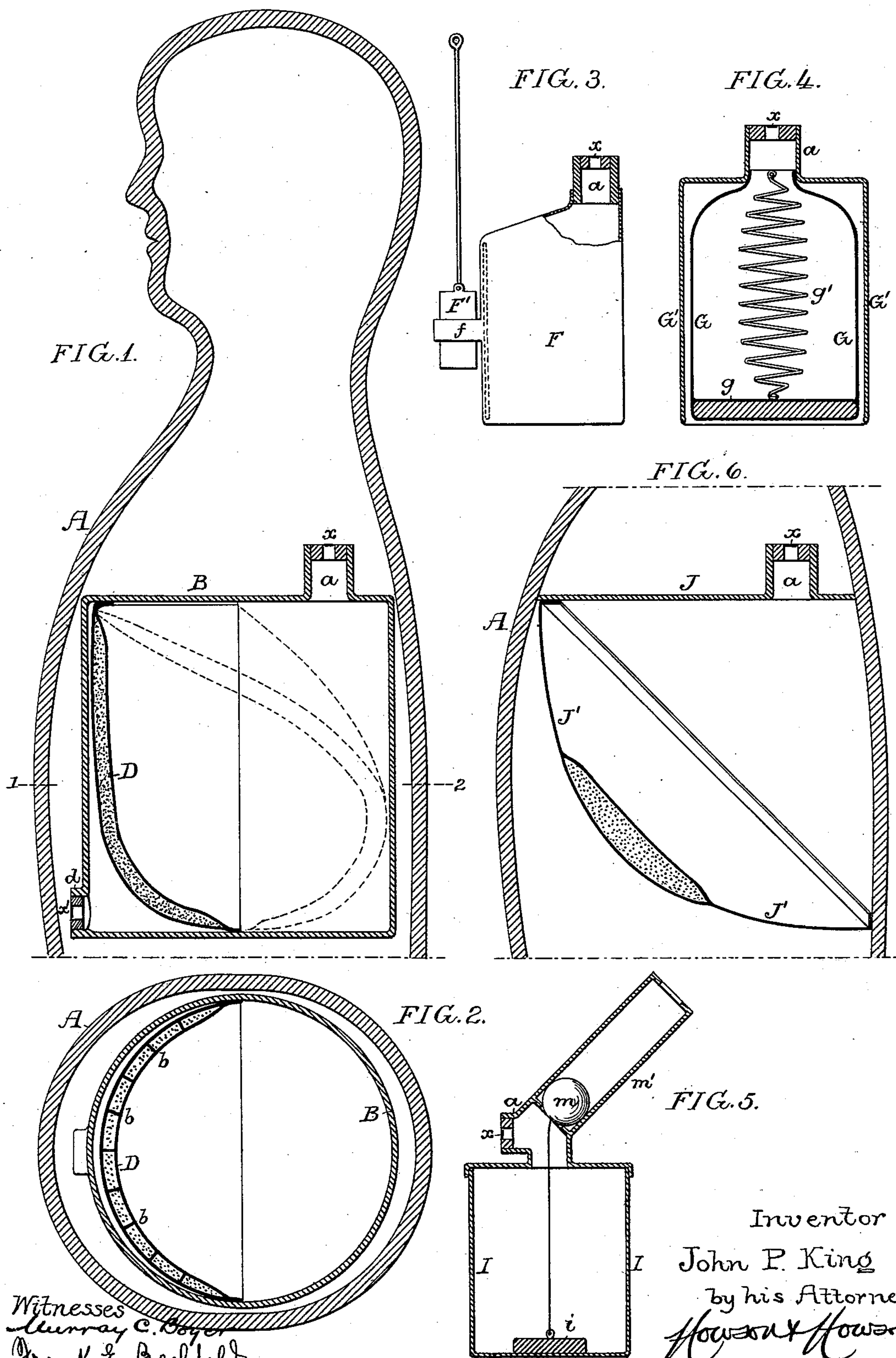


(No Model.)

J. P. KING.  
AUTOMATIC MUSICAL TOY.

No. 507,014.

Patented Oct. 17, 1893.





# UNITED STATES PATENT OFFICE.

JOHN P. KING, OF PHILADELPHIA, PENNSYLVANIA.

## AUTOMATIC MUSICAL TOY.

SPECIFICATION forming part of Letters Patent No. 507,014, dated October 17, 1893.

Application filed February 1, 1893. Serial No. 460,576. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN P. KING, a subject of the Queen of Great Britain and Ireland, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Automatic Musical Toys, of which the following is a specification.

My invention consists of a musical toy of the character shown and described in my Patent No. 489,014, dated January 3, 1893, that is to say one in which a change in the position of the toy causes a flow of air through a reed or other sound producing device, the object of my present invention being to simplify the construction and operation of the means employed for causing such flow of air.

In the accompanying drawings—Figure 1, is a sectional view of part of a doll body showing my improved attachment. Fig. 2, is a transverse section of the same, on the line 1—2; and Figs. 3, 4, 5 and 6, are views illustrating modified forms of the device.

In Fig. 1 A represents part of a doll body within which is suitably secured a box or casing B of any available form and having a neck *a*, within which is mounted a reed *x* or other sound producing device, as in the former case. Within this casing is a bag or pouch D of flexible material, preferably rubber, and having throughout its greater portion double walls connected at intervals by stays *b* so that they are retained in proper relation to each other, this bag or pouch extending throughout about one-half of the interior of the casing and being secured to the latter along the top and sides of the same. The space between the two walls of the casing is filled with sand, fine shot, liquid or other material or substance which will serve to weight the pouch without interfering with the flexibility of the same so that it is free to assume the form which, owing to its weight, gravity would naturally cause it to assume.

When, therefore, the doll body is held in an upright position, as shown in Fig. 1, the pouch assumes the position shown by full lines in said figure, the interior of the casing B being almost entirely filled with air. If, however, the doll is laid upon its back, the pouch will assume the position indicated by dotted lines in Fig. 1 and the air will be expelled from the greater portion of the inte-

rior of the casing B and will be driven out through the neck *a* and through the reed *x* or other sound producing instrument contained therein, air at the same time being drawn into the casing through another neck *d* which may also have a reed *x'*, the reeds of the two necks being such as to produce either a musical or discordant note, as circumstances may suggest. When the doll is restored to the upright position the pouch will again resume the position shown by full lines and air will be drawn in through the neck *a* and expelled through the neck *d*, which may also cause the sounding of a note if desired. It will thus be seen that the flow of air is caused by the movement of a flexible pouch weighted so as to be caused to move by gravity when the position of the doll is changed, and in carrying out my invention various devices embodying this idea may be adopted. For instance, a pouch or pocket F, such as shown in Fig. 3, may be acted upon by a weight F' suspended in the doll body so as to compress the pouch when the doll is laid on its back, the pouch having a band *f* or equivalent connection with the weight so as to be moved with the latter in both directions, or the pouch may contain a light spring tending to expand or contract it, the weight being relied upon to impart the movement in the opposite direction.

In Fig. 4 I have shown another construction in which a pouch G, contained in an open-bottom casing G' has a weighted bottom *g* and is provided with a spring *g'* which will be expanded by the dropping of the weight when the doll is held in the upright position and the full effect of gravity is exerted upon the weight, the spring being strong enough, however to draw the weight forward when the doll is laid upon its back and the weight is supported upon the casing G' which surrounds the pouch.

In Fig. 5 I have illustrated another modification in which the pouch I has a small weight *i* at the bottom sufficient to distend the pouch when the latter is free from any other influence. The bottom of the pouch is, however, connected to a weight *m* which is free to slide in an inclined guide *m'* above the pouch. When the doll is held in the upright position this weight will drop to the bottom of the



guide and permit the full expansion of the pouch, but when the doll is laid upon its back the weight *m* will slide down to the opposite end of the guide and draw up the bottom of the pouch so as to collapse the same and force the air therefrom. The doll body may also, in some cases, form part of the casing of the air chamber. For instance in Fig. 6, I have shown a construction embodying the use of a partition J, across the chest of the doll, and a weighted pouch J' extending diagonally across the doll body below said partition, the edges of this pouch being secured to the partition and to the body of the doll so as to complete the inclosure of the air chamber.

Although I have described my invention as applied to a doll it will be evident that it can be applied as well to other forms of toys for the purpose of producing sounds by changing the position of the toy.

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

1. The combination, in a musical toy, of a reed or other sound producing instrument, with a flexible pouch forming, in whole or in part, the boundary of an air chamber communicating with said reed, and a weight connected to said pouch, whereby, on a change in position of the toy, the weight is acted upon by gravity and the pouch is caused to move and force air from or draw it into said chamber, through the reed, substantially as specified.

2. The combination, in a musical toy, of a reed or like instrument, a flexible pouch forming, in whole or in part, the casing of an air chamber communicating with said reed, a weight connected to the pouch and which, on

a change in the position of the toy, is acted upon by gravity and caused to effect the movement of said pouch, and means for moving the pouch in the opposite direction when the toy is restored to its first position, substantially as specified.

3. The combination, in a musical toy, of a reed or like instrument, with a flexible pouch, forming, in whole or in part, the casing of an air chamber communicating with said reed, and a weight connected to said pouch, whereby, under the influence of gravity, said pouch is caused to move in one direction when the toy is held in one position, and in another direction when the position is changed, substantially as specified.

4. The combination, in a musical toy, of a reed or like instrument, with a flexible pouch having double walls, and forming, in whole or in part, the casing of an air chamber communicating with said reed, and weighting material contained between the walls of the pouch, substantially as specified.

5. The combination, in a musical toy, of a reed or like instrument, with a flexible pouch forming, in whole or in part, the casing of an air chamber communicating with said reed, said pouch having double walls connected by partitions at intervals, and weighting material contained between the walls of the pouch, substantially as specified.

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

JOHN P. KING.

Witnesses:

WILLIAM A. BARR,  
JOSEPH H. KLEIN.