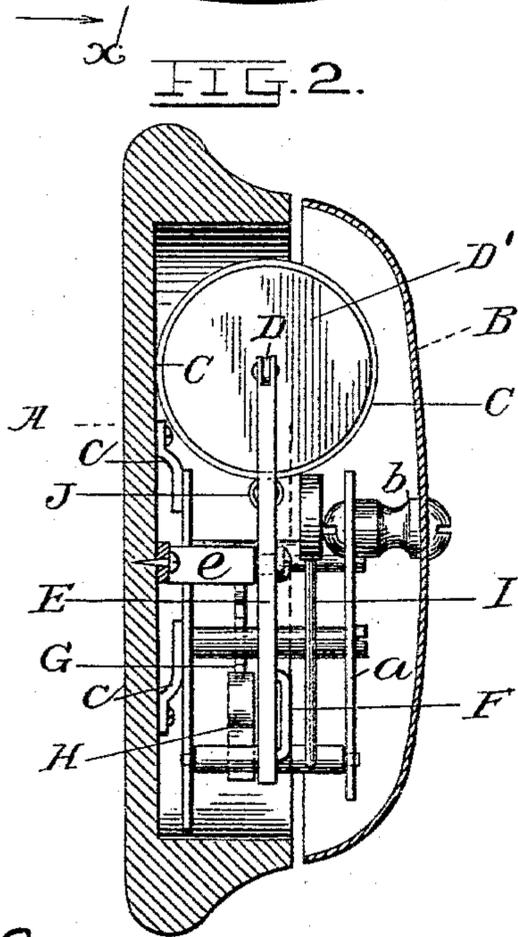
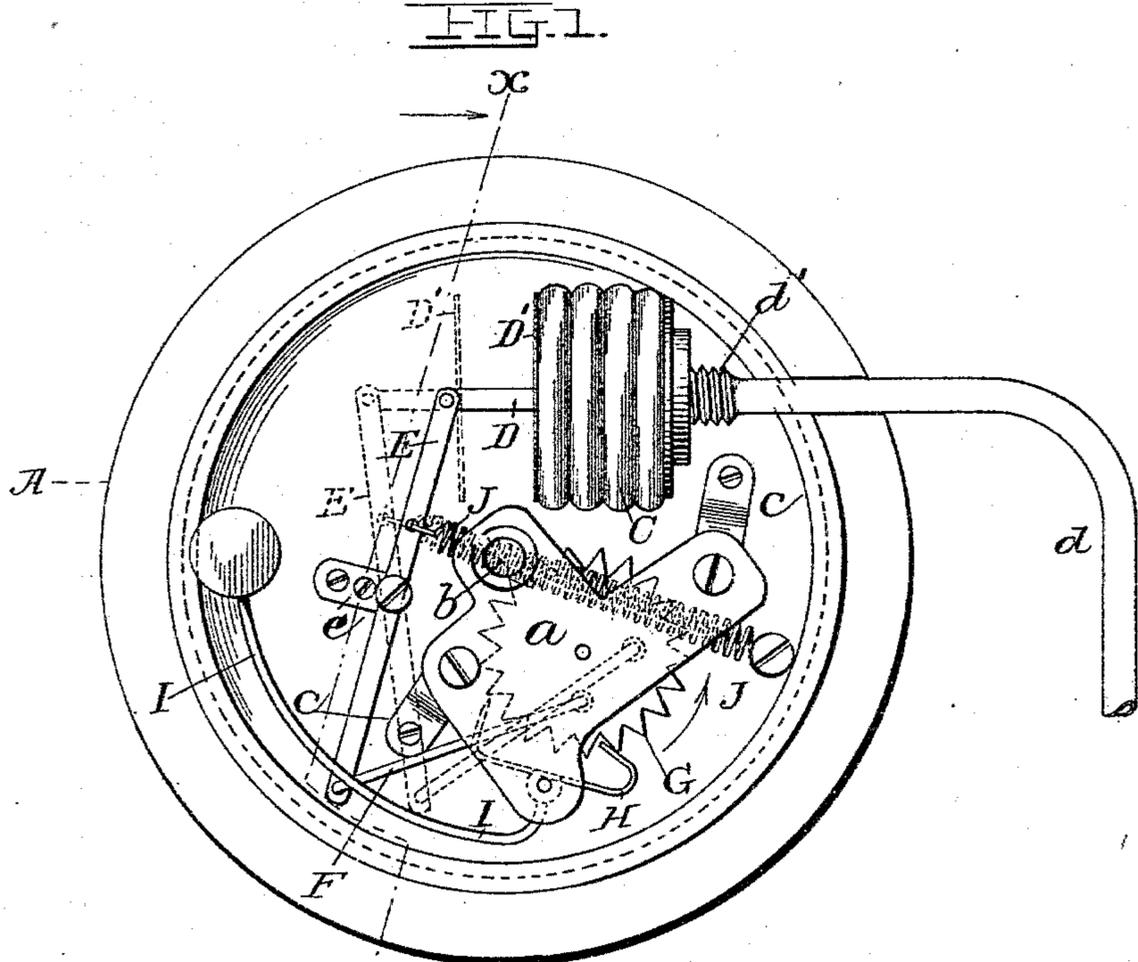


(No Model.)

J. SCHNEPF.
PNEUMATIC BELL.

No. 515,447.

Patented Feb. 27, 1894.



WITNESSES:
Edward C. Rowland.
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JOHN SCHNEPF, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO WILLIAM H. BELLAMY, OF SAME PLACE.

PNEUMATIC BELL.

SPECIFICATION forming part of Letters Patent No. 515,447, dated February 27, 1894.

Application filed January 31, 1893. Serial No. 460,349. (No model.)

To all whom it may concern:

Be it known that I, JOHN SCHNEPF, a citizen of the United States, and a resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Pneumatic Signaling Apparatus, of which the following is a specification.

My invention relates to certain improvements in pneumatic signals or bells, the purpose thereof being to simplify and improve the construction and operation of the device and avoid lost motion, so that it will operate with a minimum degree of power and thus be capable of use at long distances.

My invention is also very compact and inexpensive in construction.

Generally stated, the invention consists in a new combination of parts as hereinafter set forth, whereby the pressure of the air is made to act upon an expanding bellows or equivalent device, and is transmitted from it by means of a pivoted lever or levers to an escapement wheel, which actuates the hammer of the bell. My form of apparatus is much more simple in operation, requires much less power and can therefore be used at much greater distances than those in which there are interposed between the bellows and the escapement, racks and pinions or gear wheels and the like devices, because in those forms, there are many moving parts and many surfaces which generate friction and much lost motion, and in them, dust and other foreign matter are sure to collect, whereby their operation is retarded and frequently stopped altogether. Whereas, by my construction practically the entire power of the expanding bellows or equivalent device is exerted directly upon the escapement. Also I embody the further advantage of very much less cost and freedom from repairs; the parts of my device being so simple in construction and operation, that they last an indefinite time without requiring any attention.

In the drawings hereof, Figure 1, is a top

view of the invention, as it appears after the removal of the bell or gong. Fig. 2, is a vertical sectional view taken on the line X, X, of Fig. 1.

Referring by letter to the accompanying drawings, A designates the base or incasement of the apparatus. I prefer it to be circular in form, but this is not essential. In it the bellows, levers, escapement wheel, pallet, hammer and support for the gong are all concealed.

B designates the gong, which is supported upon a stud *b* mounted upon a frame *a*, which is attached to the bottom of the incasement by supports *c, c*.

C indicates the bellows, which is sustained upon a support *d'* and is provided with a short tube *d* which is made sufficiently long to project through the side of the base or incasement A.

D' indicates a metallic plate or disk which is provided with a horizontal rod D, which is connected with a lever E, which is supported and pivoted upon a bearing *e*. The other end of the lever E connects with a link F which is connected to the escapement wheel G, thus engaging the pallet H and hammer I.

J is a spring which serves to eject the air from the bellows after it has been inflated, thus collapsing the bellows and retracting the lever E and link F and the escapement wheel, all to their normal position as shown in dotted lines.

It will be seen that in my construction, the only points of friction and of possible lost motion are the pivots which connect the rod D with the lever E and the link F with the lever E, with the exception of the pivot *e*, upon which the lever E oscillates, and it will also be observed that the friction and lost motion at these points are practically *nil*, because these pivots are small and it is an exceedingly simple and easy matter to make them fit the holes in which they turn so snugly as to preclude the lost motion, practically if not theoretically; and consequently

there is in my construction, practically no force or power lost between the bellows and the escapement.

Having described my invention, I claim—
5 The combination in a pneumatic signaling device of a base or incasement, a bellows, a pivoted lever connected with the bellows, a link pivoted to the other end of the lever and connecting with an escapement, said escape-
10 ment itself, a pallet having a hammer actu-

ated by said escapement, a retracting spring, and a gong, substantially as set forth.

Signed at the city of New York, in the county of New York and State of New York, this 30th day of January, A. D. 1893.

JOHN SCHNEPF.

Witnesses:

FRANCIS ATKINSON,
WM. H. BELLAMY, Jr.