, against which the said hammers are brought in contact in sounding the alarm.

A gear 29 meshes with the pinion 26, and this gear 29 together with an attached pinion 30 are adapted to turn loosely upon a horizontal post 31, likewise carried inwardly from the adjustable cheek piece or plate 15, the said pinion 31 being made to mesh with a gear 32, and the said gear is mounted to revolve on a horizontal post 33, located at what may be termed the "outer" end portion of the said cheek piece or plate 15. The said gear 32 is adapted to mesh with the teeth 10 on the rack-bar C. Thus in operation when it is desired to set the alarm device the set-screw 21 is loosened, and the spring 18 will thereupon force the cheek piece or plate 15 outward or in direction of the upper sash, so

that the teeth of the gear 32 will mesh with the teeth 10 of the rack C, at which time the upper sash cannot be lowered or the lower sash raised without placing the alarm mechanism in action. If, however, it is desirable to open or close the window without sounding an alarm, the adjustable cheek piece or plate 15 is drawn inward or away from the upper sash, so as to carry the gear-wheel 32 out of engagement with the rack C, and the said cheek piece or plate 15 is secured in such inwardly-adjusted position by tightening up the thumb-screw 21.

I desire it to be understood that, while I preferably employ the rack-bar C and the gear 32 for meshing with the said rack-bar, if desired a friction-wheel 34 may be connected with the gear 32, the said friction-wheel 34 being then adapted for engagement with a side stile of the upper sash, so that the train of gearing in the alarm device will be set into action when the window is being opened or closed by the frictional engagement of said friction-wheel with the upper sash.

A suitable guide 23^a is usually secured to the outer face of the cheek piece or plate 15, which guide extends down over the vertical member 12 of the base 11, as is shown in Fig. 3. It is evident that an alarm device constructed as above described may be used either right or left, as occasion may demand.

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

1. In an alarm device, a base having a vertical member and a horizontal rib upon the said vertical member, a cheek-plate having sliding movement on the base and having a slot to receive the said rib, a spring secured to the vertical member of the base and having bearing against the cheek-plate, the said spring normally tending to force the cheek-plate in one direction, a locking device for the cheek-plate, a gong carried by the said cheek-plate, and a train of gearing likewise carried by the cheek-plate, the said train of gearing being in operative connection with the gong and adapted to be operated by a contact of one its members with a moving object.

2. In an alarm device, a base-plate provided with a horizontal channel or recess, and having an upright member, a cheek-plate having sliding movement in the said channel, the upright member of the base and the said cheek-plate having a rib-and-slot connection, a lock for the cheek-plate, a tension device normally tending to force the cheek-plate in one direction, a gong carried by the cheek-plate, and a train of gearing carried by the cheek-plate and in operative connection with the gong, the said train of gearing being adapted to be operated by

contact of one of its members with a movable object.

3. In automatic alarm devices for windows, a rack-bar adapted for attachment to an upper sash, the teeth of which rack-bar extend along at the front and at an adjacent side, the upper and the lower faces of the teeth being beveled, a body-section comprising a base adapted for attachment to the meeting-rail of the lower sash of the window-frame, a cheek piece or plate having sliding movement in the said base, a locking device for the cheek-piece, a spring carried by the base, normally acting to carry the cheek-piece in direction of the said rack, a gong carried by the cheek piece or plate, and a chain of gearing likewise carried by the cheek piece or plate and which is in operative connection with the hammer members of the gong and the said rack-bar.

4. The combination with a rack-bar adapted for attachment to the side stile of the upper sash of a window-frame, of an alarm device adapted for attachment to the meeting-

rail of the lower sash of the window-frame, the said alarm device consisting of a base having a vertical member and a horizontal rib upon the said vertical member, a cheek-piece held to slide in the base and provided with a slot to receive the said rib, a spring secured to the vertical member of the base and having bearing against the cheek-piece, acting to normally force the said cheek-piece in direction of the rack-bar, a locking device for the said cheek-piece, a gong carried by the cheek-piece, and a train of gearing for operating the hammers of the said gong, which train of gearing is likewise carried by the cheek-piece and is in operative connection with the said rack-bar.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PHILIP BOURNE.

Witnesses:

J. FRED ACKER,
JNO. M. RITTER.