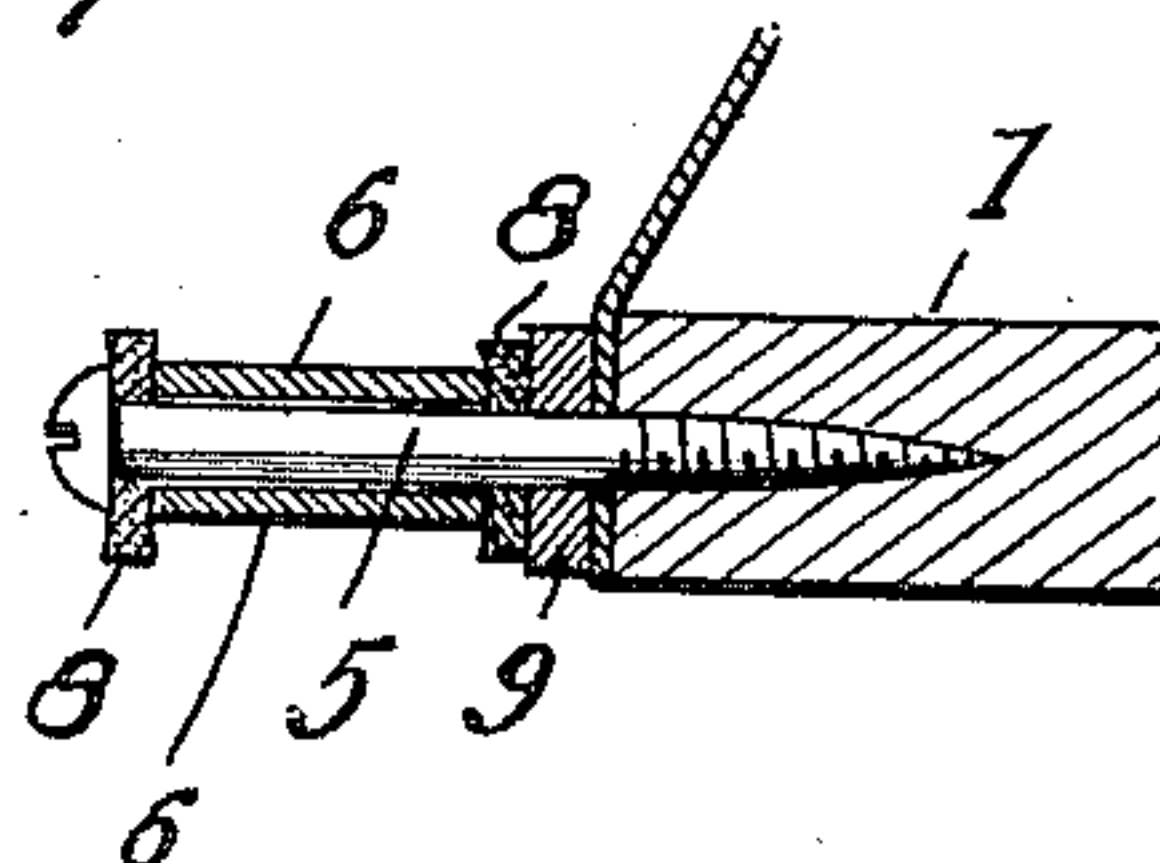
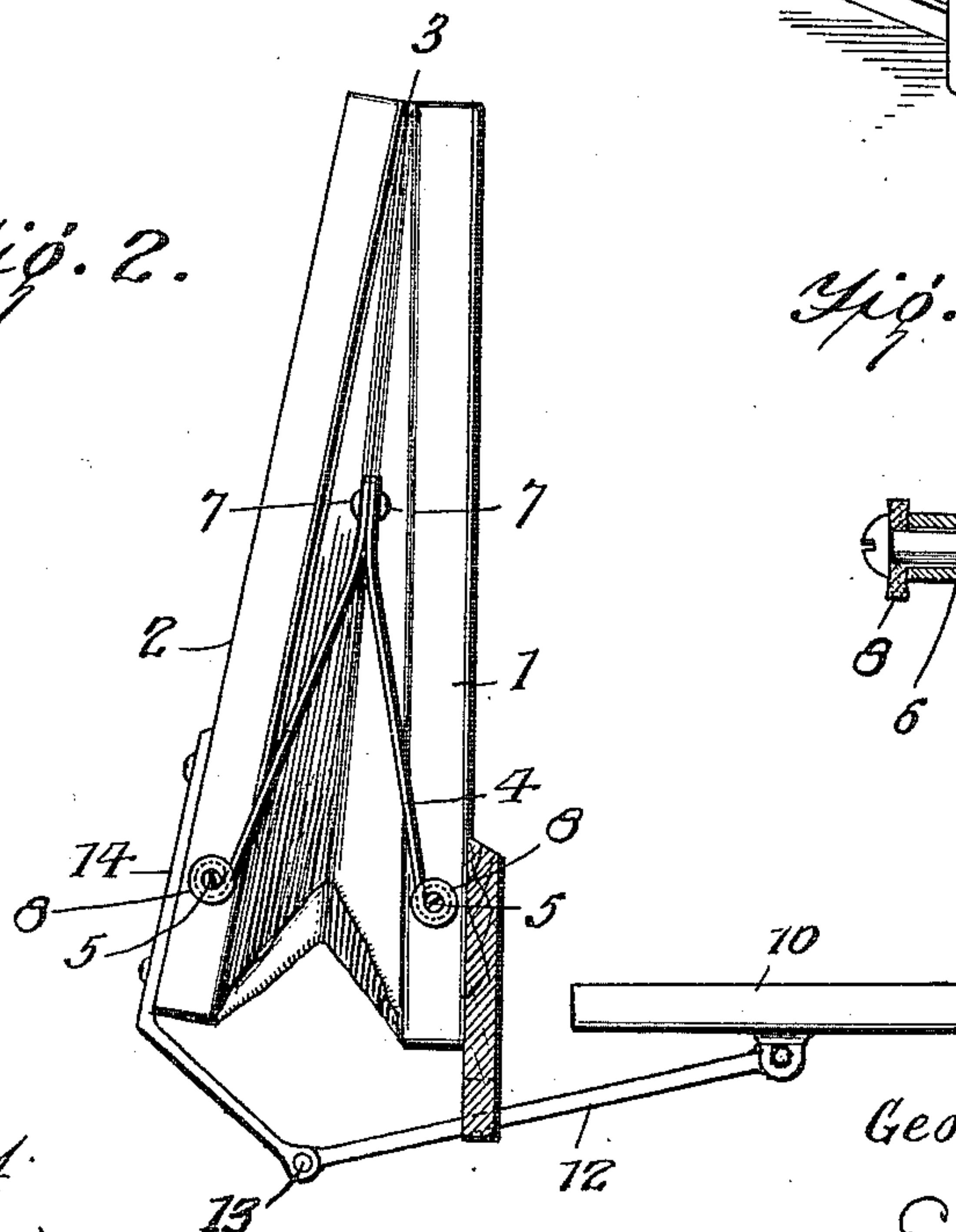
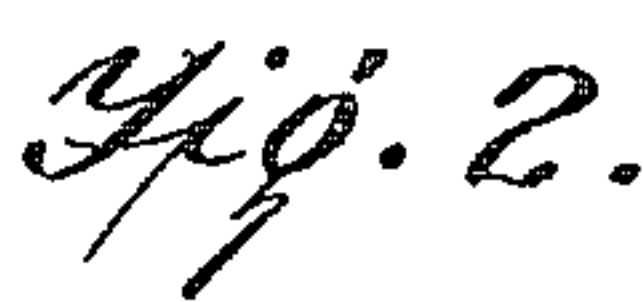


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Patented June 6, 1911.



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UNITED STATES PATENT OFFICE.

GEORGE P. BRAND, OF NEW YORK, N. Y.

EXHAUSTER.

994,697.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed April 7, 1909, Serial No. 488,344. Renewed May 2, 1911. Serial No. 624,669.

To all whom it may concern:

Be it known that I, GEORGE P. BRAND, a citizen of the United States of America, and resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Exhausters, of which the following is a specification.

This invention relates to pneumatics or bellows, more particularly to exhausters, designed primarily for use in piano players, and it has for its objects among others to provide a construction which shall occupy less room, be more handy of access for repairs or other purposes, easy to adjust, and simple to apply.

I arrange the spring outside the bellows and at one end thereof, attaching one end to the movable member and the other to the stationary member of the bellows or pneumatic, the spring extending alongside the pneumatic and the members thereof being connected together, or, if preferred, made integral at their point of juncture. This spring serves to close the pneumatic and to return the pedals to their normal position.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of an end of a pneumatic provided with my present improvement. Fig. 2 is an end elevation thereof on an enlarged scale. Fig. 3 is a section on the line 3—3 of Fig. 2, looking in the direction of the arrow.

Like numerals of reference indicate like parts throughout the several views.

Referring to the drawings, 1 designates the stationary member and 2 the movable member of the bellows or pneumatic. It is to be understood that the movable member has its movement from a point as at 3 at the apex of the two members, the pneumatic being of known construction except as hereinafter specified.

4 designates a spring, in this instance shown as of flat material, preferably metal, the two portions of which are preferably slightly convex, and each portion at one end is bent around its attaching screw or other means 5, as seen at 6, while at the opposite points the same may be either integral at

their juncture, or fixedly secured together by suitable means, as rivets 7. As seen best in Fig. 1, these screws or securing means 5 extend laterally from the lower ends of the movable and fixed members of the pneumatic, being screwed thereinto and upon each end of the portion 6 which is coiled around the screw I place a washer 8 of felt or analogous material to prevent noise and between the inner felt portion and the member to which the screw is attached I place a spacing block, washer or the like 9, to prevent contact of the spring with the member of the pneumatic. This spring, as will be readily understood, is disposed outside of the pneumatic and at the end thereof, the side portions thereof extending in the direction of the members of the pneumatic, as shown, the said spring being confined within the length of the pneumatic with the united portions disposed at substantially the midheight of the pneumatic. This spring serves to close the pneumatic after it has been deflated and serves also to elevate the pedal after it has been depressed to inflate the pneumatic or exhauster.

Referring to Fig. 1, 10 designates the pedal of any suitable construction mounted upon the rod 11 in any well known manner, while 12 is a rod connecting the pedal pivotally, as at 13, with an arm or the like 14, secured to the movable member 2 of the pneumatic or bellows, in any suitable manner.

In operation, when the parts are in the position seen in Fig. 1, the exhauster is deflated, but, when pressure is applied to the pedal 10, it is depressed and the movable member of the pneumatic moved so that the parts assume substantially the position shown in Fig. 2. As soon as the pressure is removed from the pedal, the spring serves to deflate the pneumatic and, by reason of the connection above described with the pedal, it serves to return the same to its normal position ready for further actuation.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What I claim as new is:—

1. The combination with movable and relatively stationary members of an exhauster, of means extending laterally from said members at a point removed from their pivotal point and a spring outside said members and having its ends connected with said

laterally extending means, said spring being confined within the height of the pneumatic with the portions intermediate the ends of the spring disconnected from the pneumatic, 5 and sound deadening means upon opposite sides of said spring at its points of connection with the members of the exhauster.

2. The combination with movable and relatively stationary members of an ex- 10 hauster, of means extending laterally from said members at a point removed from their pivotal point and a spring having its ends connected with said means, the opposite end of said spring being disconnected from said 15 members, said spring being confined within the height of the exhauster and constructed to normally hold the same closed, sound deadening means upon opposite sides of the spring at its points of connection with the 20 exhauster, and means for moving the movable member, said means and movable mem-

ber being returned to their normal position after the exhauster has been deflated.

3. The combination with the stationary and relatively movable members of an ex- 25 hauster, of fixed means extending laterally from the ends thereof removed from the pivotal point, a spring outside of the exhauster at one end thereof and having portions coiled around said lateral means, sound 30 deadening means on said lateral means at opposite ends of the coiled portions of the spring, and spacing blocks on said lateral means between the said members and the adjacent sound deadening means. 35

Signed by me at Washington, D. C., this 29th day of March, 1909.

GEORGE P. BRAND.

Witnesses:

E. H. BOND,

JOHN SCRIVENER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
