

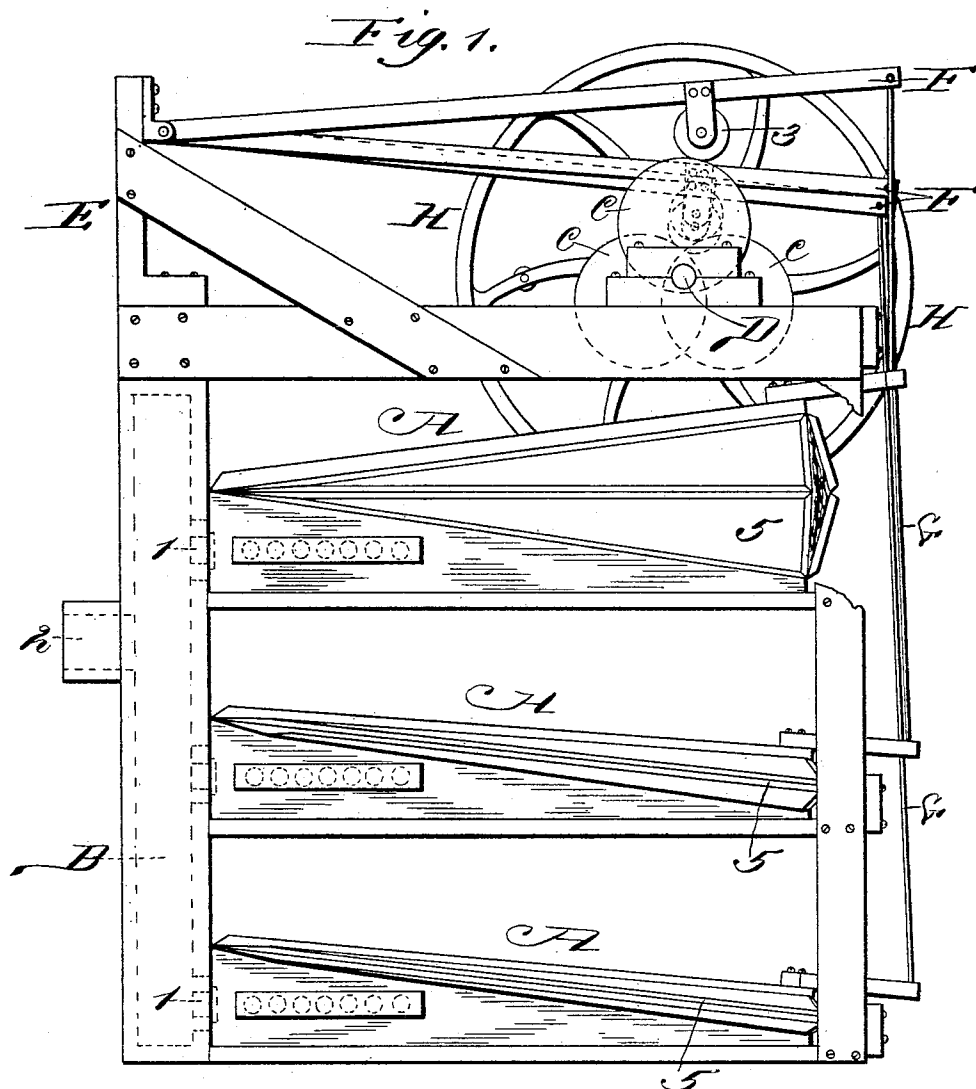
(No Model.)

5 Sheets—Sheet 1.

J. PELOUBET.
FEEDER FOR ORGANS.

No. 496,952.

Patented May 9, 1893.



Witnesses
W. D. Middleton
Reta M. Wagner.

Inventor
Jarvis Peloubet
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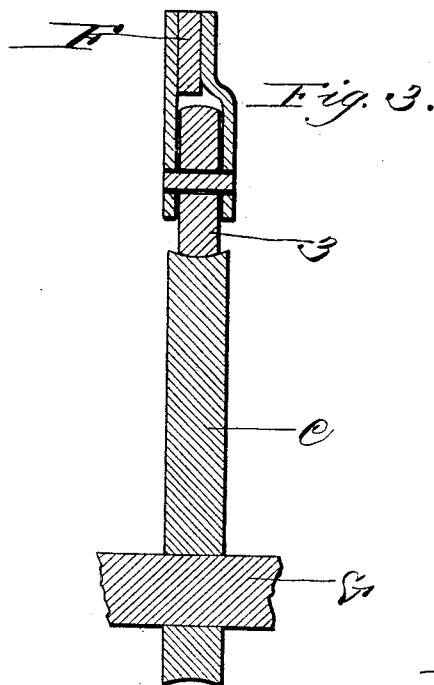
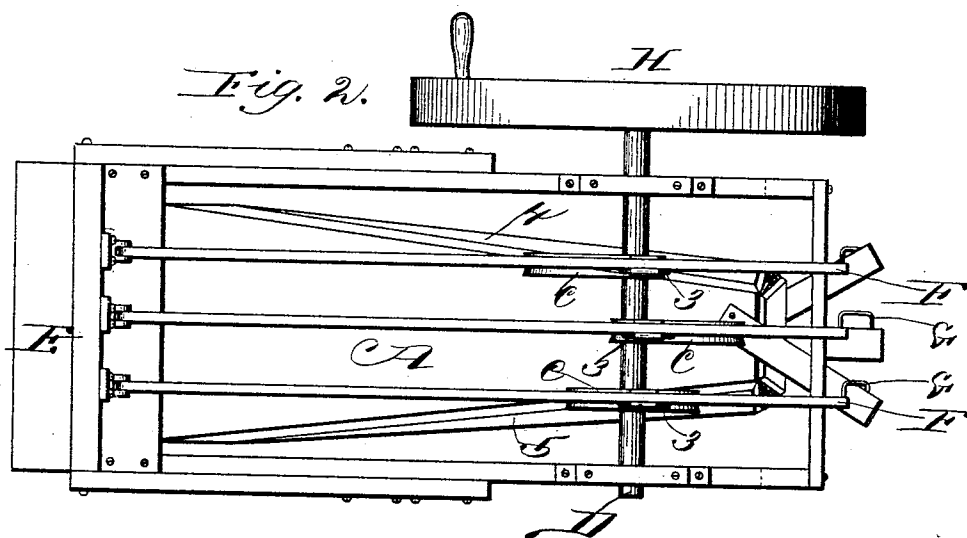
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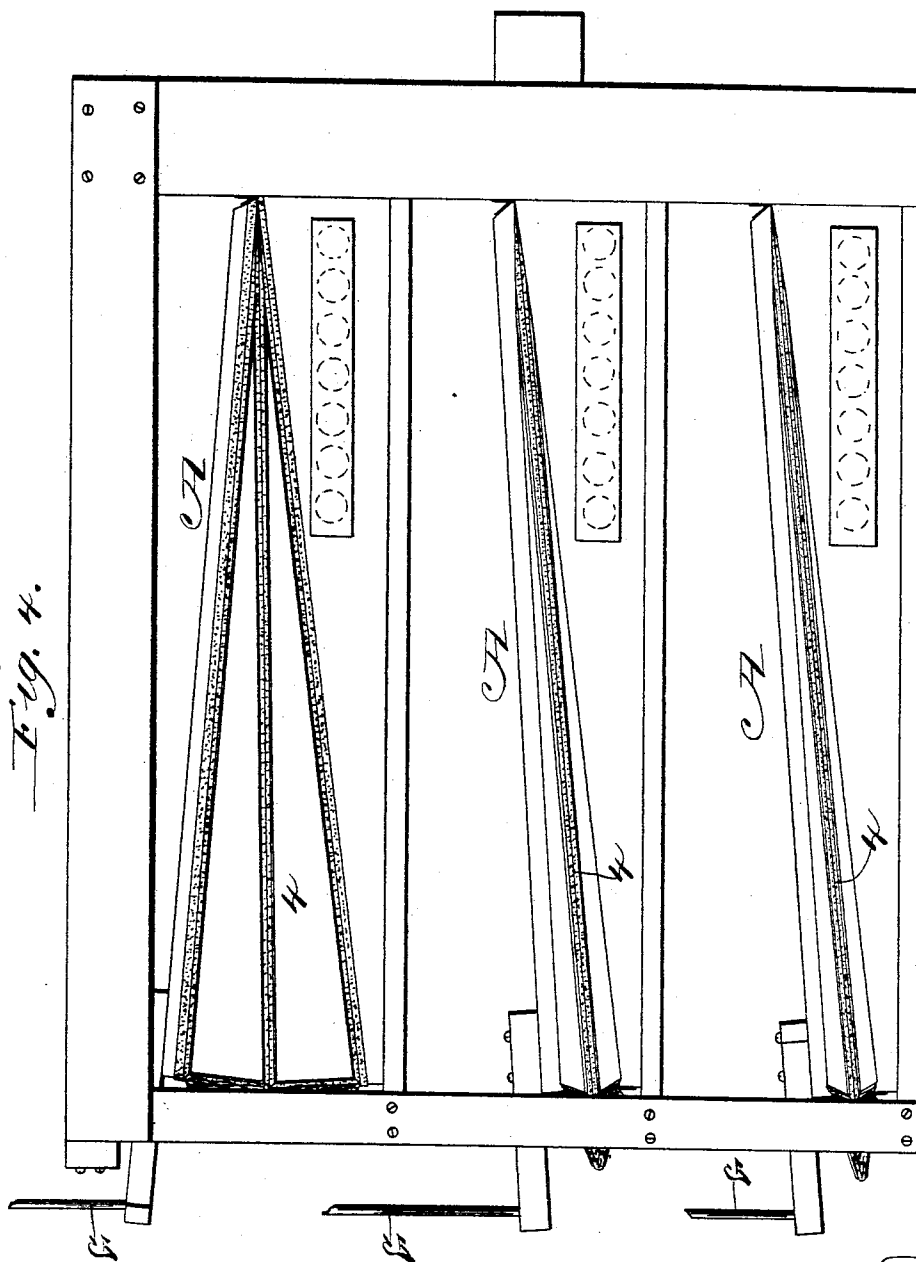
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Fig. 5.

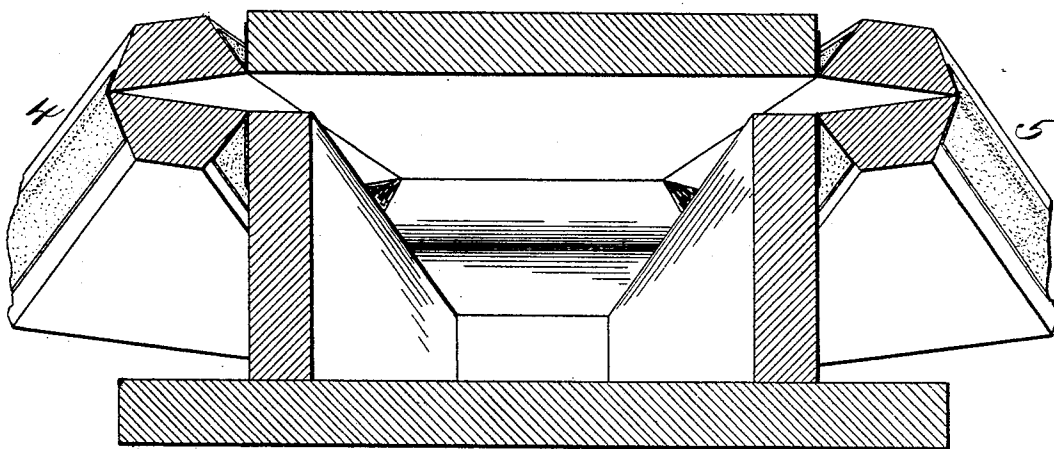
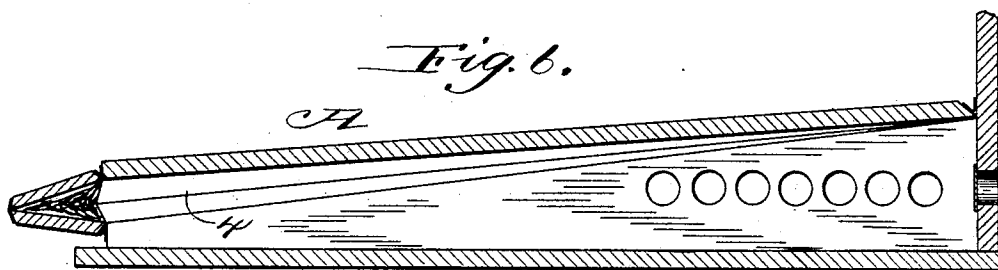


Fig. 6.



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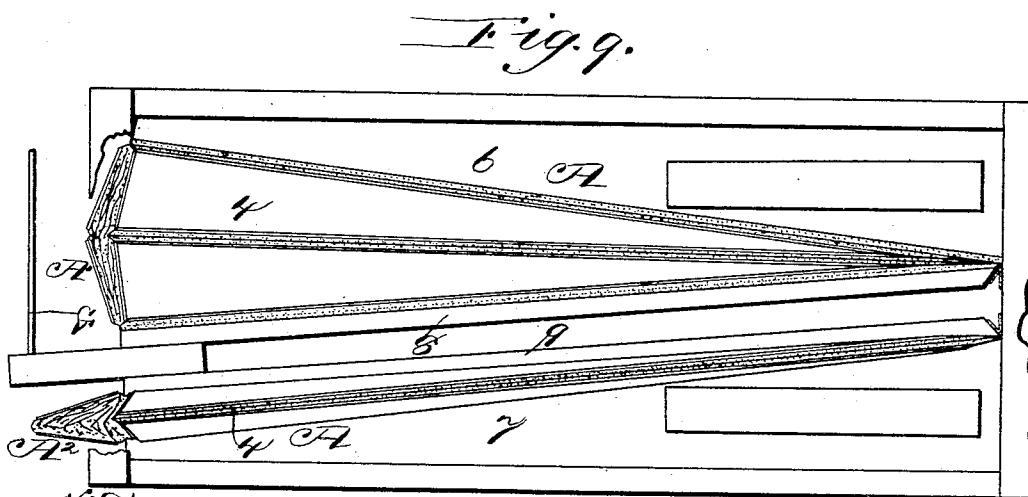
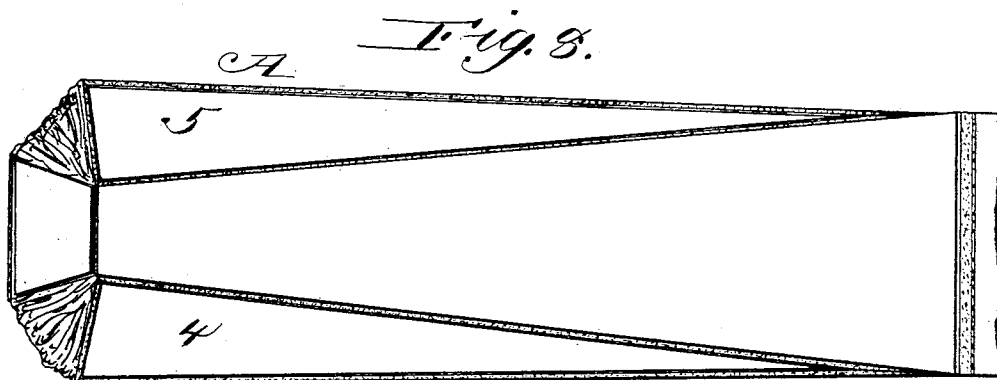
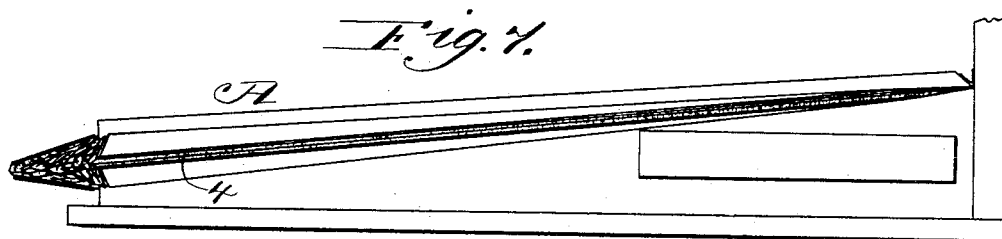
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UNITED STATES PATENT OFFICE.

JARVIS PELOUBET, OF CHICAGO, ILLINOIS, ASSIGNOR TO LYON & HEALY,
OF SAME PLACE.

FEEDER FOR ORGANS.

SPECIFICATION forming part of Letters Patent No. 496,952, dated May 9, 1893.

Application filed May 23, 1892. Serial No. 434,093. (No model.)

To all whom it may concern:

Be it known that I, JARVIS PELOUBET, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Feeders for Organs, of which the following is a specification.

My invention relates to feeders adapted for producing a steady blast or suction of wind and comprising a series of bellows connected with suitable reservoir bellows through the medium of suitably arranged valved ports or passages.

The objects of my invention are to provide simple, easy and steady working and generally efficient means for producing a steady supply of wind without lost motion; to construct the motor bellows so that atmospheric pressure may be used as an assistance instead of constituting a resistance to the opening of the suction bellows; and to provide a further improved construction whereby constant and easy action is attained and a large amount of work performed in a simple and efficient way.

In carrying out my invention I provide in connection with a set or series of bellows, a set of overhead vibratory arms provided with anti-friction rolls, and a revolving set of cams or eccentrics which sustain the anti-friction rolls so as to alternately lift and permit the fall of the arms which connect with the bellows by pendent hangers. The cams are in constant engagement with these rolls, so as to produce a steady and uniform movement and avoid lost motion. The cams are arranged progressively about a common axis, and hence may be said to be differently timed, in which way, the actions of the several bellows can be relatively timed so as to secure the best results. I also provide as a matter of further improvement, a suction bellows having its sides arranged to bulge or fold outwardly only when the bellows close. The act of opening the bellows while serving to unfold or straighten up its sides tends therefore in effect to draw its sides inwardly, and so to speak with the suction, in which way, the external pressure of the atmosphere in place of resisting the unfolding and straightening up of the bellows sides will assist such operation

and thereby render the opening of the bellows a comparatively easy matter.

In the accompanying drawings,—Figure 1 represents a feeder embodying my improved operating mechanism and also illustrating the bellows provided with sides which fold outwardly when the bellows close. Fig. 2 is a top plan view of the feeder. Fig. 3 shows on a larger scale a vertical section through one of the cams or eccentrics and movable hanger supports resting thereon. Fig. 4 is a side elevation of the set of suction bellows. Fig. 5 shows on a larger scale a section taken transversely through one of the suction bellows. Fig. 6 is a longitudinal section through one of said bellows. Fig. 7 represents one of the suction bellows in side elevation. Fig. 8 shows the same in top plan view. Fig. 9 represents in side elevation a couple of the "suction" bellows arranged together for alternate action.

The feeder comprises a series of bellows A which may be horizontal or vertical, arranged to connect with a chamber B (indicated in dotted lines in Fig. 1) through the medium of valved ports 1, which are also indicated in dotted lines in said figure. The chamber B is understood to connect with any ordinary or suitable reservoir bellows through the medium of a passage 2, indicated in dotted lines in Fig. 1, and as the construction and use of such bellows is well understood by those skilled in the art, the same is not herein shown. With reference to my improved mechanism for operating these bellows, I provide a set of revolving cams C, which are formed as wheels or disks and eccentrically secured upon a rotary shaft D. These cams or eccentrics are arranged above a set of bellows, and are positioned upon the shaft so that their centers shall be in different lines radiating from the shaft, thereby providing a set of cams or eccentrics arranged to revolve about a common axis and severally occupying positions which may be said to be progressively arranged with relation to one another. Upon the frame E or other suitable support, I pivotally support a set of independently vibratory arms or levers F, corresponding in number to the number of cams and arranged for

operation over the cams and bellows. Each vibratory arm carries an antifriction roll 3 which bears upon one of the cams, in which way by revolving the set of cams, the arms or
 5 levers will be caused to rise and fall successively or as I may describe it, the arms will act with relatively differential movements. These arms are respectively connected with one and another of the bellows by rods or hangers G,
 10 so as to operate the same. The shaft D is provided with a balance wheel H and can be operated by any suitably applied power. During operation each wheel or roll 3 bears continuously upon the circular perimeter of its
 15 allotted cam or eccentric and is maintained over the axis about which such cam or eccentric revolves. In this way I provide an exceedingly easy, steady and efficient action, and avoid dead centers.

20 With reference to my improvement in the construction of the suction bellows, it will be observed that each bellows has its flexible or jointed sides 4 and end 5 articulated and arranged so as to bulge or fold outwardly when
 25 the bellows closes, as best illustrated in Fig. 5. As a result of such arrangement, the act of opening or expanding the bellows while tending to unfold and bring its sides to a straightened condition, draws them inwardly
 30 in place of forcing them outwardly as is the case in suction bellows where the sides fold inwardly during the closing of the bellows. By my improved construction I obviously provide a much easier working bellows, since
 35 in opening the bellows and thereby creating a partial vacuum therein, the external atmospheric pressure assists in unfolding and straightening the sides and thereby proportionally relieves the power employed for opening
 40 the bellows. It will also be apparent, that the nearer the sides of the bellows approach a straightened out condition, the greater will be the assistance of the external pressure, and consequently the less the resistance the
 45 rising hanger and its movable arm or support will have to overcome in fully opening or expanding the suction bellows.

Each flexible or jointed side of the suction bellows is desirably composed of a couple of
 50 longitudinally arranged inflexible or rigid side portions which are hinged together and also hinged to the top and bottom boards or like portions of the bellows by suitable flexible connections, in which way full advantage of
 55 external atmospheric pressure may be secured during the opening of the bellows.

As a matter of further improvement I have illustrated in Fig. 9 a double suction bellows

involving in effect two suction bellows A' and A² arranged one above the other and
 60 adapted for alternate service. In the suction bellows illustrated in preceding figures, the bottom of the bellows is fixed, while the top thereof is arranged to vibrate so as to open
 55 and close the bellows. In Fig. 9 however, the top portion 6 of the upper one of the double bellows and the bottom portion 7 of the lower one of said double bellows are both fixed, while the oppositely arranged vibratory bottom 8 of the upper and vibratory top 9 of the
 70 lower bellows are brought together and connected with one of the hangers. By such arrangement, one of said bellows closes while the other opens, and in this way I obtain an easy working, and compact arrangement of
 75 bellows having a large capacity for work.

As a matter of course the terms top and bottom of the bellows as used in connection with the foregoing description of my improved construction of bellows, are relative, since if
 80 the bellows should be (so to speak) stood on end, the top and bottom boards might be termed sides.

The valves of the bellows hereinbefore described may be of ordinary or suitable construction, as will be understood by those skilled
 85 in the art.

The cam action herein described can be advantageously used for operating either suction or blast bellows for any desired purpose,
 90 and while I have herein illustrated the bellows to operate as a suction bellows in conjunction with an exhaust reservoir or bellows suitable for an organ, I do not limit myself to such use, but can apply said cam action to
 95 any desired feeder or device for producing wind.

What I claim as my invention is—

1. The combination with a feeder of a set of vibratory arms arranged above the same
 100 and provided with rolls, a set of revolving cams or eccentrics which sustain the rolls and thereby operate the vibratory arms, and pendent hangers connecting the vibratory arms with the feeder bellows, substantially as de-
 105 scribed.

2. A feeder comprising a "suction" bellows having its top and bottom board connected by articulated side portions arranged to fold outwardly only, substantially as and for the
 110 purpose described.

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Witnesses:

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