

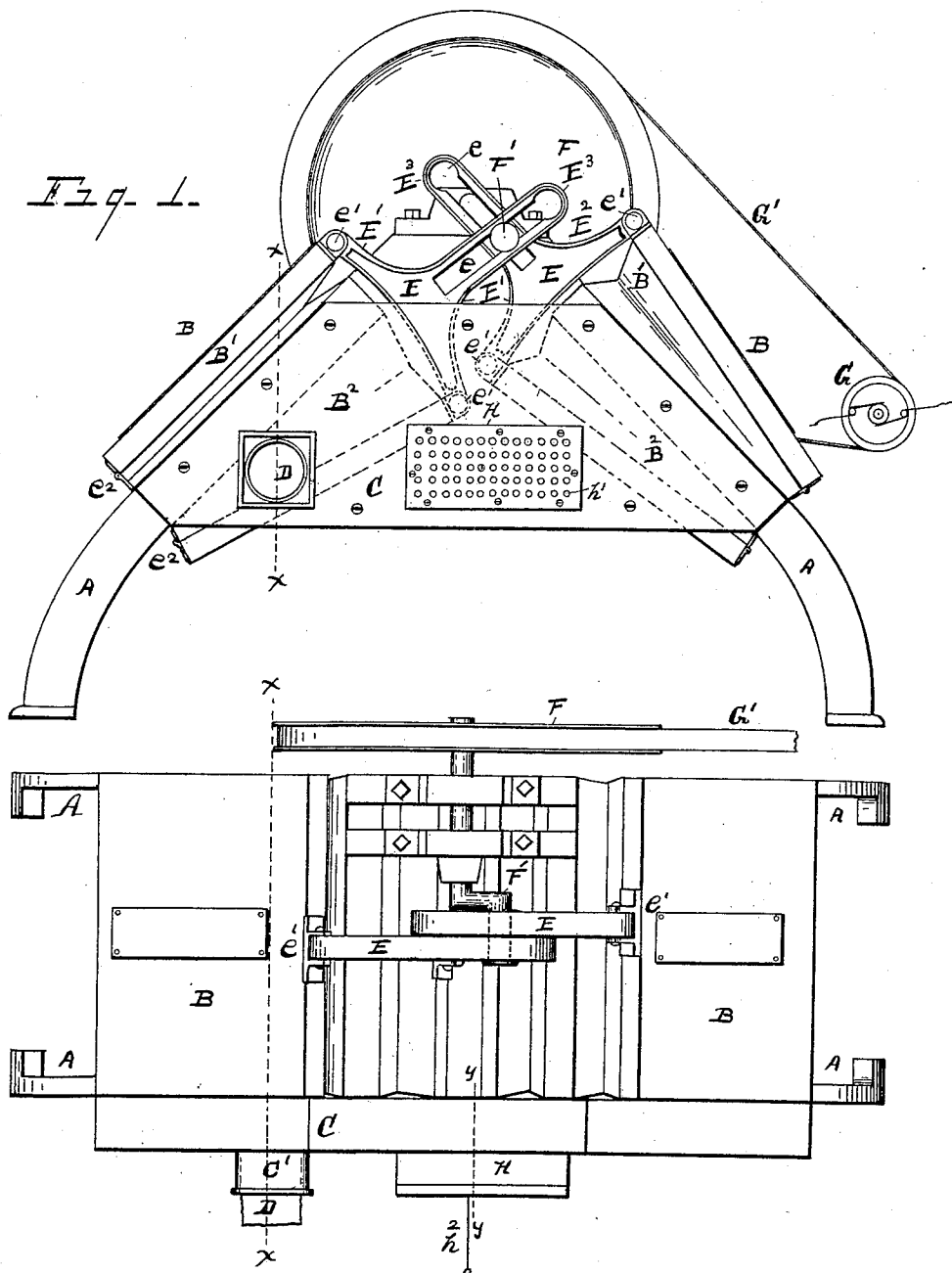
(No Model.)

2 Sheets—Sheet 1.

H. & J. SCHWESINGER.
PUMP FOR ORGANS.

No. 522,184.

Patented June 26, 1894.



Witnesses

O. B. Baenziger.
John F. Miller

Fig. 2.

Henry Schwesinger Inventors
John Schwesinger
By their Attorney
Newell S. Wright.

(No Model.)

2 Sheets—Sheet 2.

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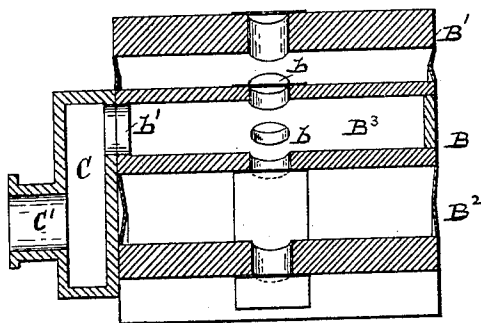


Fig. 3.

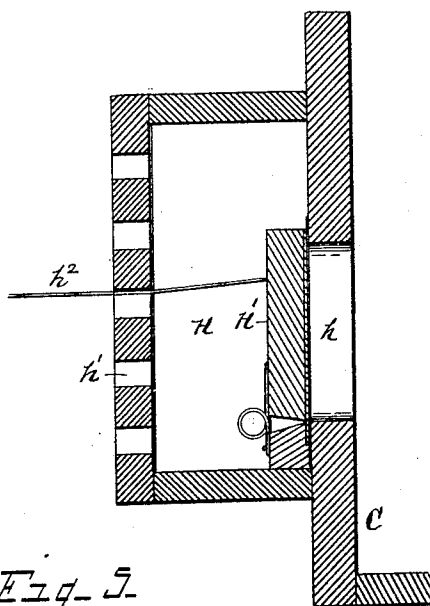


Fig. 5.

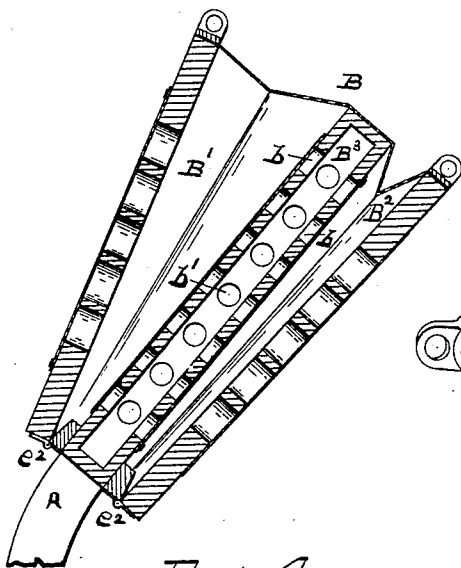


Fig. 4.

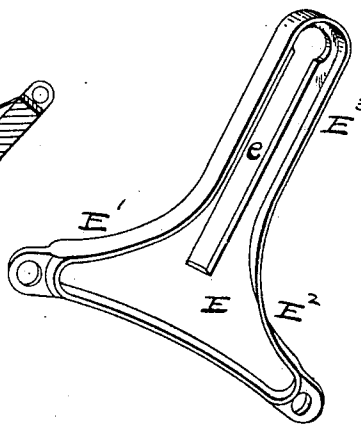


Fig. 6.

Witnesses

O. B. Baenziger.
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Henry Schwesinger, Inventors
John Schwesinger,
By their Attorney
Newell S. Wright.

UNITED STATES PATENT OFFICE.

HENRY SCHWESINGER AND JOHN SCHWESINGER, OF DETROIT, MICHIGAN.

PUMP FOR ORGANS.

SPECIFICATION forming part of Letters Patent No. 522,184, dated June 26, 1894.

Application filed February 20, 1893. Serial No. 463,020. (No model.)

To all whom it may concern:

Be it known that we, HENRY SCHWESINGER and JOHN SCHWESINGER, citizens of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Pumps for Organs, &c.; and we declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Our invention has for its object an improved pump, more especially adapted for pumping organs, æolians, and musical instruments of an analogous nature, whereby air may be pumped thereinto or exhausted therefrom, as may be desired, the invention being intended to provide such a device of superior simplicity, economy and efficiency.

Our invention, to these ends, consists of the construction, combination and arrangement of devices and appliances hereinafter specified and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is a plan view. Fig. 3 is a cross section on the line $x-x$ Figs. 1 and 2. Fig. 4 is a vertical section through one of the feeders. Fig. 5 is a vertical section on the line $y-y$, Fig. 2. Fig. 6 is a separate view of one of the arms connecting the bellows of the feeders to the crank of the driving pulley.

In the drawings the pump is shown arranged to exhaust the air from the organ.

We carry out our invention as follows:

In the drawings A represents a supporting frame of a suitable construction.

B B represent double acting, oscillating feeders, each feeder preferably consisting of a compound or double bellows B' and B², each communicating with an intermediate wind chest B³, as through communicating orifices "b."

C denotes a common wind trunk, into which the feeders B B communicate. To this end the wind chest B³ of each of said feeders leads into said wind trunk, as through ports "b'."

D is a pipe or duct to connect the wind trunk C with the musical instrument, not shown.

This pipe or duct communicates with said wind chest, as through a channel C'. The feeders B B are supported upon the frame A. The bellows B' and B² of the feeders, at their 55 expansible ends are united to an arm E, as shown. This arm is constructed with lateral extensions E' and E², and with a longitudinal extension E³.

F is a driving pulley provided with a crank F', with which crank the arms E E of the feeders B B are engaged. Each of said arms E E is constructed with an elongated slot, as shown at "e," into which the crank projects, the crank being held in engagement therein 65 in any proper manner. The pulley F may be driven by any desired power, as by an electric motor G, belted therewith by a belt G'.

H denotes an exhaust chamber communicating with the wind trunk C, as by an orifice 70 "h" controlled by a suitable valve H'. This exhaust chamber is constructed on its outer wall with a series of small air exit orifices "h," whereby the exit of the air is so regulated as to prevent noise in its escape. A 75 valve operating rod "h²" provides for the opening of the valve H' whenever desired. The bellows B' and B² of each of the feeders, have a jointed engagement with the extensions E' and E² of the arm E, as shown at 80 "e'." The movable wing of each of the bellows has also a hinged engagement at its lower end, as shown at "e²."

It will be obvious from the drawings, that on the downward stroke of the crank F', the 85 lower bellows B² of each of the feeders will be expanded, while the upper bellows B' of each of the feeders will be compressed, and vice versa. At the same time, as the crank performs its revolution, one of the feeders acts 90 in advance of the other so that a continuous pressure or suction of air is occasioned.

We have shown in the accompanying drawings but two feeders B B engaged upon the crank F', but we would definitely have it understood that any desired number of feeders 95 may in a corresponding manner be so arranged as to be actuated by said crank to give any required amount of bellows power.

It will be observed that when the bellows 100 is designed to be used to force air into the organ, instead of to exhaust air therefrom,

the valves of the bellows will be correspondingly changed.

What we claim as our invention is—

1. A pump for musical instruments having
5 in combination a rotatable crank, multiple
oscillating feeders arranged upon opposite
sides of the crank and connected therewith,
a common wind trunk with which said feed-
ers communicate, each of said feeders being
10 constructed with compound bellows having
an intermediate wind chest leading into said
wind trunk, and slotted arms E engaged with
said crank and jointly united with the mov-
able leaves of the corresponding feeders re-
15 spectively, substantially as set forth.
2. A pump for musical instruments having
in combination, a supporting frame, multiple
oscillating feeders engaged therewith, a ro-
tatable crank connected with said feeders, a
20 common wind trunk with which the feeders
communicate, each of said feeders being con-
structed with compound bellows and an in-
termediate communicating air chamber, the
movable leaf of each bellows having a hinged
25 engagement with the intermediate air cham-
ber at its base, and arms E engaged with said

crank and having a jointed connection with
the opposite end of each of the movable leaves
of the feeders, said feeders the one acting in
advance of the other, substantially as set forth. 30

3. The combination of multiple oscillatory
feeders, a wind trunk C communicating with
said feeders, and an exhaust chamber H com-
municating with said wind trunk, said cham-
ber provided with a valve controlling its com- 35
munication with the wind trunk and con-
structed with orifices "h'," substantially as
described.

4. The combination with a rotatable crank,
of a feeder constructed of bellows B', B², and 40
an arm E constructed with lateral extensions
E', E² connected with said bellows respect-
ively, and with a longitudinal slotted arm E³
connected with said crank, substantially as
described. 45

In testimony whereof we sign this specifica-
tion in the presence of two witnesses.

HENRY SCHWESINGER.
JOHN SCHWESINGER.

Witnesses:

CHAS. F. SCHWANKROSKY,
N. S. WRIGHT.