

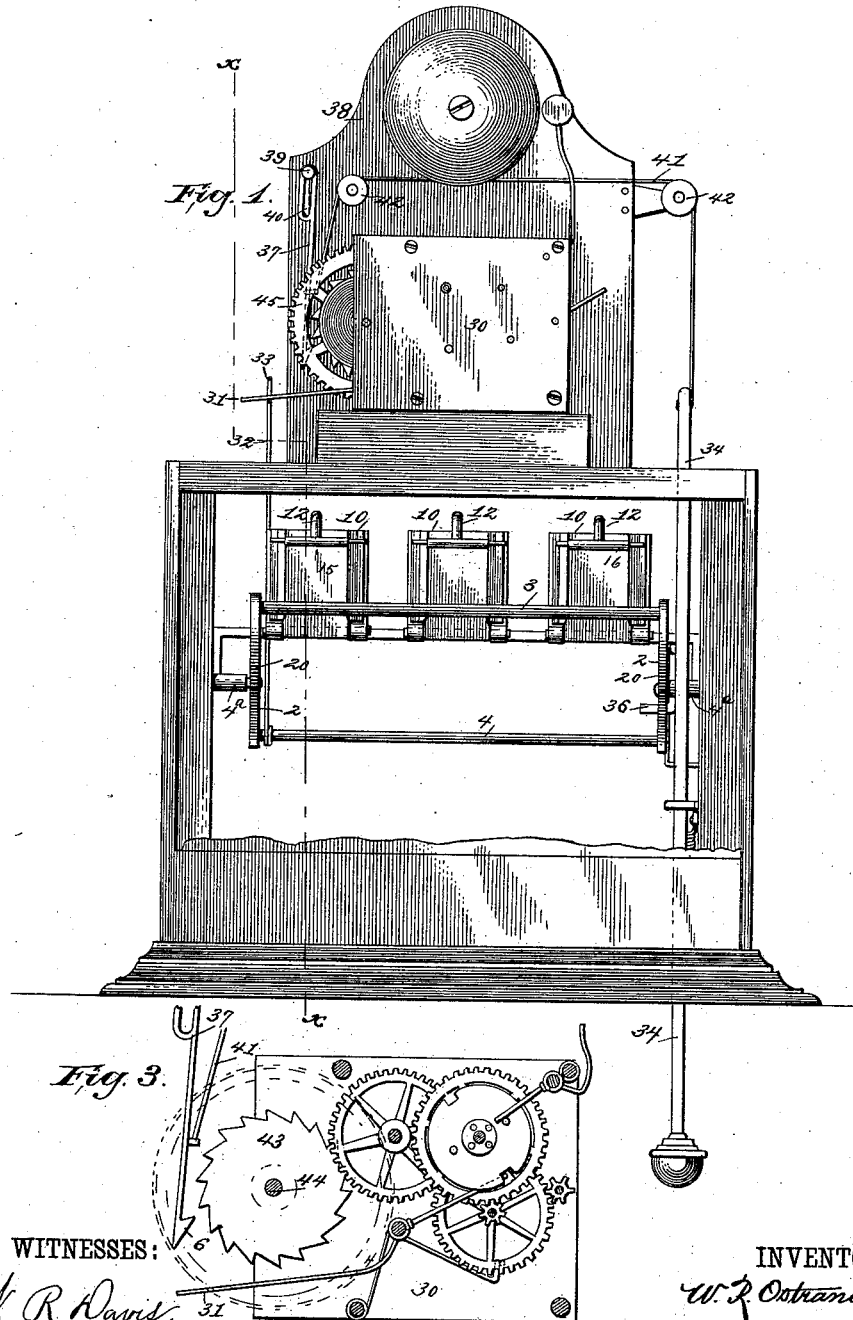
(No Model.)

2 Sheets—Sheet 1.

W. R. OSTRANDER.
PNEUMATIC ANNUNCIATOR.

No. 382,051.

Patented May 1, 1888.



WITNESSES:
W. R. Davis.
C. Sedgwick.

INVENTOR:
W. R. Ostrander
BY *Munn & Co.*
ATTORNEYS.

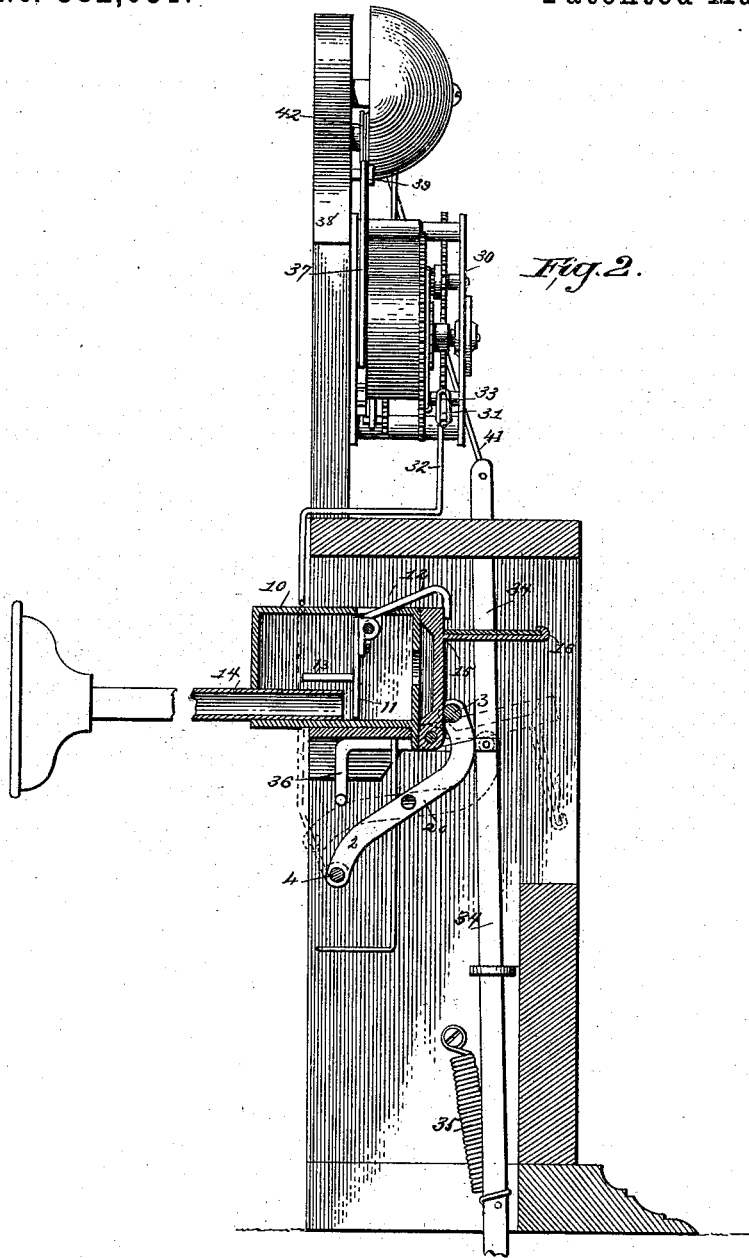
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UNITED STATES PATENT OFFICE.

WILLIAM R. OSTRANDER, OF BROOKLYN, NEW YORK.

PNEUMATIC ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 382,051, dated May 1, 1888.

Application filed May 25, 1887. Serial No. 239,348. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. OSTRANDER, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Pneumatic Annunciator, of which the following is a full, clear, and exact description.

The object of this invention is to provide a pneumatic annunciator wherein the parts are so arranged that the resetting of the drops will rewind the alarm attachment.

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

Figure 1 is a front view of my improved pneumatic annunciator, the door of the annunciator case being removed and a portion of the link which connects with the alarm-train lever being shown in section. Fig. 2 is a side view of the annunciator in partial section, taken on line *x x* of Fig. 1; and Fig. 3 is a sectional view of the alarm-train, the view being taken just inside the inner plate of the train-frame.

In the drawings above referred to, 10 represents valve-cases, within which there are mounted leaf-valves 11, said valves being pivotally supported and provided with catch-arms 12, which extend out through apertures formed in the upper walls of the valve-cases. These catch-arms 12 are provided with hooked ends, which extend down a short distance in front of the valve-cases, and in order that the weight of these catch-arms may be counterbalanced to a certain extent I connect counterbalancing-arms 13 to the valves 11.

Each of the valve-cases is entered by a tube, 14, which tubes closely approach the rear faces of the valves 11, as shown in Fig. 2. In front of the valve-cases I mount L-shaped indicator-drops 15, which drops are hinged to the lower edges of the valve-cases and arranged so that they may be turned up to the position in which they are shown in Fig. 2, to be engaged by the hooked arms 12, the indicator-cards of these drops being secured to the upper faces of their forwardly-extending plates 16.

Beneath the valve-cases I mount a frame, 20, made up of side arms, 2, an upper cross-bar, 3, and a lower cross-bar, 4, the frame being supported by studs 4^a, to which the side arms, 2, are connected, connection being es-

tablished slightly above the centers of the arms, so that the frame will normally rest in the position in which it is shown in full lines in Fig. 2.

In connection with the parts described I provide a clock-work alarm-train, 30, the tripping-lever of said train being shown at 31, and this lever I connect with the frame 20 by means of a connecting rod or link, 32, said link being secured at one end to the frame, and being provided at the other end with a loop, 33, through which the lever 31 extends.

The tubes 14 lead to the various apartments from which it is desired to operate the annunciator, and by slightly compressing the air in these tubes, as by pushing in a diaphragm or puffing in a mouth-piece, the valves 11 will be carried forward, the hooks or catches 12 will be raised, and the drops 15 will be free to move to the position in which they are shown in dotted lines in Fig. 2--that is, to a position so that their cards will be displayed, and as the drops so move they will tilt the frame 20 to the position in which it is shown in dotted lines in Fig. 2, and the connecting rod or link 32 will thus be raised and the alarm-train started, this train being of any of the ordinary constructions--such, for instance, as the one shown in the drawings and probably best illustrated in Fig. 3.

In order to reset the drop operated upon as above described, I mount a bar, 34, which is normally held in the position in which it is shown in Fig. 2 by a spring, 35, and this bar I provide with an arm, 36, which extends out over the lower portion of one of the side arms, 2, of the frame 20, so that if the bar 34 be grasped and drawn downward against the tension of the spring 35 its arm 36 will strike against the arm 2 of the frame 20, and said frame will be carried to the position in which it is shown in full lines in Fig. 2, the drop being at the same time raised to its normal position, as shown in the figure referred to, and as the link or connecting rod 32 is lowered the tripping-lever 31 will be free to fall and the stops of the alarm-train will enter their notches and consequently stop the sounding of the alarm.

In order that the winding of the alarm by hand may be dispensed with, I connect a toothed bar, 37, with the back 38, to which the alarm mechanism is attached, the connection

between the bar and the back being established by means of a pin, 39, which passes through a slot, 40, that is formed in the bar. To this bar there is connected a cord, 41, which leads over guiding-pulleys 42 to the bar 34, the arrangement being such that when the bar 34 is drawn down the tooth 6 of the bar 37 will be drawn into engagement with one of the teeth of a toothed wheel, 43, that is carried by the spring-arbor 44, and consequently each time the drops are reset and the sounding of the alarm checked the spring of the alarm-train will be partially rewound.

Now, although I have shown an independent winding-wheel, 43, it will of course be understood that the bar 37 could be arranged so that it would engage with the main gear 45, and although I have shown the cord 40 as passing over sheaves it will of course be understood that said cord might be arranged in connection with bell-crank levers, and that if desired the bar 34 could be placed upon the opposite side of the machine, in which case a single bell-crank lever or sheave would act to transmit its motion to the bar 37.

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

1. The combination, with an alarm-train, of a toothed bar arranged to engage therewith

and formed with an elongated slot, a pin passing through said slot, an operating-bar, and connections between the toothed bar and the operating-bar, substantially as described.

2. The combination, with an alarm-train, of a sliding bar provided with a catch-tooth which is arranged to engage with the train, an operating-bar, and connections between the operating-bar and the toothed bar, substantially as described.

3. The combination, with an alarm-train provided with a toothed wheel, of a toothed bar arranged to engage with said toothed wheel and formed with an elongated slot, through which there is passed a supporting-pin, an operating-bar, and connections between the toothed bar and the operating-bar, substantially as described.

4. The combination, with an alarm-train provided with a toothed wheel, 43, of a bar, 37, provided with a tooth, 6, and a slot, 40, a pin, 39, which passes through the slot 40, sheaves 42, an operating-bar, 34, and a cord passing from the operating-bar over the sheaves 42 to the bar 37, substantially as described.

WILLIAM R. OSTRANDER.

Witnesses:

EDWARD KENT, Jr.,
C. SEDGWICK.