

(No Model.)

I. M. FURBISH.  
Mechanical Musical Instrument.

No. 233,147.

Patented Oct. 12, 1880.

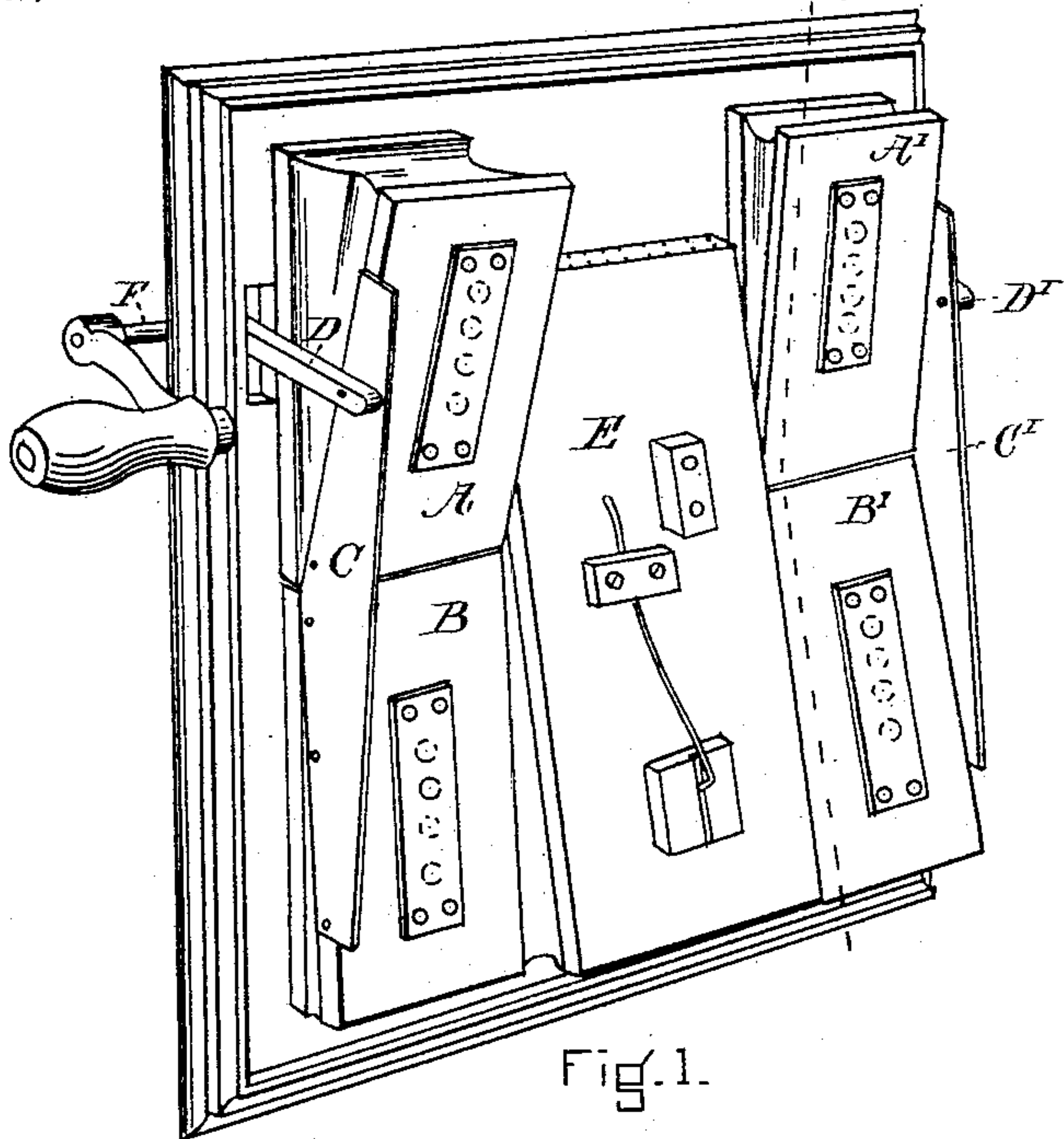


Fig. 1.

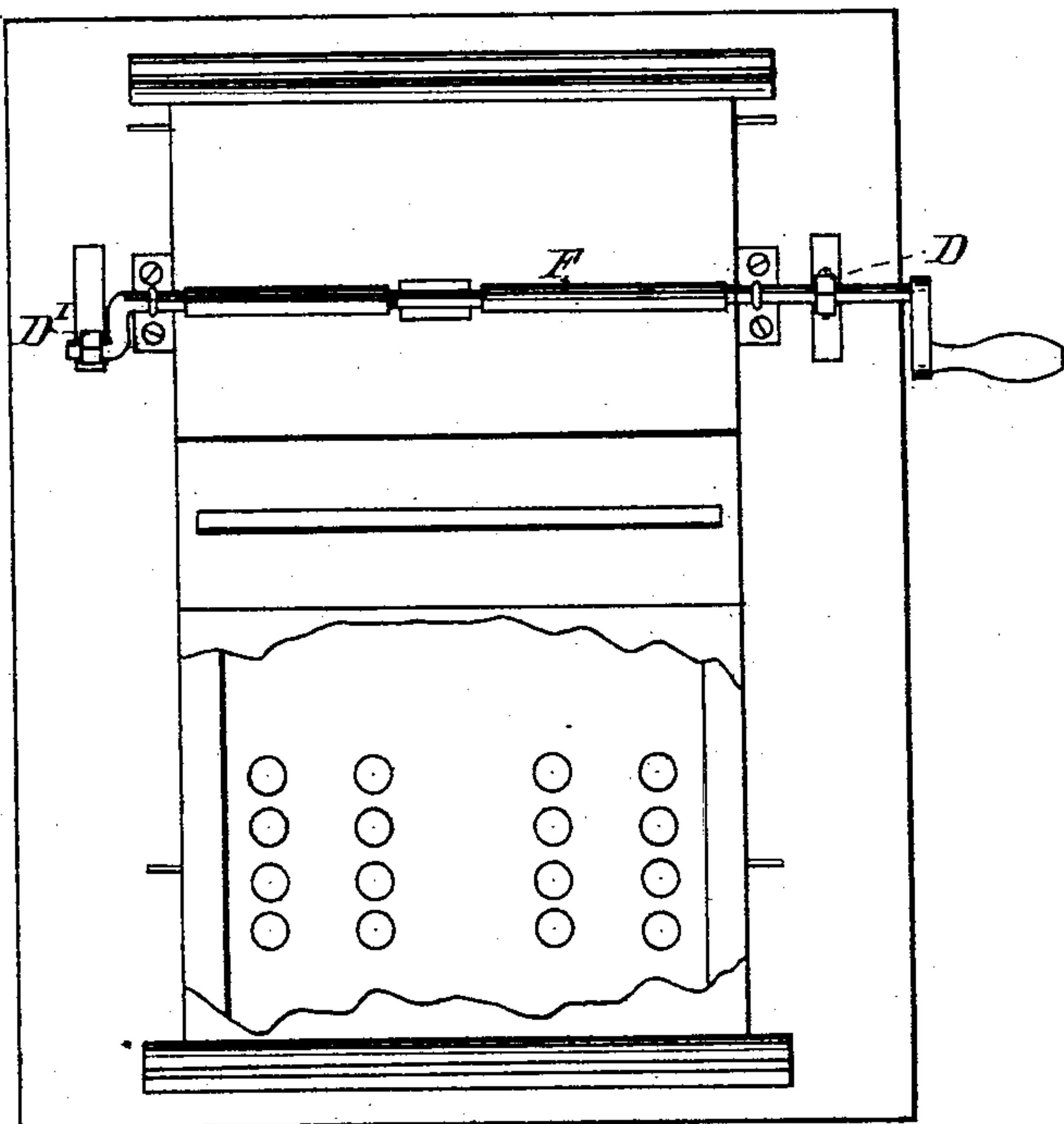


Fig. 2.

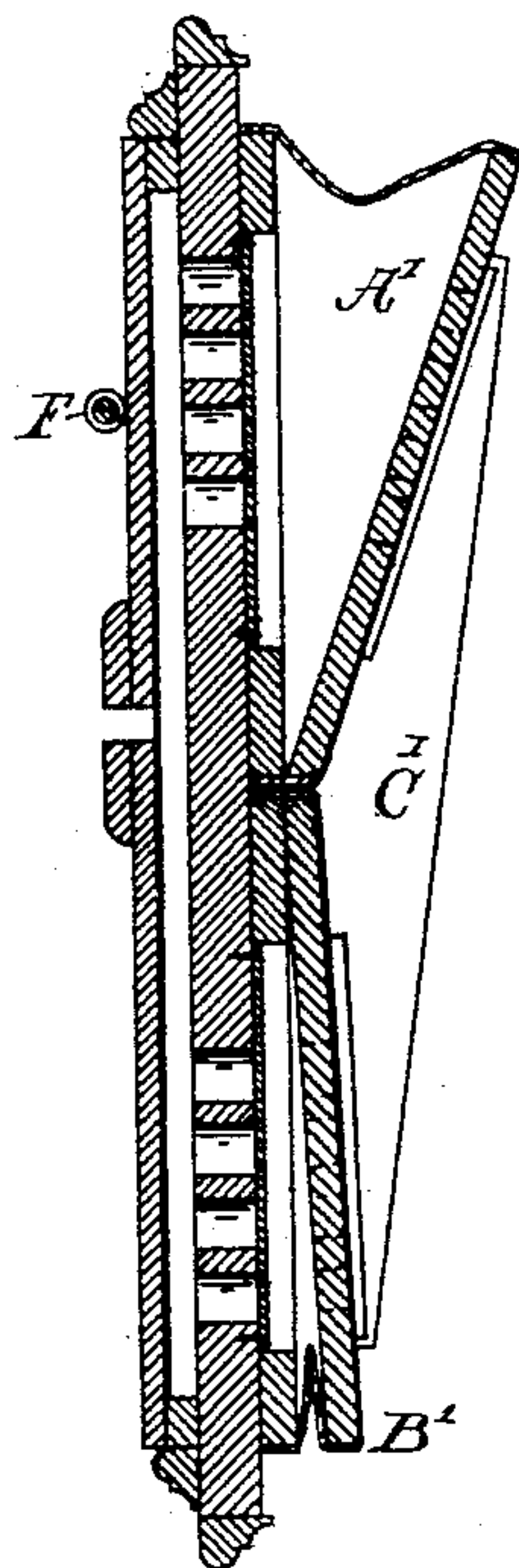


Fig. 3.

WITNESSES

*Wm. E. Robinson*  
*Mr. E. C. Ellis*

INVENTOR

*I. M. Furbish*  
*per Wm. B. H. Dowse*  
*attorney.*



# UNITED STATES PATENT OFFICE.

ISAIAH M. FURBISH, OF AUGUSTA, MAINE, ASSIGNOR TO WILLIAM H. JOHNSON, OF MELROSE, MASSACHUSETTS.

## MECHANICAL MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 233,147, dated October 12, 1880.

Application filed May 27, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, ISAIAH M. FURBISH, of Augusta, in the county of Kennebec and State of Maine, have invented a new and useful Improvement in Organettes or Mechanical Musical Instruments, of which the following is a specification.

The invention relates to the relative position of the wind-moving bellows of the above class of musical instruments to each other and means for working the same.

Heretofore the small or wind-moving bellows have been arranged side by side at one end of the organette, and have been operated by a rotary shaft having crank-bends thereon and links connecting with the bellows, the rotary shaft being connected with the driving-shaft by pitman-rods at either end.

The object of my invention is to do away with the rotary shaft and links connecting the same with the wind-moving bellows, which are liable to get out of order; and, further, to arrange the wind-moving bellows so as to work by pitman-rods connected directly with the driving-shaft, and to increase the number of the wind-moving bellows without occupying any more space than in the old arrangement, and with a corresponding increase in power.

The invention consists in the arrangement of the wind-moving bellows by placing a pair of them upon each side of the large bellows or reservoir, so that the hinges of each pair adjoin each other, the reservoir being between the pairs and all running lengthwise of the instrument. The bellows of each pair are connected together by a rigid brace, so that when one of the bellows is depressed the other is elevated.

It also consists in connecting the pitman-rods on each end of the driving-shaft directly with the rigid brace, near its end, instead of to the rotary shaft, and of placing the pitman-rods on the inside of the casing of the instrument, thereby greatly improving the outward beauty of it.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a perspective view of the bottom of an organette, showing my arrangement of the wind-moving bellows and means for working the same. Fig. 2 is a plan of the top of the wind-chest of an organette, showing the driving-shaft. Fig. 3 is a side elevation of wind-moving bellows and rigid brace.

In Fig. 1, E represents the reservoir; A B and A' B', the two pairs of wind-moving bellows arranged on each side of the reservoir; C and C', the rigid braces connecting the bellows A B and A' B', respectively. D and D' represent the pitman-rods, which are pivoted directly to the rigid brace C and C'.

In Fig. 2, F represents the driving-shaft.

The operation of the device is as follows: When the power applied draws the pitman-rod D up it closes the bellows A and opens the bellows B, and at the same time the pitman-rod D' acts to depress and elevate bellows A' and B', but at a slightly different interval of time, by reason of the difference of attachment of the pitman-rods to the driving-shaft, the crank-bends of the driving-shaft to which the pitman-rods are connected being at right angles to each other.

I am aware that the Patent No. 197,048 granted to E. P. Needham, November 13, 1877, describes a peculiar construction of automatic musical instruments and the means to operate the bellows in the same, consisting of a crank attached to the main shaft and a toggle connecting the crank and bellows; but as my invention relates to organettes, and as I attach the main shaft by a pitman-rod directly to the brace which connects the pairs of bellows, and arrange the bellows A and B and A' and B', in connection with the reservoir E, to secure durability and strength in the instrument and an even exhaustion of air, all herein set forth as the peculiar qualities of this construction, I consider that said Letters Patent do not embody my invention.

What I claim is—

1. In an organette or mechanical musical instrument, the combination, with the air-reservoir E, of the bellows A B A' B', arranged in pairs upon each side thereof and lengthwise of the instrument, to operate substantially as and for the purpose set forth.

2. In an organette or mechanical musical instrument, the reservoir E and bellows A B A' B', arranged in pairs upon each side thereof, in combination with the rigid braces C C', pitman-rods D D', and driving-shaft F, constructed and arranged to operate substantially as specified.

I. M. FURBISH.

Witnesses:

R. W. BLACK,  
H. F. BLANCHARD.