(No Model.)

J. SCHNEPF.

PNEUMATIC ANNUNCIATOR.

No. 491,027. Patented Jan. 31, 1893.

Fig. 1.

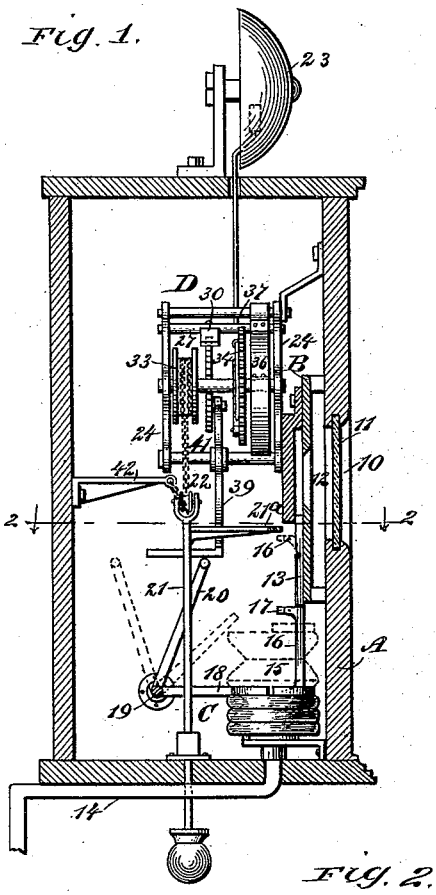


Fig. 3.

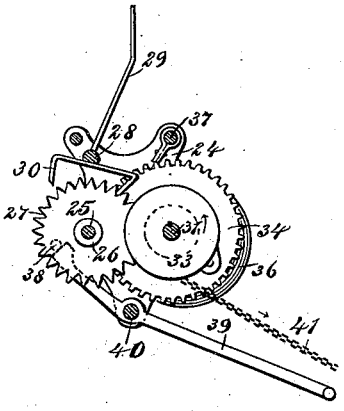


Fig. 4.

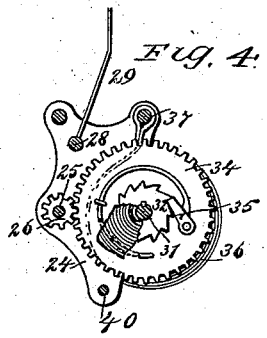
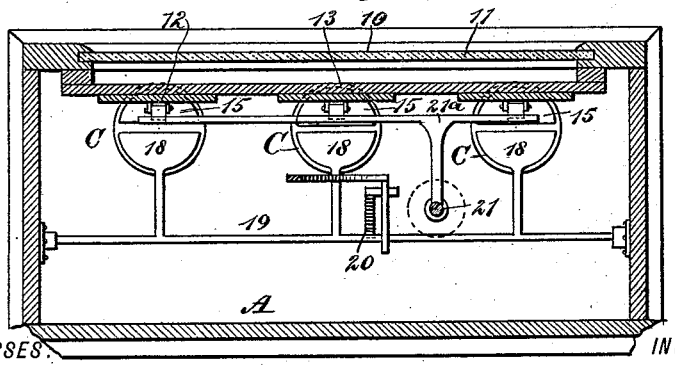


Fig. 2.



WITNESSES.

W. R. Davis.

Wm. R. Wilson

INVENTOR

John Schnepf

UNITED STATES PATENT OFFICE.

JOHN SCHNEPF, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO WILLIAM H. BELLAMY, OF SAME PLACE.

PNEUMATIC ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 491,027, dated January 31, 1893.

Application filed June 11, 1891. Serial No. 395,920. (No model.)

To all whom it may concern:

Be it known that I, JOHN SCHNEPF, of New York city, in the county and State of New York, have invented a new and Improved Pneumatic Signaling Device, of which the following is a full, clear, and exact description.

My invention relates to an improvement in pneumatic signaling devices, and especially to an improvement in pneumatic indicators; and the object of the invention is to so construct the device that the draw rod controlling the downward movement of the indicator tablets, when manipulated, will, in addition to manipulating the tablets, both wind and set the mechanism.

A further object of the invention is to provide a device of simple and durable construction and capable of being expeditiously, conveniently and effectively operated either at long or at short distances.

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 claim.

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

Figure 1 is a central vertical section through the casing of an indicator, illustrating the mechanism in elevation; Fig. 2 is a horizontal section taken practically on the line 2—2 of Fig. 1; and Figs. 3 and 4 are detail views of the alarm-actuating mechanism.

The casing A, may be of any suitable or approved construction, and as shown is provided in one face with an opening 10, covered by a glass 11, or any other transparent material. Back of the transparent plate 11, a pocket B, is formed, having an opening 12 opposite the transparent plate, and in the pockets the indicator tablets 13, which may be of any approved construction, are cabable of sliding vertically, the tablets being normally below the opening 12.

In the bottom of the casing A, a series of bellows C, is located, and each bellows has connected therewith a pneumatic tube 14, which may be carried to any desired point. Each bellows has resting thereon a plate 15, the plates being preferably segmental, and each plate has projected therefrom an arm 16, provided at its upper end with a horizontal head 17, and the head of each arm is adapted to support an indicator tablet 13. The segmental plates 15, but partially cover the upper faces of the bellows, the remaining portion of said upper faces being in engagement with like plates 18, which plates are connected with a rock shaft 19, or the equivalent thereof, journaled in any suitable or approved manner within the casing. The rock shaft is provided with an upwardly-extending crank arm 20; and the draw rod 21 of the device is provided with an extension 21^a, adapted for engagement with the heads of all the arms 16 when said arms are elevated by the expansion of the bellows. The draw rod 21, passes downward out through the casing in the usual manner, as is shown in Fig. 1; and the upper portion of the drawhead is provided with a friction pulley 22, or the equivalent thereof.

A gong 23, or the equivalent thereof, is preferably placed upon the top of the casing; and the gong is sounded through the medium of a mechanism shown in detail in Figs. 3 and 4, the entire mechanism being designated by the reference letter D. This mechanism consists of two side pieces 24, between which a spindle 25, is journaled, carrying a pinion or small gear wheel 26 and an escape wheel 27. Above the spindle 25 a rock shaft 28, is journaled, to which the hammer 29 of the gong is secured, and the said rock shaft is provided with a verge 30, adapted for engagement with the teeth of spur gear 27.

In front of the spindle 25 a shaft 31, is journaled in the side pieces 24, the said shaft having secured thereon a ratchet wheel 32 and a drum 33. Next to the ratchet wheel a gear 34, is loosely mounted upon the shaft 31, provided with a spring-pressed dog 35, engaging with the ratchet; and a main spring 36, is attached to the shaft 32 at one side of the spur gear 34, and to a rod 37, connecting the side pieces 24 of the mechanism.

The escapement wheel 27, is preferably provided upon one side with a pin 38, adapted to be engaged by one end of a trip lever 39, fulcrumed upon a shaft 40, at the central lower portion of the mechanism. The forward end

of the lever 39, by gravity, is normally held downward, and the upper rear end is in engagement with the pin 38, while the lower forward end of the lever is in engagement with the crank arm 20 of the rock shaft 19. Around the drum 33 a chain 41, or the equivalent thereof is wound, one end of the chain being attached to the drum and the opposite end being passed under the friction roller 22 of the draw rod 21 and secured in any approved manner to the casing, ordinarily through the medium of a bracket 42, as shown in Fig. 1. Thus in operation if one of the pneumatic tubes is blown into from a certain room for instance, the bellows connected with that tube is expanded and the arm 16 attached to the plate 15, resting upon the bellows is elevated and carries up with it the proper indicator tablet. At the same time, through the medium of the other plate 18, which rests upon the bellows, the shaft 19 is so rocked that its crank arm 20, will engage with the lower end of the trip lever 39, disengaging it from the pin 38 of the escapement wheel 27, thereby causing an alarm to be sounded; and as the alarm is sounded the shaft 31, is rotated and likewise the drum 33, and the chain is wound upon the drum. The alarm will continue to sound until the spring 36, is entirely unwound, and the moment that the draw rod is pulled downward, its extension 21^a, engaging with the head of the elevated arm 16, will force said arm downward and cause it to carry also in the same direction the elevated tablet, and the chain 41, will be unwound from the drum 33, thus causing it to revolve and give motion to the shaft 31 in a direction to wind the spring 36 for another alarm, and at that time the trip lever 39, will be in engagement with the pin 38 of the escapement gear.

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

In a pneumatic signaling apparatus, the combination, with a bellows, an indicator tablet, an arm projected from the bellows supporting said tablet, and a crank arm operated by the expansion and contraction of the bellows, of an alarm mechanism, the spring shaft of which is provided with a drum carrying a chain connected with the drum and to an adjacent support, and a draw rod connected with the chain and provided with an extension adapted for engagement with the bellows arm, whereby when the rod is drawn downward a raised tablet will be lowered and the spring of the alarm mechanism wound, as and for the purpose specified.

JOHN SCHNEPF.

Witnesses:
J. FRED. ACKER,
C. SEDGWICK.