

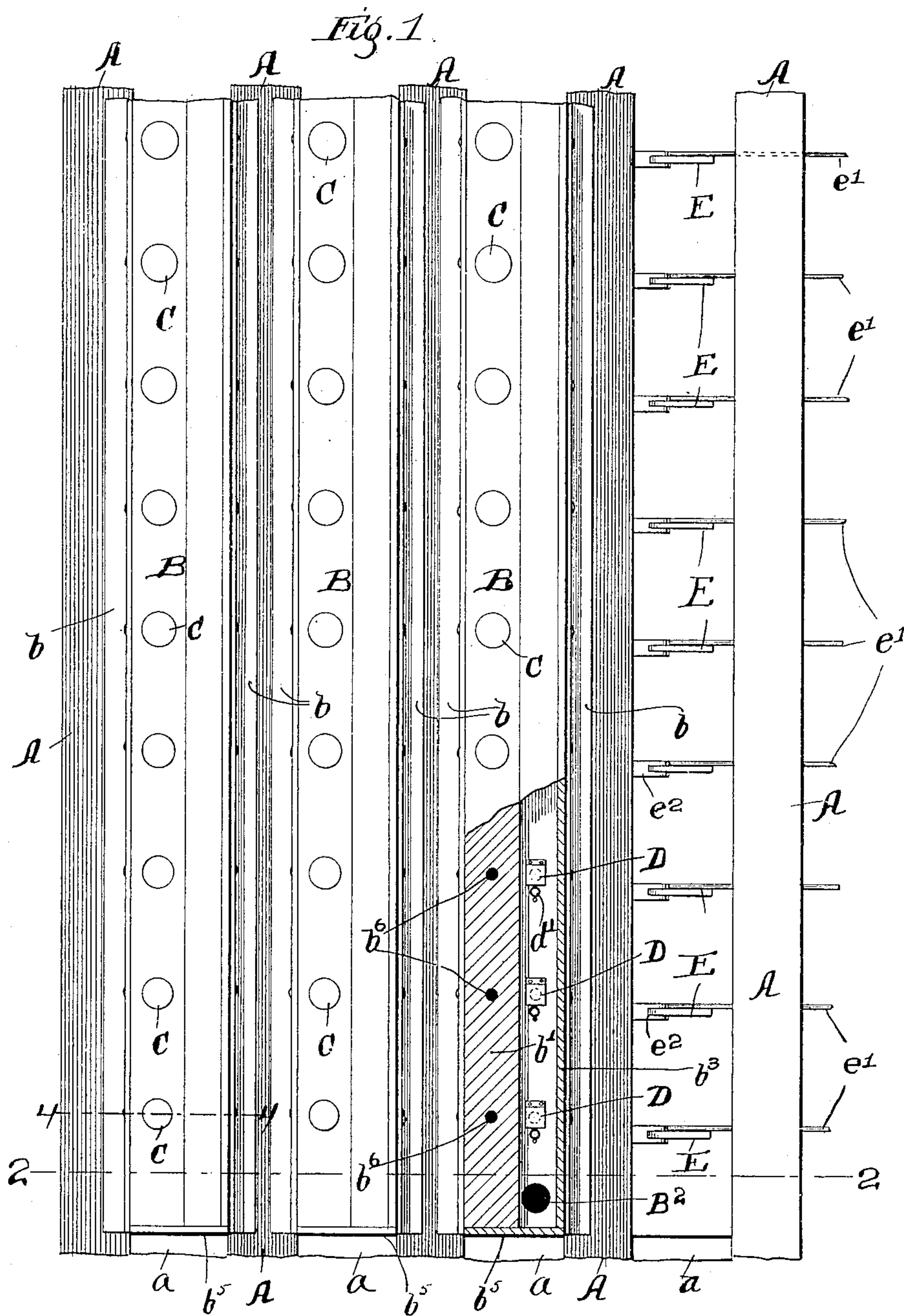
(No Model.)

2 Sheets—Sheet 1.

V. ANDERSON.  
ORGAN.

No. 598,311.

Patented Feb. 1, 1898.



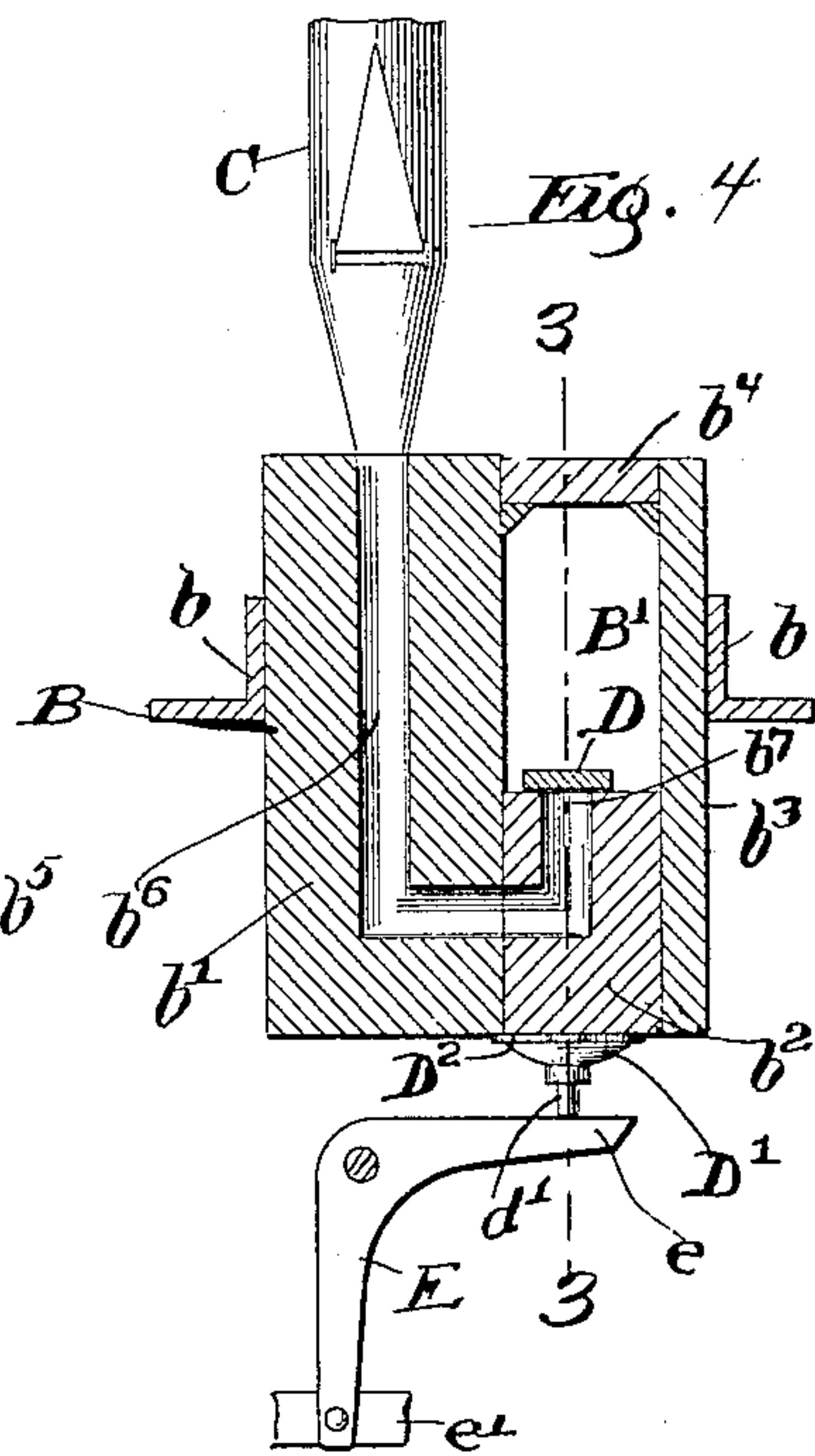
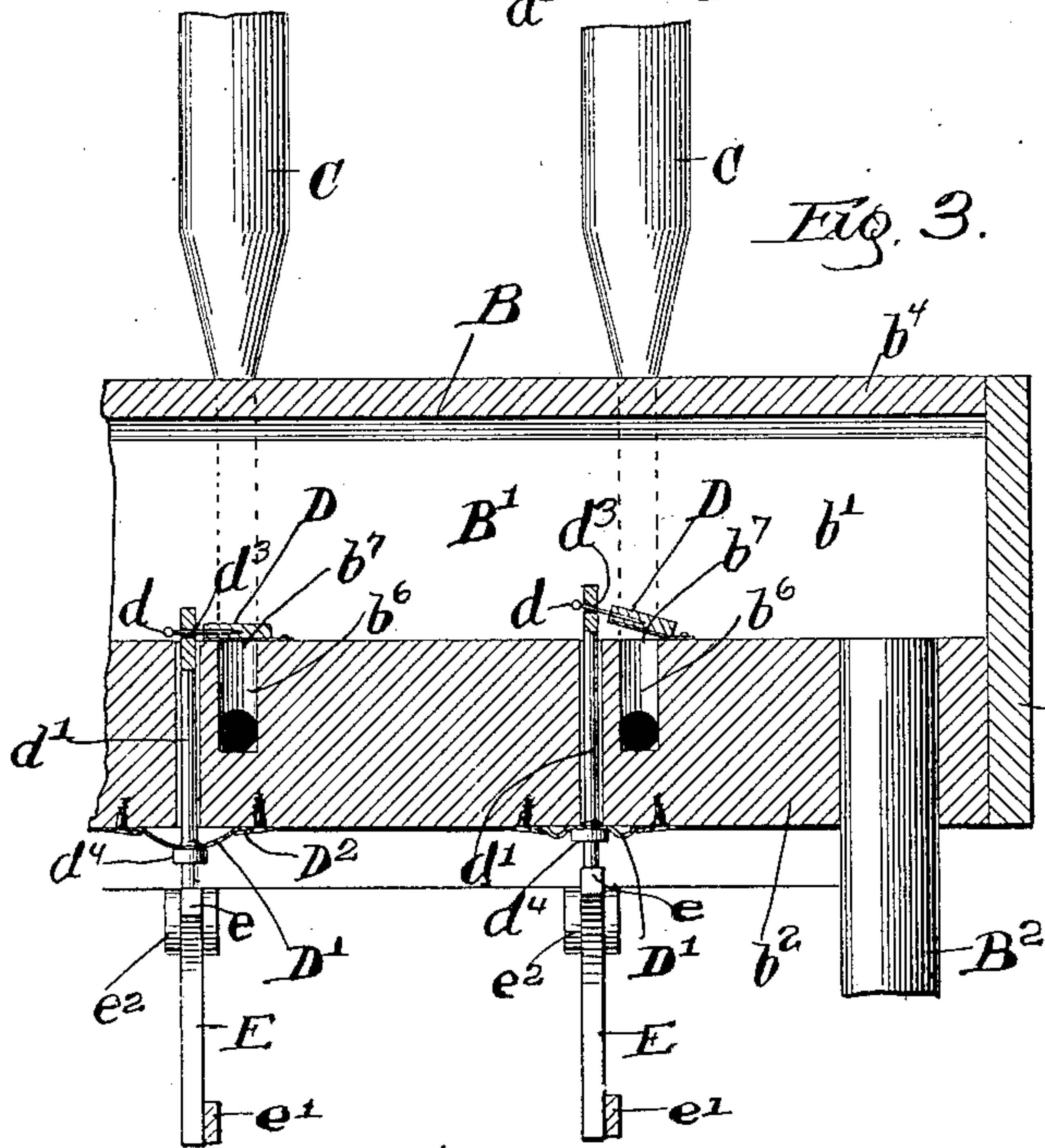
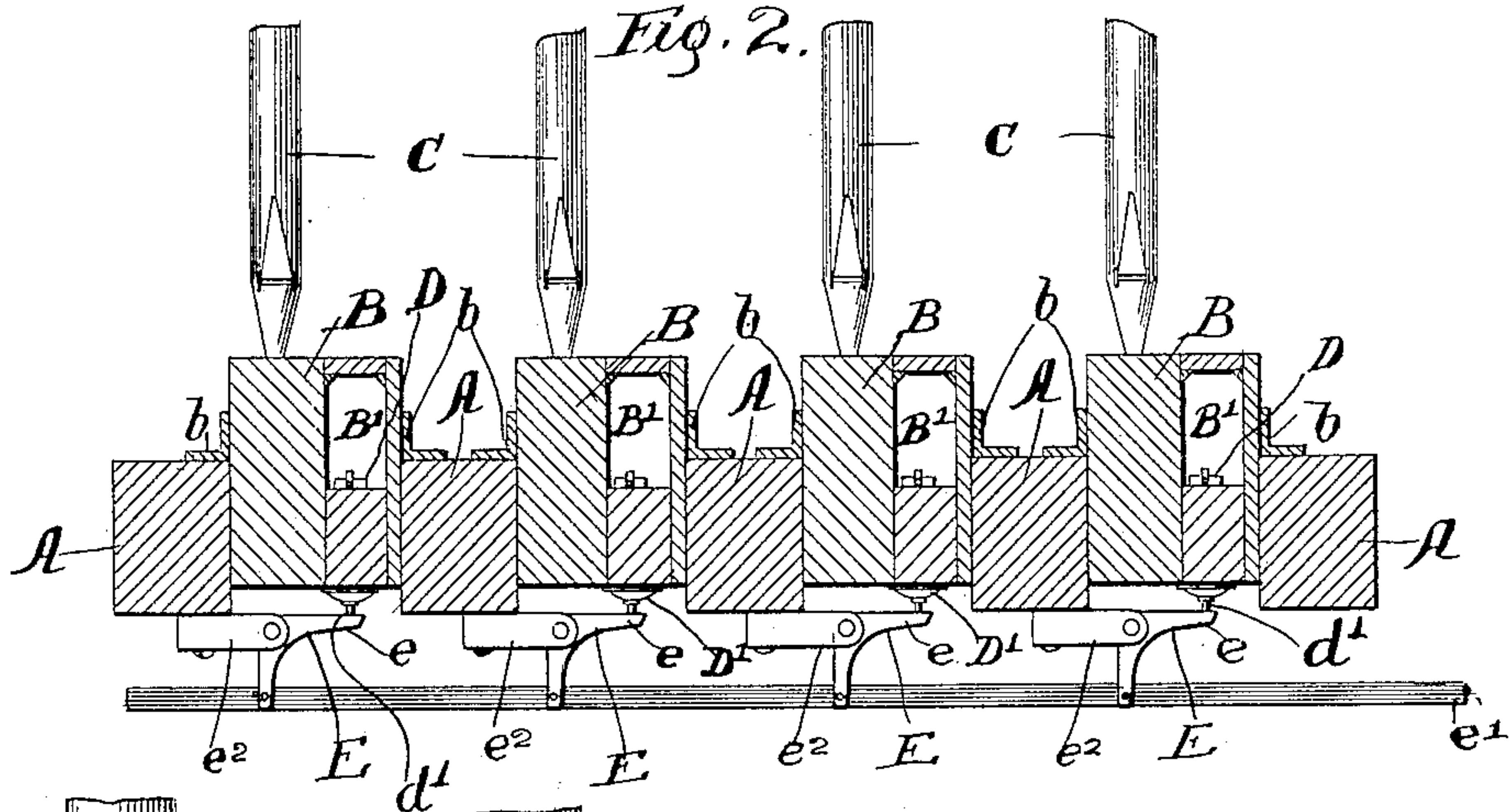
Witnesses:  
Chas. O. Shurway  
R. O. Bailey

Inventor:  
Victor Anderson  
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Attys

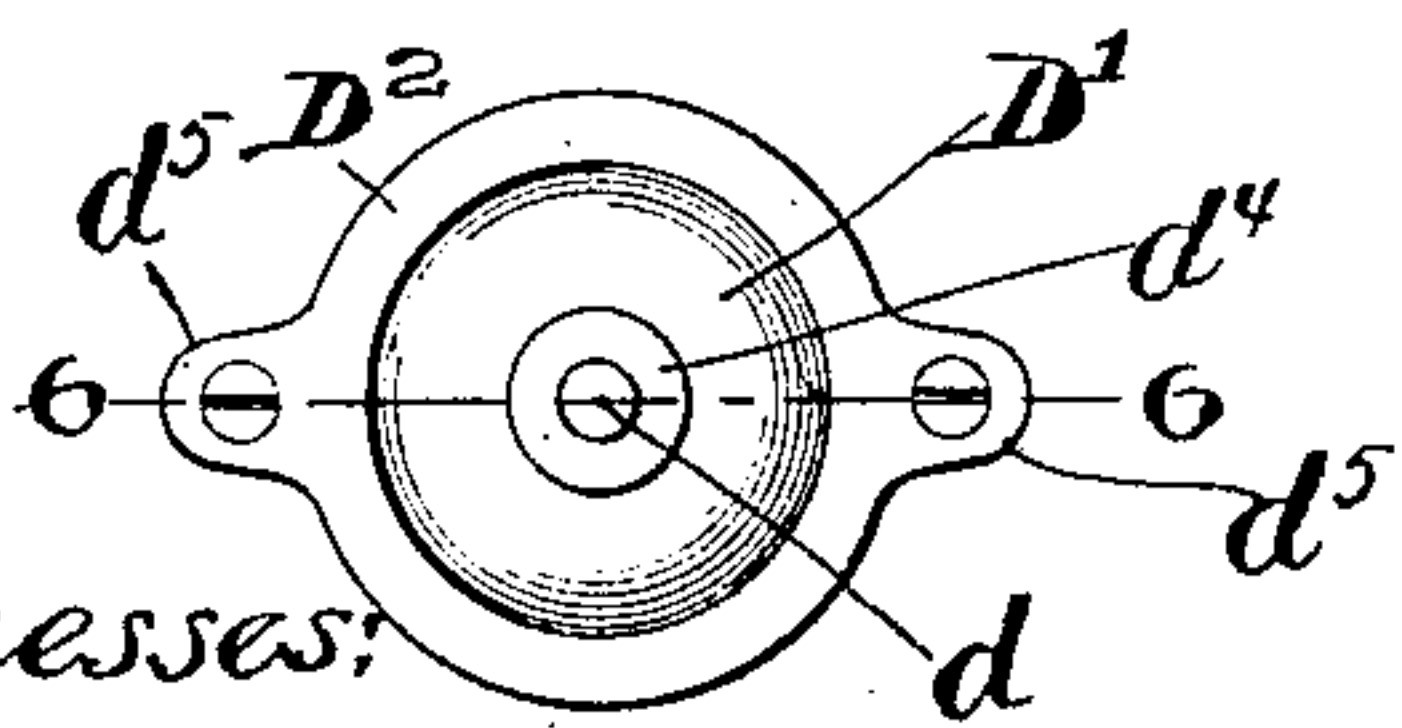
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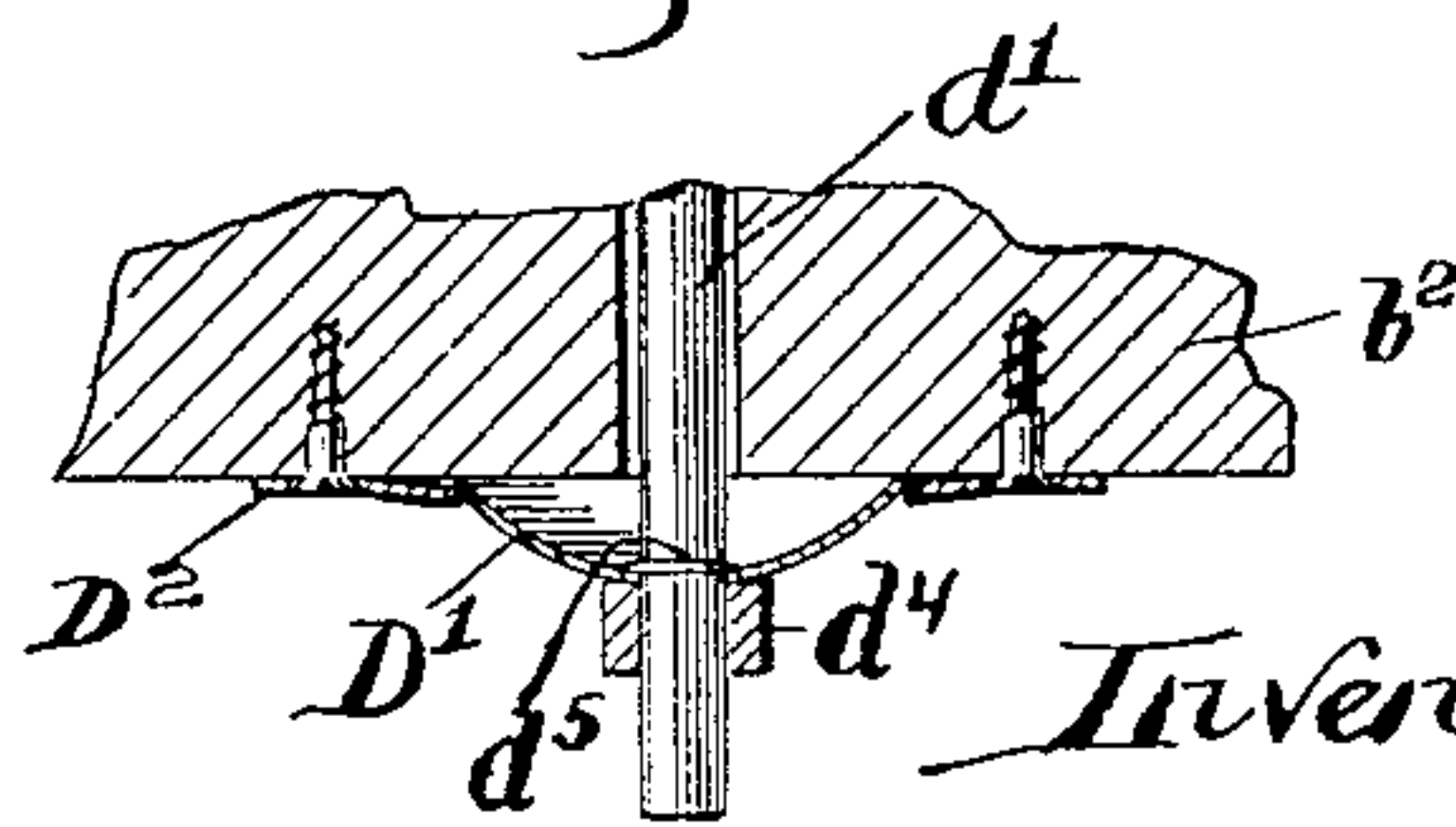


*Fig. 5.*



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*Fig. 6.*



Inventor:  
Victor Anderson  
by  
Wilestrum & Co.  
Attys



# UNITED STATES PATENT OFFICE.

VICTOR ANDERSON, OF CHICAGO, ILLINOIS.

## ORGAN.

SPECIFICATION forming part of Letters Patent No. 598,311, dated February 1, 1898.

Application filed April 29, 1897. Serial No. 634,328. (No model.)

*To all whom it may concern:*

Be it known that I, VICTOR ANDERSON, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Organs, of which the following is a specification.

My invention relates to certain improvements in organs, and more particularly to that class of organs in which a great number of pipes is used. These pipes are ordinarily connected with a wind-chest which receives a supply of compressed air from a bellows or other source, and when they get out of order it is an exceedingly difficult operation to repair the injury. To obviate this difficulty, I have devised an organ in which the wind-chest for each series of pipes is separate and easily removable, so that when an injury in a certain part is found that wind-chest, together with its series of wind-pipes, may be removed for repair without disturbing the others.

The invention is fully described in this specification and clearly illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my preferred construction. Fig. 2 is a vertical cross-section in line 2 2, Fig. 1. Fig. 3 is a longitudinal section of one of the wind-chests upon an enlarged scale, the plane of section being 3 3, Fig. 4. Fig. 4 is an enlarged cross-section of one of the wind-chests, the plane of section being 4 4, Fig. 1. Fig. 5 is an under plan of a diaphragm used in this organ; and Fig. 6 is a section in line 6 6, Fig. 5.

Referring to the drawings, and especially to Figs. 1 and 2, a series of longitudinally-extending rails or beams are seen at A and are adapted to support the wind-chests B. As shown, these wind-chests rest between the beams A and are provided on either side with angle-irons *b*, by means of which they are seated upon the beams. At or near the ends of the beams are cross-pieces *a*, adapted to serve as guides or stops to retain the wind-chests in place and thereby insure the perfect operation of the different parts.

Inasmuch as all of the wind-chests are alike I shall proceed to describe one of them, such description evidently pertaining to them all.

The framework of the wind-chest is com-

posed of a comparatively wide strip *b'*, (see Figs. 3 and 4,) a narrower strip *b<sup>2</sup>*, secured upon the lower side of the strip *b'*, and a comparatively thin strip *b<sup>3</sup>*, secured upon the outside of the strip *b<sup>2</sup>* and connected with the upper edge of the strip *b'* by a strip *b<sup>4</sup>*. These strips are glued or otherwise securely fastened together and form the walls of the chamber *B'*, extending the entire length thereof. End pieces *b<sup>5</sup>* are secured at the ends to completely inclose the chamber. A pipe *B<sup>2</sup>* (see Fig. 3) connects the wind-chest with the bellows of the organ, which may be of any of the well-known kinds used in organs of this class and adapted to supply the wind-chest with a supply of air.

The wind-chest is connected with a series of pipes C, in which the different notes are produced, these pipes being arranged along the top of the strip *b'* and opening into ducts *b<sup>6</sup>*, formed in said strip. (See Fig. 4.) These ducts extend into the strip *b<sup>2</sup>* and open out into the chamber *B'*, their orifices *b<sup>7</sup>* being closed by valves D.

In organs of this class the pipes are so arranged and operated that several of the same pitch are put in communication with the compressed air simultaneously by the operation of one key or pedal. In the device here shown this is accomplished by arranging the wind-chests side by side, placing pipes which have the same pitch in parallel lines transversely of the wind-chests, and connecting their valves in such a manner as to be operated simultaneously. The valves D above referred to are provided for each duct which leads to these pipes and are hinged to the strip *b<sup>2</sup>* in any suitable manner. They are operated by means of stems *d'*, extending through openings in the strip *b<sup>2</sup>*, the valves being provided with pins *d*, resting in eyes *d<sup>3</sup>* in the stems. Near the bottom the stems are secured to diaphragms D' by means of collars *d<sup>4</sup>* and shoulders *d<sup>5</sup>* upon the stems, (see Fig. 6,) the diaphragms being held firmly between the shoulders and collars. Rings D<sup>2</sup> are provided for clamping the diaphragms to the strip *b<sup>2</sup>*, said rings having ears *d<sup>5</sup>*, through which screws are passed to secure the rings to the strip. Inasmuch as the wind-chest when in use is always full of air which is free to circulate around the stems *d'* and press upon the dia-



phragm the valves are automatically kept closed except when opened by the operator. I have provided bell-crank levers E to open the valves, they being pivoted upon brackets  
 5  $e^2$ , secured to the beams A. The arms  $e$  of these bell-cranks rest against the lower ends of the stems  $d'$ , the other arms in each transverse series being connected by a bar or rod  $e'$ , extending to the key-operating mechanism.  
 10 As shown in Fig. 1, one of these rods is provided for each transverse series of valve-stems, each rod working independently of the other. By the use of the stops  $a$  the wind-chests may be put in the proper position, so  
 15 that the stems  $d'$  will come immediately above the bell-crank levers E, which is necessary to the proper working of the organ.

From the above it will be seen that when an accident happens to any of the wind-chests,  
 20 pipes, or other working parts the wind-chest at that point may be easily removed and the injury repaired.

I claim as new and desire to secure by Letters Patent—

25 1. In an organ, the combination with the removable wind-chest, B, having the air-ducts,  $b^6$ , opening at one end into suitable pipes, C, of valves, D, having the pins,  $d$ , the valve-

stems,  $d'$ , connected with said pins, the diaphragm, D', connected to the stems near their  
 30 lower ends, the bell-crank levers, E, and rods,  $e'$ ; substantially as described.

2. The combination with the beams, A, of the wind-chests, B, having the pipes, C, and connected with suitable bellows, and the an-  
 35 gle-irons,  $b$ , secured to the wind-chests and adapted to rest upon the beams; substantially as described.

3. In an organ, the combination with a removable wind-chest connected with a suitable  
 40 bellows and provided with a series of pipes, C, of the air-ducts,  $b^6$ , the valves, D, the stems,  $d'$ , connected with said valves, and the diaphragms D', adapted to be pressed outward  
 45 by the air within the wind-chest, said diaphragms being suitably connected to the valve-stems; substantially as described.

In witness whereof I have hereunto set my hand, at Chicago, in the county of Cook and State of Illinois, this 24th day of April, A. D. 50  
 1897.

VICTOR ANDERSON.

Witnesses:

CHAS. O. SHERVEY,  
 R. O. BAILEY.