

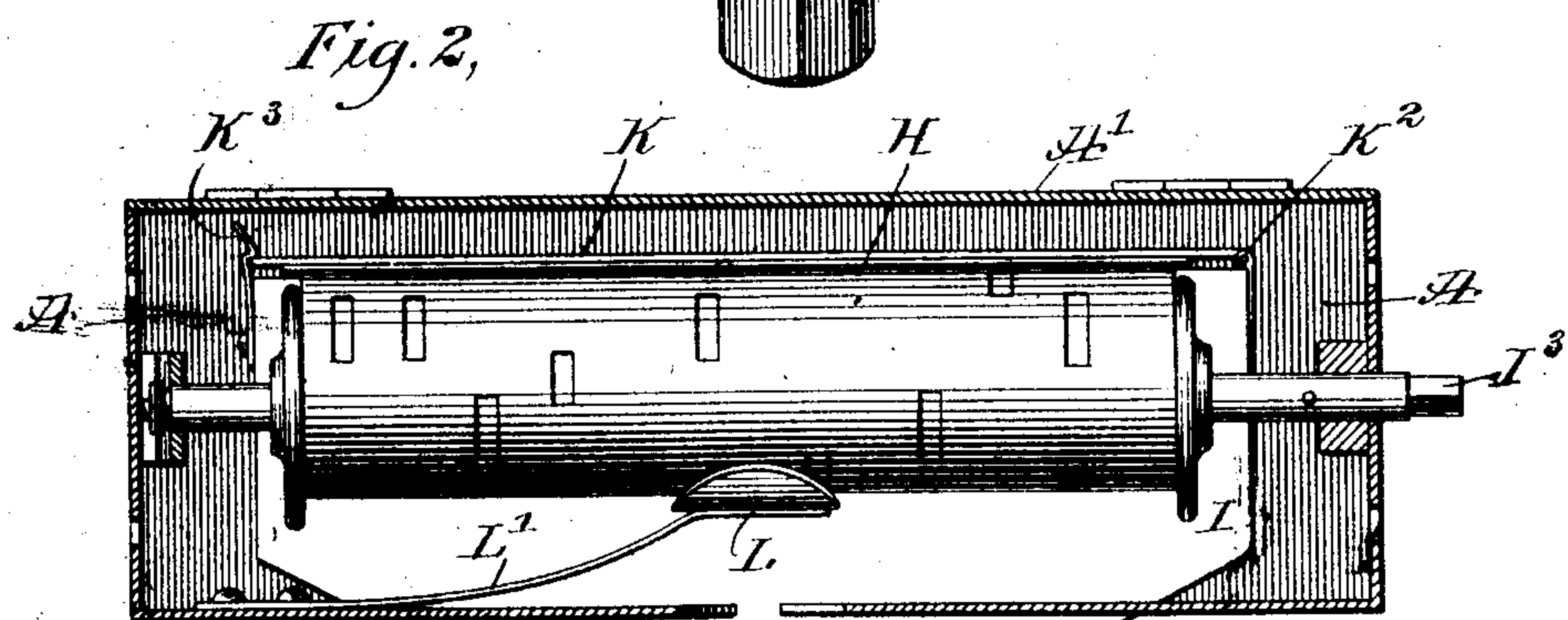
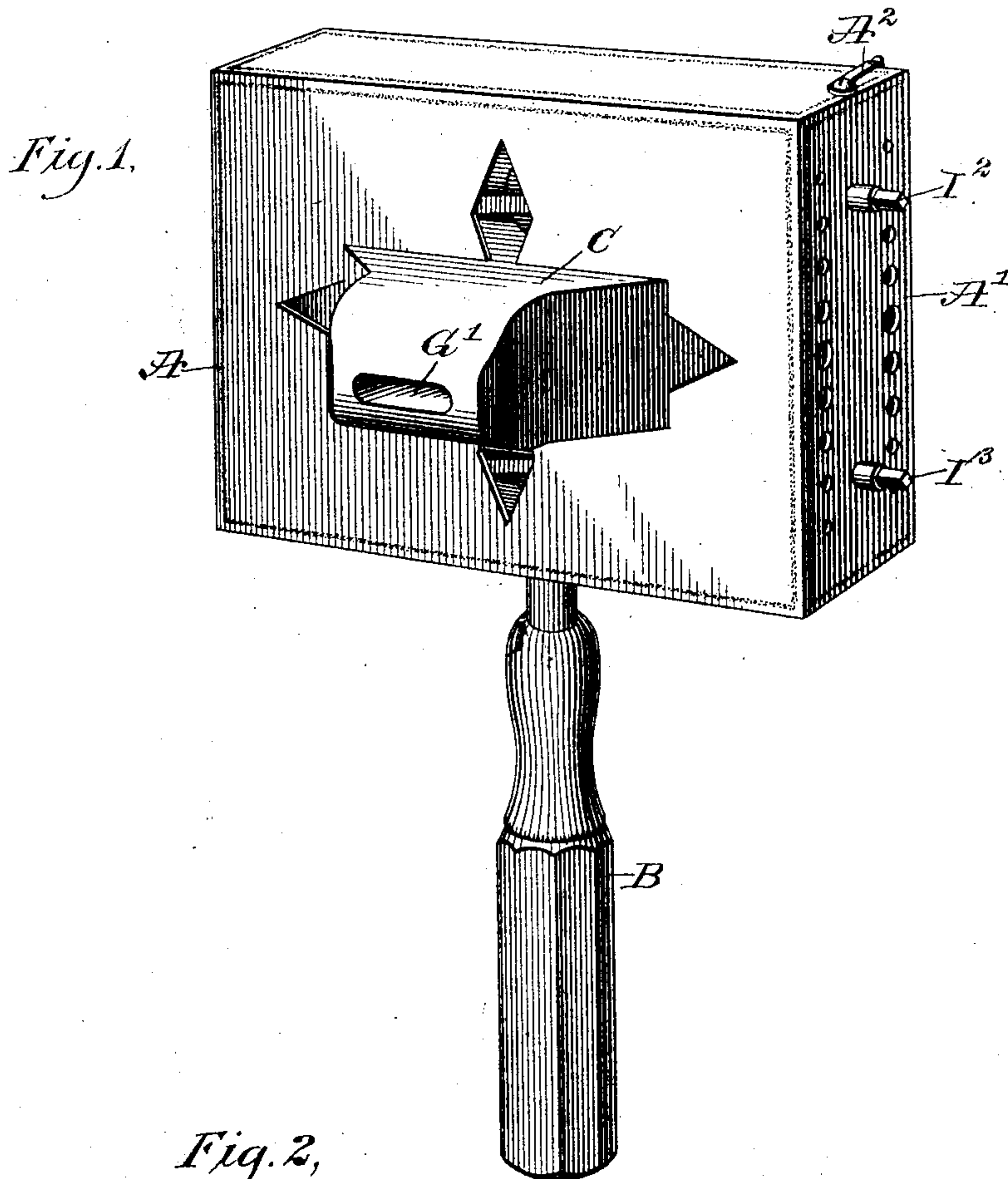
No. 777,370.

PATENTED DEC. 13, 1904.

H. E. HIBSHMAN.
MUSICAL INSTRUMENT.
APPLICATION FILED NOV. 10, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

Edw. Thorpe
Rev. G. H. H. H.

INVENTOR

Henry E. Hibshman

BY

M. M. M.
ATTORNEYS

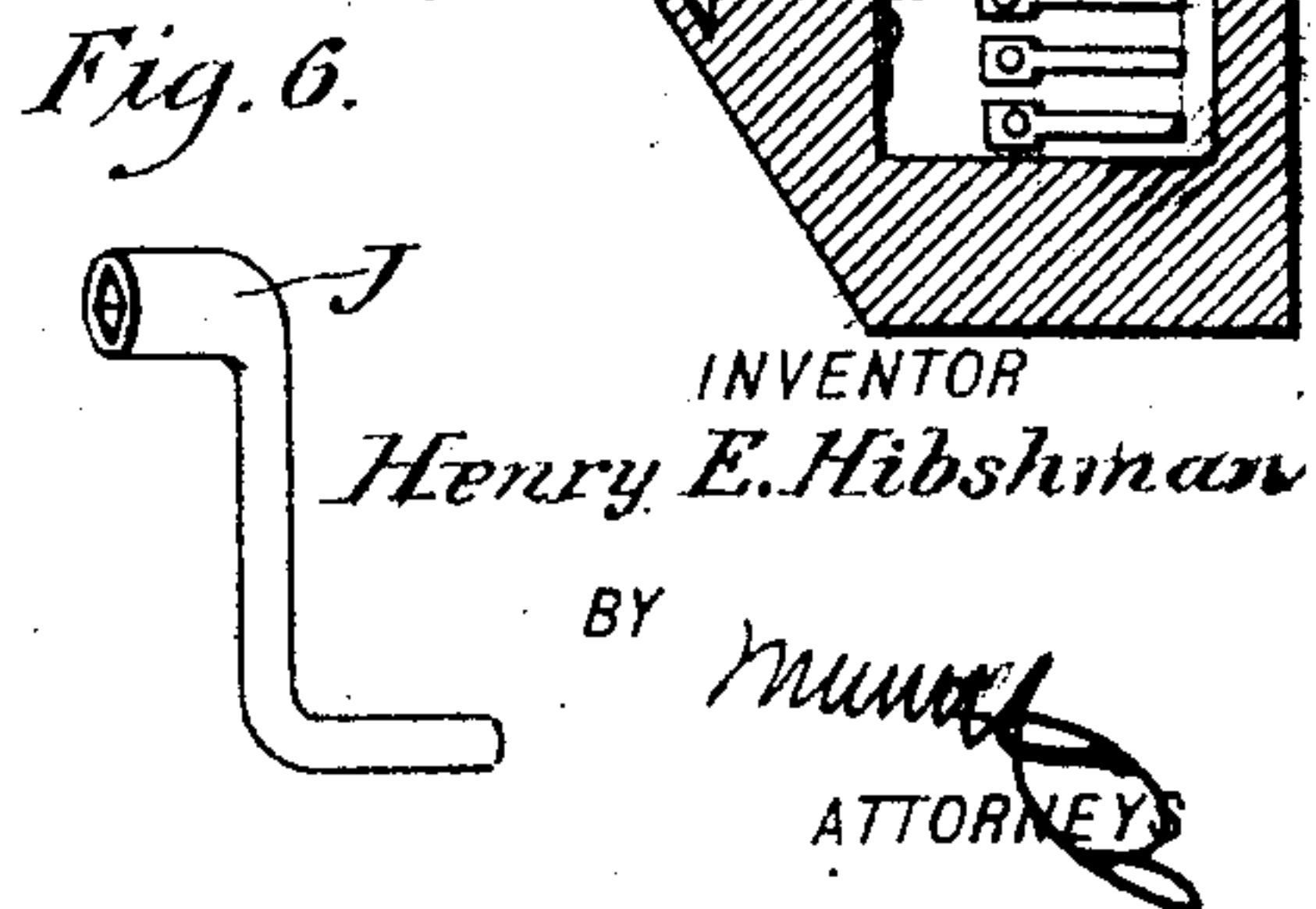
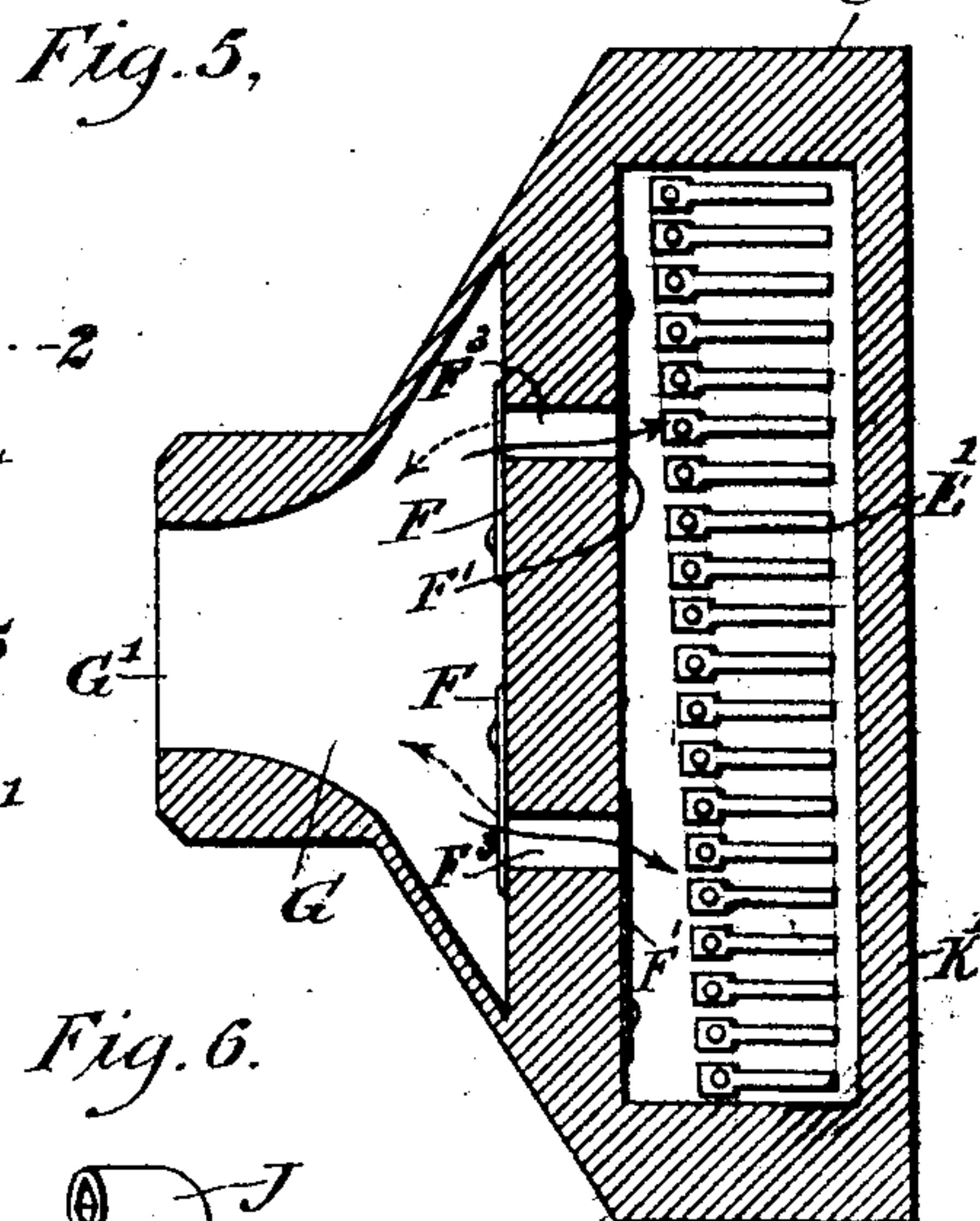
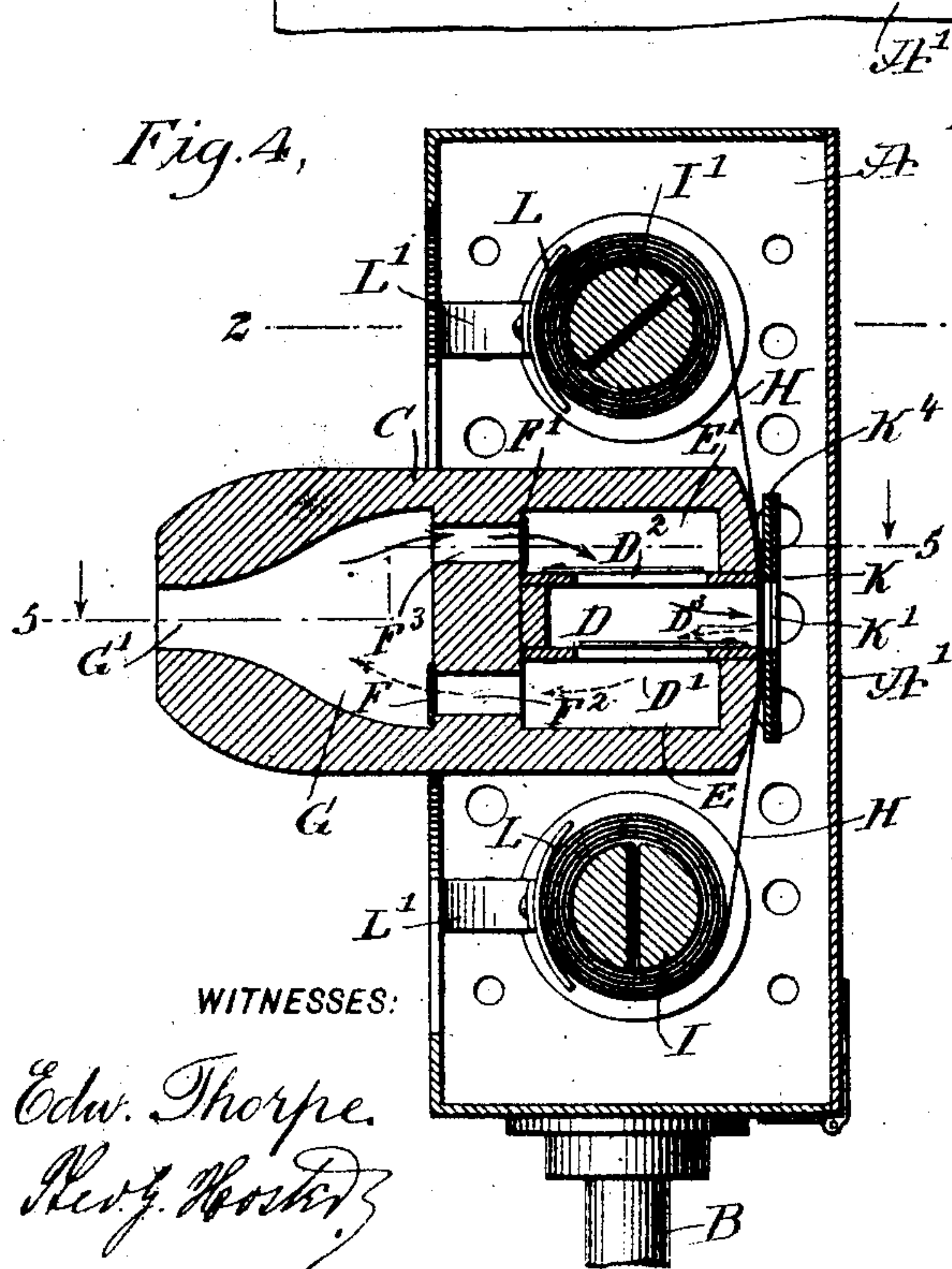
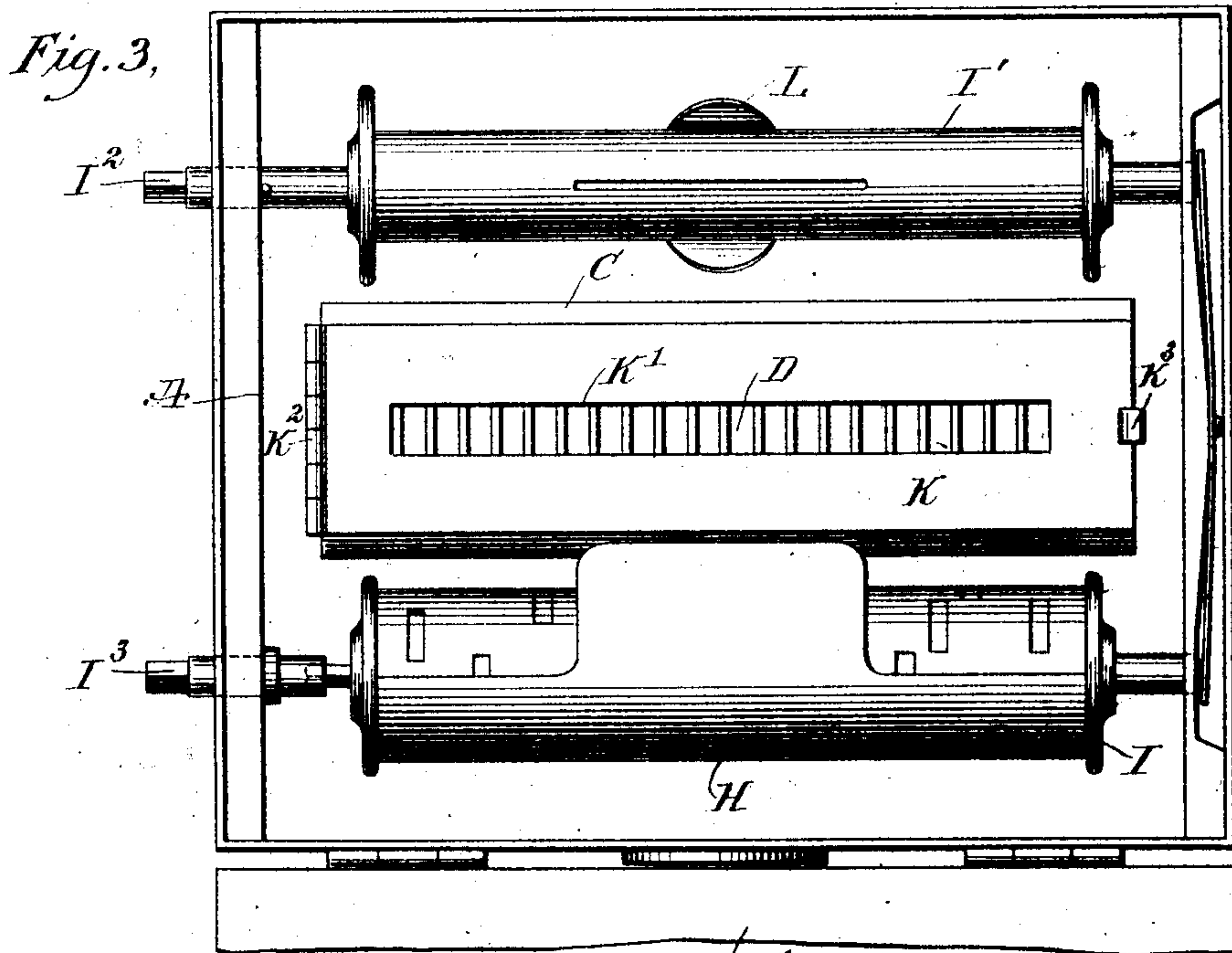
No. 777,370.

PATENTED DEC. 13, 1904.

H. E. HIBSHMAN.
MUSICAL INSTRUMENT.
APPLICATION FILED NOV. 10, 1903.

NO MODEL.

2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

HENRY EBERLY HIBSHMAN, OF NEWARK, NEW JERSEY.

MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 777,370, dated December 13, 1904.

Application filed November 10, 1903. Serial No. 180,568. (No model.)

To all whom it may concern:

Be it known that I, HENRY EBERLY HIBSHMAN, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented a new and Improved Musical Instrument, of which the following is a full, clear, and exact description.

The invention relates to reed instruments of the mouth-harmonica type, and more particularly to musical instruments such as shown and described in the Letters Patent of the United States, No. 744,546, granted to me November 17, 1903.

The object of the invention is to provide a new and improved musical instrument arranged to require but comparatively little wind and exertion on the part of the operator to properly execute a piece of music with the aid of a perforated note-sheet.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement. Fig. 2 is an enlarged sectional plan view of the same on the line 2-2 of Fig. 4. Fig. 3 is a front elevation of the same, showing the casing-door open. Fig. 4 is a transverse section of the same. Fig. 5 is a sectional plan view of the same on the line 5-5 of Fig. 4, and Fig. 6 is a perspective view of the crank-handle for turning the winding-up roll.

The improved musical instrument is mounted in a suitably-constructed casing A, having a front hinged door A', adapted to be locked in a closed position by a suitable catch A², as plainly indicated in Fig. 1. The bottom of the casing A is provided with a suitable handle B, adapted to be taken hold of by the operator to enable the user to properly support the casing by the use of one hand.

Within the casing A is secured a chest C, extending through the back of the casing, as

plainly illustrated in the drawings, and in this chest C is secured a reed-block D, connected at its sides with chambers E E' for the passage of the air to and from the reeds of the reed-block D to sound the reeds, as hereinafter more fully described.

Valves F and F' control openings or ports F² and F², connecting a wind-chest G with the chambers E and E', the said wind-chest G being formed in the outer portion of the chest C, and the entrance G' to the wind-chest is in the form of a mouthpiece for the operator to blow and suck the air to and from the said wind-chest when performing on the instrument, as hereinafter more fully explained. The valves F open outwardly into the wind-chest G, so that on sucking air from the wind-chest the valves F open to sound the reeds D', and when the operator blows into the wind-chest G then air passes through the ports F², past the valves F' into the chamber E', and to the reeds D² to sound the same. Thus on both blowing and sucking air the corresponding reeds in the reed-block D are sounded.

The mouth D³ of the reed-block forms a tracker-board for the passage of a note-sheet H, having the usual perforations and unwinding from a drum I and winding up on a drum I', the drums I and I' being journaled in suitable bearings in the casing on opposite sides of the chest C. A crank-handle J may be employed to engage the outer square end I' of the winding-up roller I' to enable the operator to wind up the note-sheet H on this roller I' and unwind it from the roller I, the note-sheet during this winding-up and unwinding operation passing over the mouth D³ of the reed-block D to bring the perforations of the note-sheet in register with the corresponding tracker-board openings, so as to sound the corresponding reeds D' and D². When the piece of music has been played, the operator can apply the crank-handle J on the outer end of a spindle I'', with which the shaft of the roller I is removably connected, so that the operator can rewind the note-sheet H on the roller I. It is understood that during this rewinding operation the operator does not blow or draw air at the mouthpiece G' of the wind-chest G.

as this is only done during the time the note-sheet H is wound up on the winding-up roller I'.

In order to hold the note-sheet H in proper contact with the tracker-board at the time the note-sheet passes over the said tracker-board, a retaining-plate K is provided, having an elongated slot K' registering with the tracker-board openings. The plate K is preferably hinged at K² to one end of the chest C, and the free end of the said plate K is adapted to be engaged by a spring-catch K³ (see Figs. 2 and 3), to hold the retaining-plate K in position and to allow of unlocking the spring-plate to swing the same into an open position whenever it is desired to place another note-sheet in position on the roller I. The under side of the retaining-plate K is preferably provided with a lining K¹, of felt or other suitable material, to prevent escape of air from one tracker-board opening to another, the lining K¹ pressing the note-sheet with sufficient force in contact with the tracker-board to prevent escape of air, as described, but to allow ready traveling of the note-sheet when turning the corresponding roller I' or I, as above explained.

In order to prevent slack rolling and unrolling of the note-sheet H on the rollers I and I', friction-plates L are provided, preferably made segmental in shape and adapted to engage the note-sheet on the rollers I and I', as plainly shown in Figs. 3 and 4. The friction-plates L are secured on the free ends of spring-arms L', riveted or otherwise fastened to the casing A at the rear thereof. (See Fig. 2.)

In using the device the operator blows and draws into and from the wind-chest G by way of the mouthpiece G', as above described, and at the same time winds up the note-sheet H on the roller I' by turning the latter with the crank-handle J. As the note-sheet H passes over the tracker-board of the reed-block D it is evident that whenever a perforation of the note-sheet registers with a tracker-board opening then air can pass through the reed-block to sound the corresponding reed D' or D², ac-

cording to the direction in which the air is traveling—that is, whether the operator sucks air from the wind-chest G and sounds the reeds D' or blows into the wind-chest G to sound the reeds D².

It is understood that the reeds D' are duplicates of the reeds D², so that it does not make any difference as far as the tune is concerned whether the operator sucks or blows air from or to the wind-chest G.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A musical instrument substantially as described, comprising a reed-block, suction and pressure chambers on opposite sides of the reed-block and separated from each other, a wind-chest having independent connections with said chambers, whereby suction and pressure may be applied to the independent chambers without influencing the other chamber, and valves controlling said independent connections with the pressure and suction chambers whereby the application of suction or pressure to the respective chambers will not cause the air to leak past the reeds in connection with the other chamber.

2. In a musical instrument of the class described, a chest formed at one end with a mouth forming a tracker-board for the passage of a note-sheet, having adjacent to said end a reed-block communicating with its mouth, independent suction and pressure chambers on opposite sides of said reed-block and having at their ends opposite the tracker-board a mouth-piece and within the same, an inner chest communicating through independent ports with the suction and pressure chambers, and valves controlling the said ports, substantially as and for the purposes set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY EBERLY HIBSHMAN.

Witnesses:

THEO. G. HOSTER,
F. W. HANAFORD.