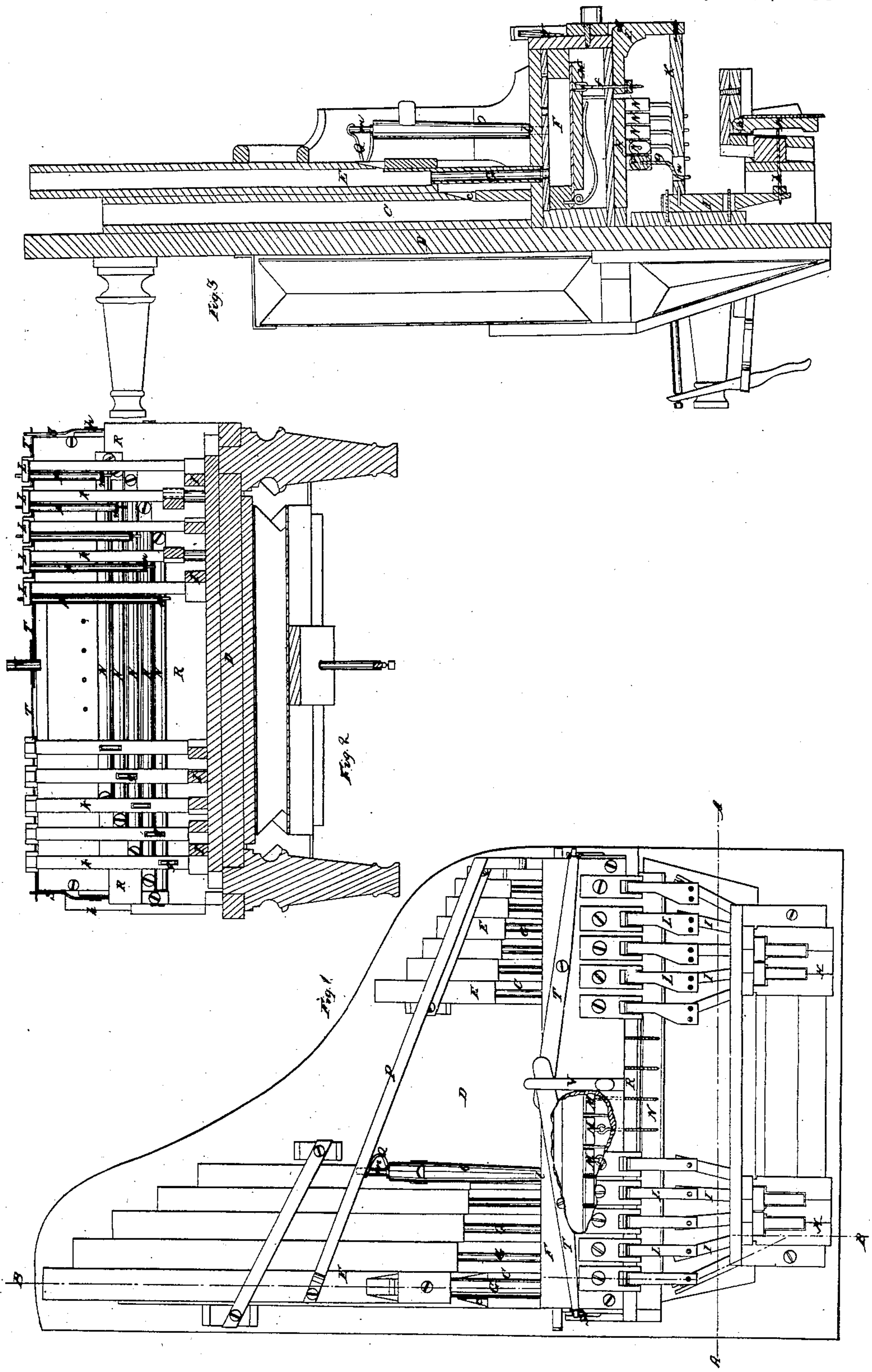


T. Sands,

Pipe Organ.

N^o 14,992.

Patented May 27, 1856.



UNITED STATES PATENT OFFICE.

THOMAS SANDS, OF CHELSEA, MASSACHUSETTS, ASSIGNOR TO THOMAS SANDS AND
JNO. P. LINDSAY.

PARLOR-ORGAN.

Specification of Letters Patent No. 14,992, dated May 27, 1856.

To all whom it may concern:

Be it known that I, THOS. SANDS, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented certain new
5 and useful Improvements in Parlor-Organs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 is a plan of an instrument with
10 my improvements attached; Fig. 2, a section upon the line A, A, of Fig. 1; Fig. 3, a section upon the line B, B, of Fig. 1.

It has long been a desideratum to construct a pipe organ of a size and shape that
15 would adapt it for use in the parlors of private dwellings, but thus far without success, owing to the great length of the keys and of the action, as well as of the organ pipes, which so enlarged the instrument as
20 to unfit it for introduction into private houses.

My invention has for its object the removal of these difficulties and consists in certain details of construction and in a
25 peculiar arrangement of the parts, which I will now proceed to describe.

The first part of my invention whereby the great height of the instrument is avoided, consists in such an arrangement of the
30 pipes with respect to each other that they may be placed in a horizontal position one above the other, without having their mouths covered by those immediately over them, whereby I am enabled to inclose the
35 whole within a case not larger than that of an ordinary grand piano.

In the accompanying drawings a portion of the case is removed to show the parts within. The lower tier of pipes C, is placed
40 directly upon the bed of the instrument D. These pipes have their mouth pieces at *c*. Above these is placed another tier E, which are removed so far back as to leave the mouth pieces of those beneath them, entirely unobstructed. The pipes E, communi-
45 cate with the wind chest F, by means of conductors G. A third and fourth tier of pipes may be placed above the pipes E, care being taken as before to leave the mouth
50 pieces of each tier unobstructed by the pipes above them, and to connect them all by conductors of sufficient length, with the wind chest. The requisite number of pipes may
55 thus be arranged within a very limited space, and without increasing the height of

the instrument above that of an ordinary piano.

I will now describe the peculiar arrangement and construction of the action and of the keys, whereby I am enabled greatly to
60 reduce the length of the instrument. H, are the keys which in lieu of extending into the body of the instrument, as in the organs heretofore constructed, are pivoted at *a*,
(Fig. 3,) and rest upon rods *b*, which rise 65 from the levers I. Upon the opposite end of these levers rest the stickers K. As the key is depressed the jacks L, are vibrated around their pivots *d*, and the valves M, connected thereto by the wires *f*, are opened. 70
I am thus enabled to place the wind chest together with all the parts necessary to give motion to the valves immediately back of the key board. With this compact arrangement of the action, it would not be possible 75
were all the levers I, arranged side by side, to introduce the requisite number of notes for a full key board; to enable me to accomplish this, I have placed these levers
80 in two tiers one above the other, by which arrangement I am enabled to make use of a full key board without unnecessarily increasing the width or length of the instrument.

I will now describe the coupler employed 85 for the purpose of connecting each note with its octave above. N, are the coupler bars which are pivoted at their extremities to a frame or carriage R, which is moved
90 out, or in, toward, or from the stickers K, in the following manner. S, are levers pivoted at *h*, and having their lower ends secured to the sliding carriage R. Through the upper ends of these levers pass the ship-
95 per levers T, which are pivoted to the wind chest, and are vibrated around their centers by the sliding block V. From one end of each of the coupler bars N, project the bent
100 wires *g*, which pass through slots in the stickers K, (Figs. 2 and 3.) From the other end of the coupler bars N, project the rods *n*, which carry auxiliary stickers *p*, that are connected with the jacks L, of the
105 octave notes. These jacks however when operated by their own keys, are allowed to rise without moving the auxiliary stickers *p*.

When the coupler bars are drawn back as seen Figs. 1, and 3, the lower portion of the wires *g*, rest upon the bottom of the
110 slots in the stickers, and as the latter are

raised by the depression of the keys, the bars N, are vibrated and the octave of the note struck is also sounded. When the coupler bars are thrown forward by the connections already explained, the stickers in rising do not touch the wires *g*, and the octave is not sounded.

Where metal pipes are used as for the flute and other stops, it is necessary that they be so connected with the instrument, that they may be at any moment removed and replaced for tuning, cleansing, or repairs.

Where the pipes stand vertically there is no difficulty, as the weight of the pipes is sufficient to keep them upon their seats, and I have adopted the following means for the purpose when these pipes are placed horizontally. O, is a metallic pipe, the open end of which rests against the wind chest at 7. To the other ends of the pipe is secured the rod *m*, which enters a hole in the bar P. Q, is a spring which presses the pipe against its seat, when necessary to remove the pipe, it is drawn back from its seat, the spring Q being compressed and the rod *m*, entering the hole in the bar, P.

What I claim as my invention and desire to secure by Letters Patent is,—

1. Arranging the pipes horizontally in

compact tiers, one above the other, when each succeeding tier is placed at a greater distance from the wind chest than the one below it, for the accommodation of the mouths of the pipes, all the pipes except those of the lower tier being connected with the wind chest by means of the conductors G as set forth.

2. I claim the peculiar combination and arrangement of the action herein described, with the short keys H, that is to say the combination of the keys H, the levers I, the stickers K, and the jacks L, operating in the manner, and for the purpose substantially as herein described.

3. I claim the coupler rods N, with their bent wires *g*, in combination with the stickers K, and the auxiliary stickers *p*, for the purpose of coupling the notes with their octaves as set forth.

4. I claim the method herein described of holding the metallic pipes in place by means of the bar P, the rod *m*, and the spring Q, operating in the manner herein described.

THOS. SANDS.

Witnesses:

D. W. NESSER,
SAM. COOPER.