

No. 640,223.

Patented Jan. 2, 1900.

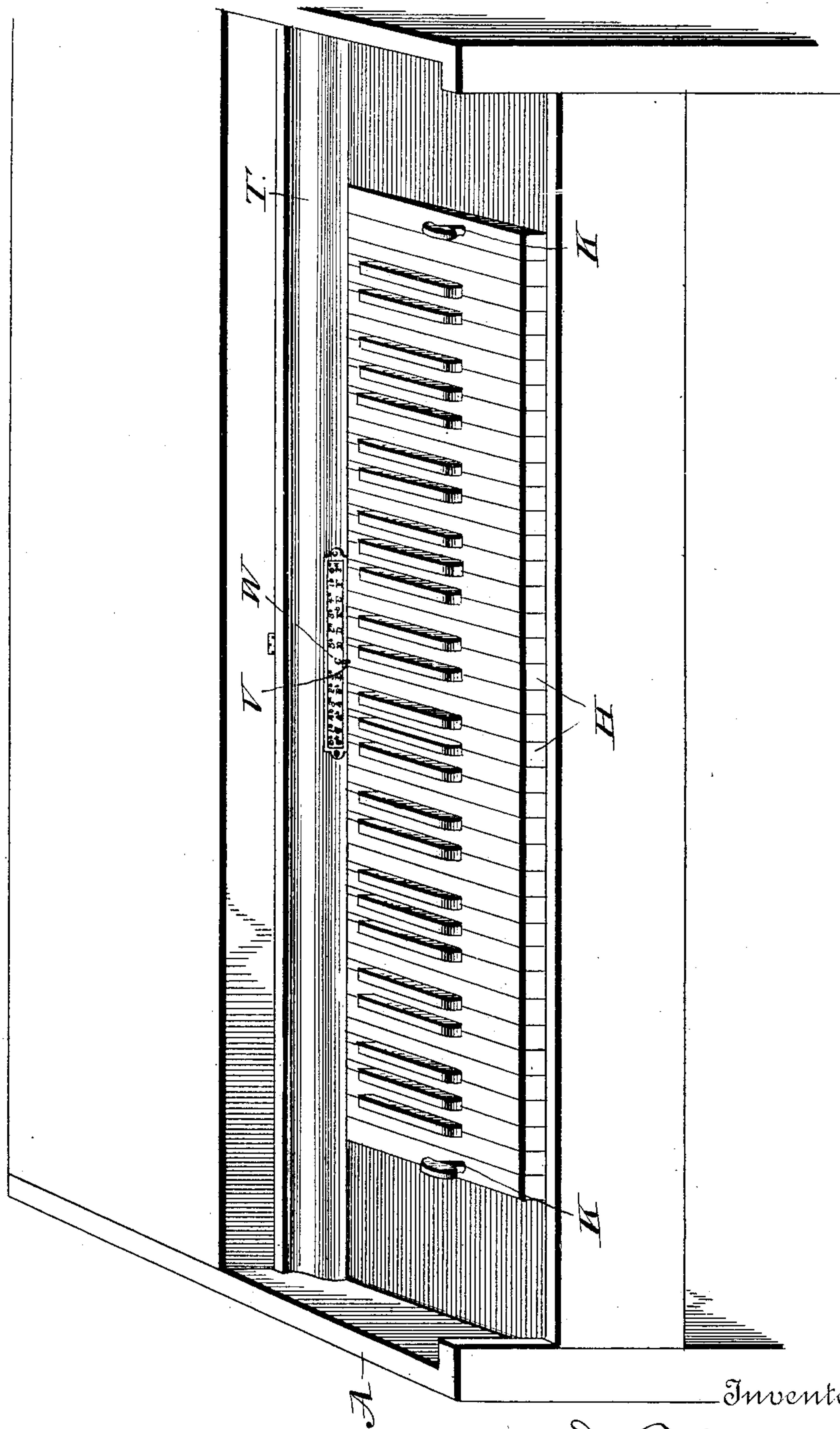
D. F. RANKIN.  
ADJUSTABLE KEYBOARD.

(Application filed Oct. 30, 1899.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



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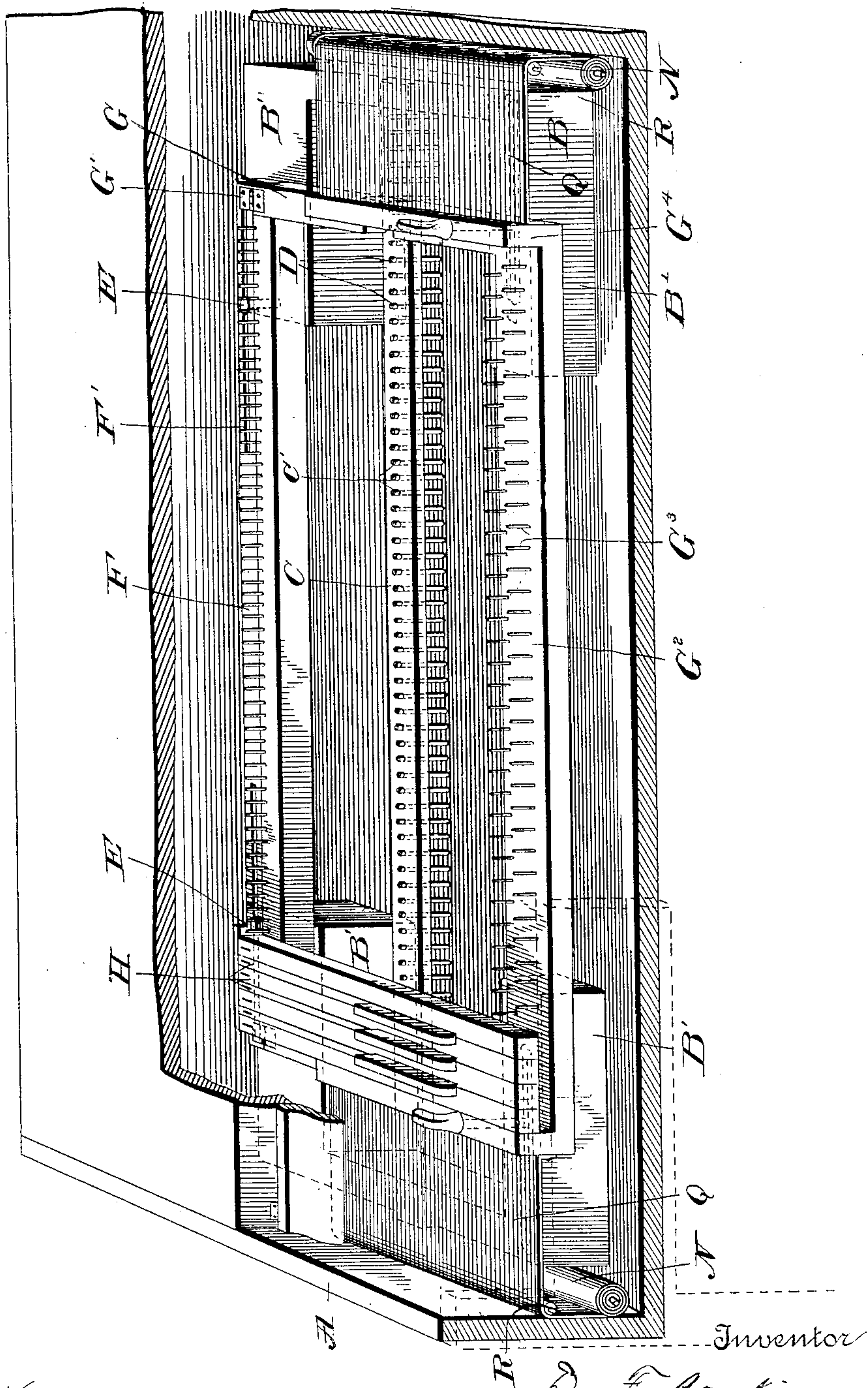
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3 Sheets—Sheet 2.

Fig. 2.



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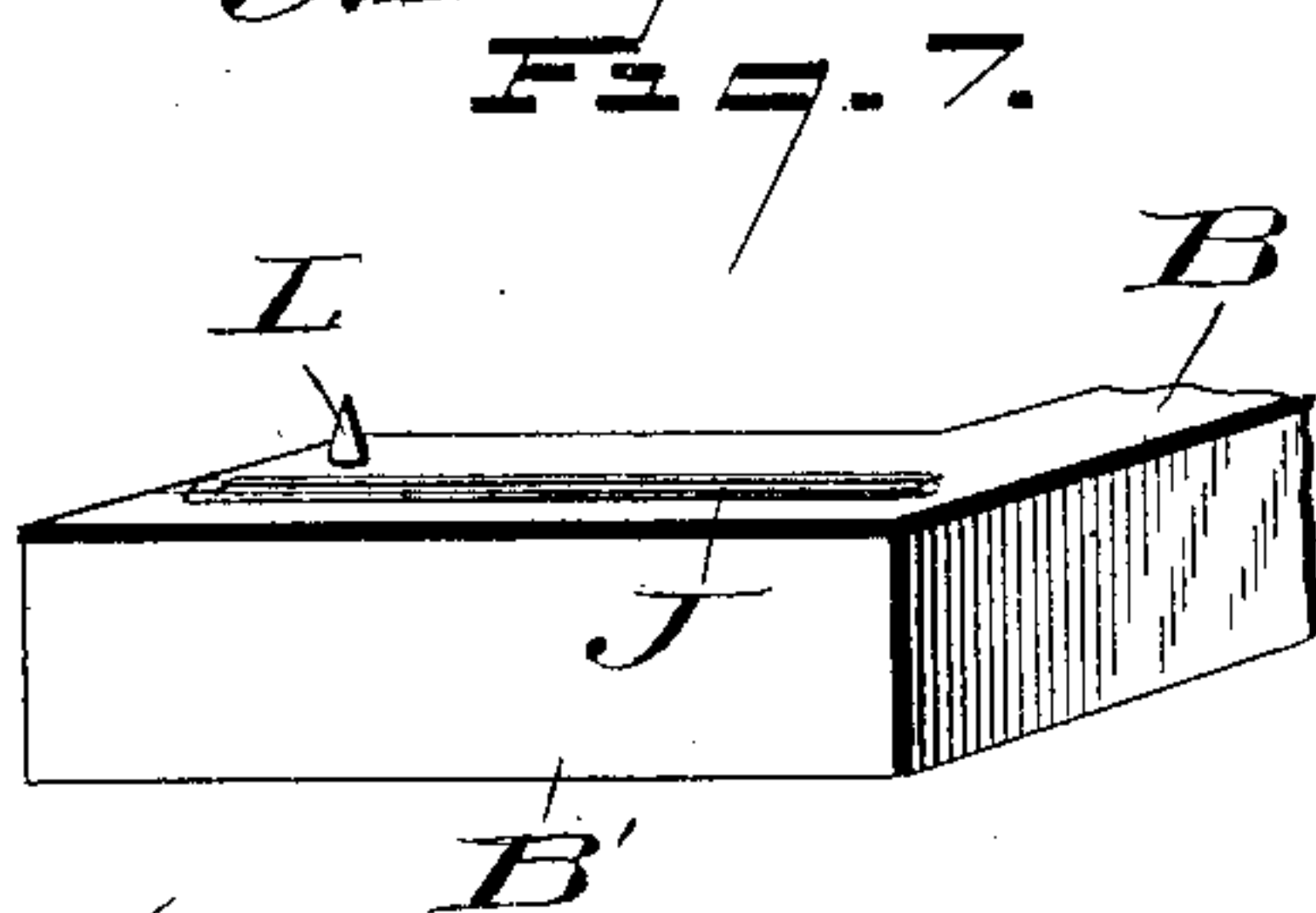
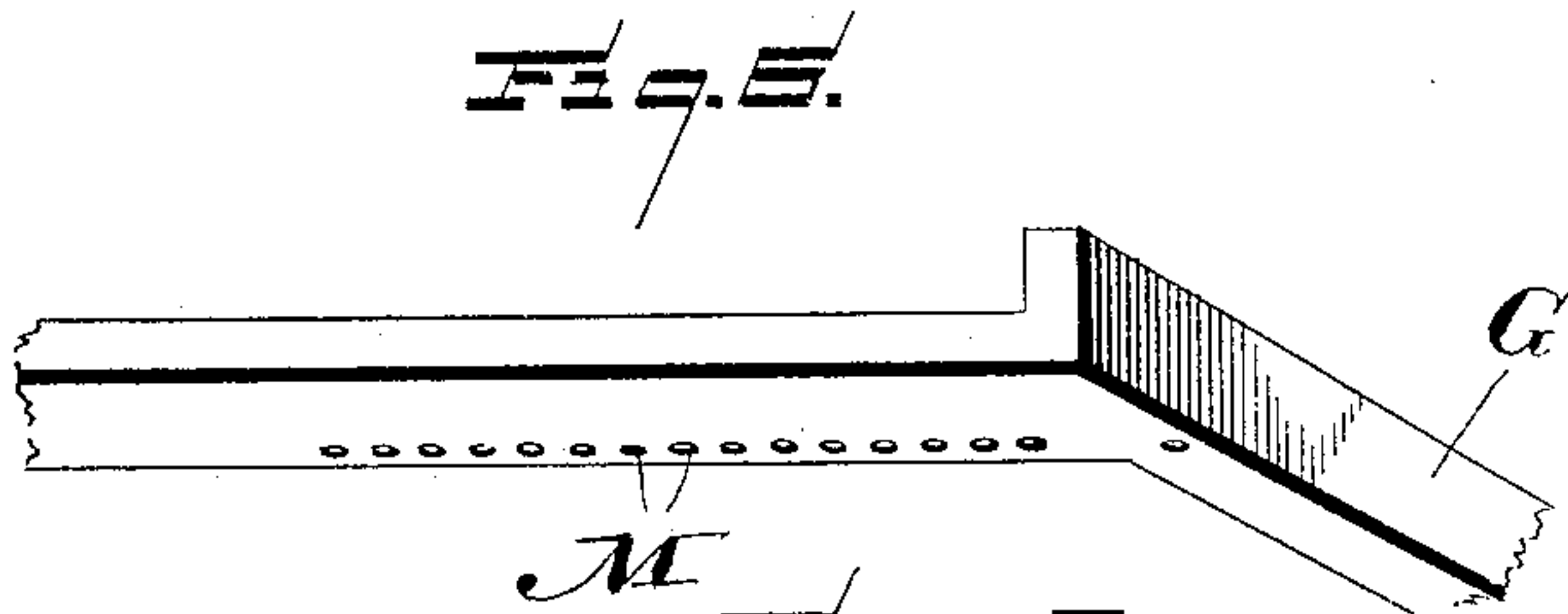
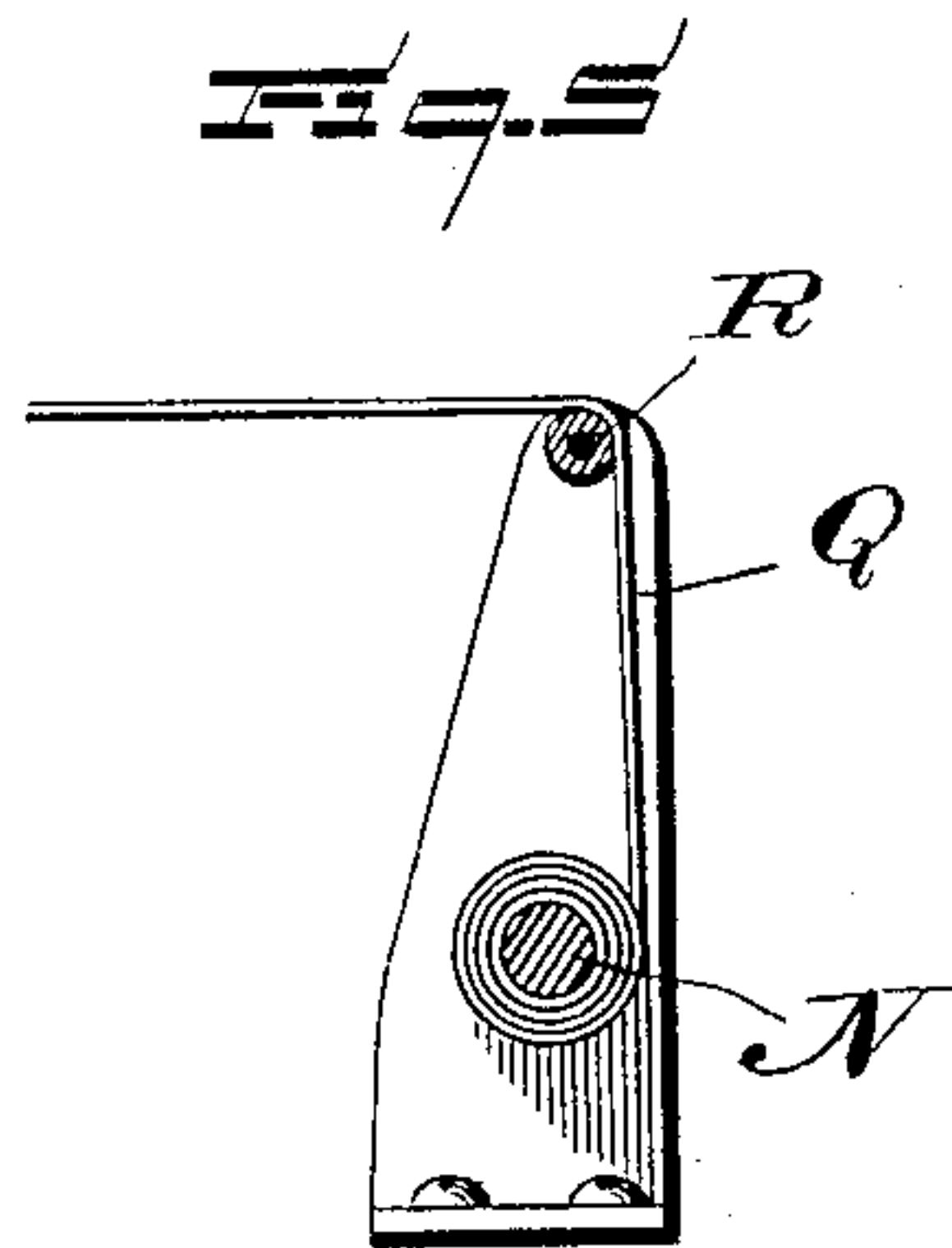
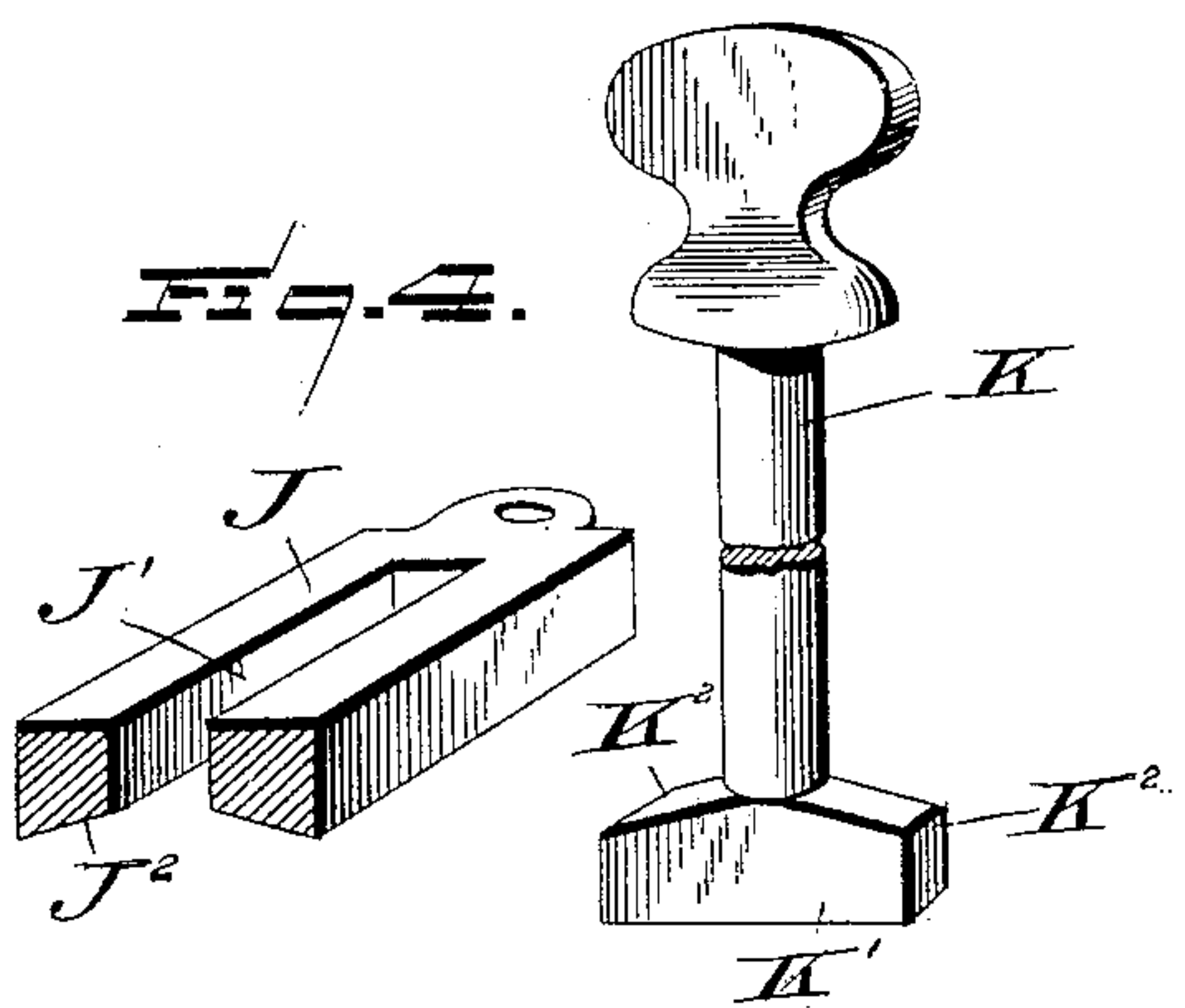
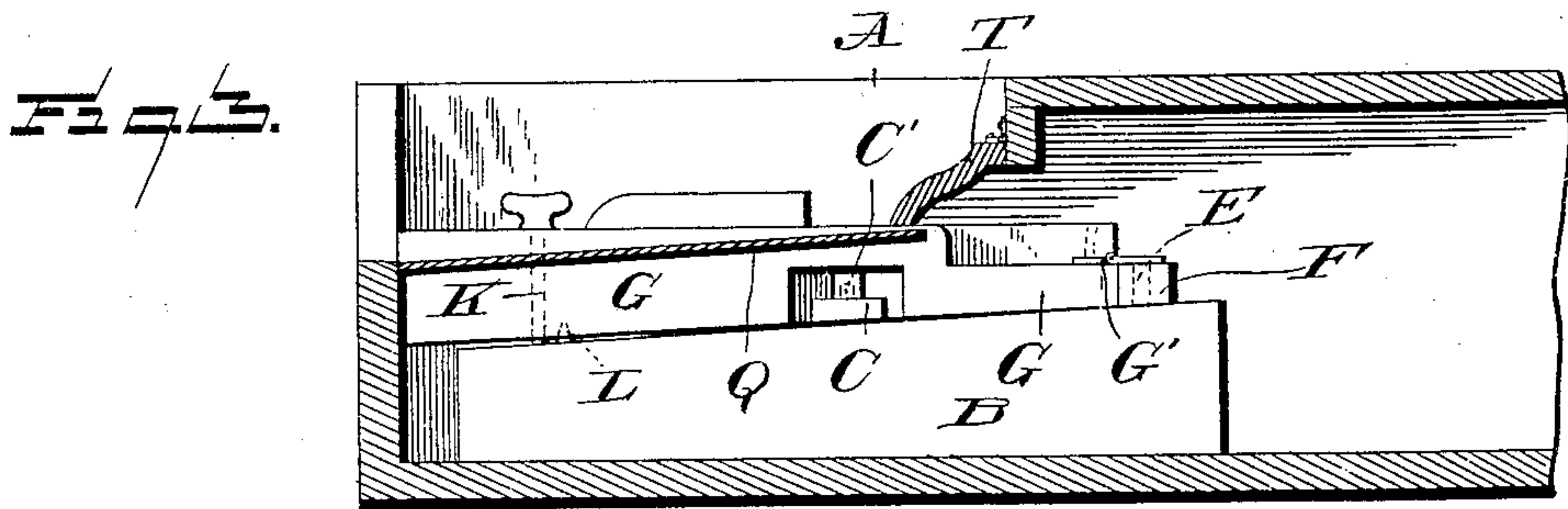
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3 Sheets—Sheet 3.



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# UNITED STATES PATENT OFFICE.

DAVID FRANKLIN RANKIN, OF NORTH VERNON, INDIANA.

## ADJUSTABLE KEYBOARD.

SPECIFICATION forming part of Letters Patent No. 640,223, dated January 2, 1900.

Application filed October 30, 1899. Serial No. 735,304. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID FRANKLIN RANKIN, a citizen of the United States, residing at North Vernon, in the county of Jennings and State of Indiana, have invented certain new and useful Improvements in Adjustable Keyboards; and I do declare the following to be a full, clear, and exact description of the invention, 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, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in adjustable keyboards; and the object of the invention is to produce a device for attachment to organs and pianos whereby music may be played in any key by adjusting the keyboard so that the player while operating the keys as the notes indicate may by the adjustment of the keyboard play in a higher or lower key. It often happens that singers find songs written in a key too high to accommodate their voices, and, as few can transpose music at sight, by the use of my adjustable keyboard a piece may be transposed into any key. Almost all music can be written in the key of C, and difficult pieces, written in D-flat, five flats; A, three sharps; A-flat, four flats; E, four sharps, &c., which few can play or ever learn to play, can be written in the key of C, no flats or sharps, and be readily played. Thus music that the majority of players never learn, because of lack of ability or means to master as written in sharps and flats, may be played when written in the key of C.

By my invention I am able to simplify music, which enables the person who learns the key of C to play in any or every key, and by learning to play the cords in one key one may readily play the other cords in the various keys.

More specifically, the invention consists in the provision of a finger-board which is made longitudinally adjustable and adapted to be fitted to a piano or organ; and it consists in the provision of means for attaching the keyboard to the instrument and of adjusting it to the tacker-rods of an organ or the wires of a piano and retain the same in an adjusted po-

sition, while at the ends of the finger-board are secured cloths which wind about spring-actuated rollers, which cloths are provided to fill up the spaces between the ends of the finger-board and the sides of the instrument when the said finger-board has been adjusted in different positions.

To these ends and to such others as the invention may pertain the same consists, further, in the novel construction, combination, and adaptation of parts, as will be hereinafter more fully described and then specifically defined in the appended claims.

My invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form part of this application, and in which drawings similar letters of reference indicate like parts throughout the several views, in which—

Figure 1 is a perspective view showing my invention as applied to an organ. Fig. 2 is a perspective view of the attachment, with parts of the instrument broken away to more clearly illustrate the details of construction of the adjustable finger-board. Fig. 3 is a vertical transverse section through the instrument and the adjustable finger-board. Fig. 4 shows the casting and tightening thumb-screw for locking the swinging end of the adjustable board to the frame supporting the same. Fig. 5 is a sectional view through one of the rollers on which the strip of cloth secured to the finger-board winds. Fig. 6 is an enlarged detail in perspective of one corner of the frame which supports the keyboard, and Fig. 7 is an enlarged detail of a portion of the frame which supports the hinged frame.

Reference now being had to the details of the drawings by letter, A designates the casting of an organ, and mounted therein is a frame B, which is held stationary on a shelf of the instrument, and this frame has the two parallel projecting ends B' at each end thereof, and the longitudinal strip C, midway between said parallel portions and said strip C, has a series of perforations C', through which the ends of the tacker-rods D extend, as shown clearly in Fig. 2 of the drawings. Mounted on the inner projecting portions B' of said frame are the screws E, and F is a strip provided with longitudinal slots F', said screws E being provided to hold the strip F



to the projections B' of the frame B and allow said strip to be moved longitudinally, the strip F being guided and held in position by means of the screws E, disposed in said slots.

5 G is a frame which is hinged to the strip F by means of the hinges G', and the longitudinal strips G<sup>2</sup> of said frame G are provided with a series of pins G<sup>3</sup>, which are provided to hold the keys H of the instrument to the  
10 frame G.

It will be observed that the upper edges of the frame B are slanting downward and forward, Fig. 3 of the drawings, and that the under edges of the frame G slant in a reverse  
15 direction, so that when the latter is in its normal position its upper face will be in a plane parallel to the lower edge of the frame B, which insures the keys being held in a horizontal position. Mounted on the outer ex-  
20 tensions B' of the frame B are the slotted castings J, having elongated slots J' therein, the upper surfaces of said castings being flat, while the under surfaces are inwardly tapering, as at J<sup>2</sup>. (Clearly seen in Fig. 4 of the  
25 drawings.) Carried by the upright end portions G<sup>4</sup> of the frame G are the tightening-screws K, the lower portions of which have the rectangular-shaped ends K' of a width equal to the width of the slots J', adapted to  
30 pass through said slots and when turned a partial revolution to be disposed at right angles across said slots and securely hold the screws in a locked relation. It will be observed that the upper surfaces K<sup>2</sup> of the  
35 thumb-screws are downwardly tapering to correspond with the taper J<sup>2</sup> on the under surface of the castings J. Adjacent to the end of the outer projecting portions B' of the frame B are the pins L, (shown clearly in  
40 Figs. 3 and 7 of the drawings,) which pins project above the surface of the frame B and are adapted to be seated in any one of the various holes M in the under surface of the frame G, these holes being clearly shown in  
45 Fig. 6 of the drawings. These pins L are of such a height as to render it impossible for the lower edges of the keys to strike against the tacker-rods D when the adjustable key-  
50 board is being moved longitudinally by reason of the fact that before said keyboard may be moved it will be necessary to raise its outer swinging end above the points of the pins L. When the adjustable frame G is in its normal position, these pins serve to hold said  
55 frame steady and from longitudinal or lateral movement.

Mounted at the ends of the casing of the organ are the spring-actuated rollers N, to which the outer ends of the cloths Q are se-  
60 cured, which cloths pass over the rollers R and have their inner ends secured to the ends of the longitudinally-movable keyboard, as clearly shown in Figs. 1 and 2 of the drawings. These cloths are provided for the pur-  
65 pose of covering over the spaces formed at either end of the keyboard as the latter is moved longitudinally and the springs which

actuate the rollers N serving to wind up the cloth or allow it to unwind accordingly as the keyboard is moved in one direction or the  
70 other.

The upper ends of the tacker-rods D, which extend through the apertures C' in the strip C and are guided therein, extend a sufficient  
75 distance above the upper surface of said strip C so that as any one of the keys of the instrument is depressed the valve in the reed may be actuated to produce a certain tone. Hinged or otherwise secured to the front por-  
80 tion of the instrument is a board T, which has on its front face a plate W, on which are arranged the different sharps and flats, and an indicating-pointer V is secured to the key of the finger-board representing middle C.

In adjusting the keyboard the operator  
85 turns the screws K a one-fourth revolution, which will allow the ends K' to pass through the elongated slots J' in the castings J. This done, the outer free end of the keyboard may  
90 be raised so that its lower surface will be free of the pins L, also of the upper ends of the tacker-rods D, after which the finger-board may be moved longitudinally to adjust the instrument to play in a higher or lower  
95 key, as the case may be. After the keyboard is adjusted to the right key the frame is lowered to its normal position, the pins L engaging in the recesses or holes M in the under surface of the frame G, after which the ends  
100 of the thumb-screws which have passed through the elongated slots in the castings J may be turned at right angles and the frame securely locked in its adjusted position. As the frame is moved in one direction the cloth  
105 at one end will wind up and at the opposite end of the frame will unwind from the roller, thus covering up the space formed at the end of the keyboard as the latter is moved longi-  
tudinally.

While I have shown my adjustable key-  
110 board as applied to an organ in which the keys are adapted to actuate the valves in the reeds, it will be understood that the invention is equally applicable to pianos, in which case slight variations will be necessary in or-  
115 der to apply the invention; but it is not thought necessary to show the slight details of construction in adapting the keyboard to the piano, such details being within the province of an ordinary mechanic and not involv-  
120 ing the exercise of inventive genius.

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

1. In combination with the longitudinally-  
125 movable and hinged keyboard, the frames supporting same, the slotted castings secured to the latter, the thumb-screws passing through apertures in said swinging frame, and having a T-shaped end designed to be turned at  
130 right angles across said slot to lock the frame in an adjusted position, as set forth.

2. In combination with the longitudinally-movable and hinged keyboard, the under



edges of the frame of the latter being slightly inclined, the supporting-frame having angled ends with its upper edges outwardly and downwardly inclined, the pins L in its angled ends, said pins being adapted to be seated in holes in the under surface of the keyboard, a central strip of the movable frame, the tacker-rods passing through apertures in said strip, as shown and for the purpose set forth.

10 3. In combination with the longitudinally-movable keyboard, the cloths secured at each end thereof and the spring-actuated winding-rollers on which said cloths wind as set forth.

15 4. In combination with the longitudinally-movable and hinged keyboard, the frame with angled ends supporting same, the slotted cast-

ings secured to the under faces of said angled ends of the supporting-frame, the under edges of said castings being inwardly and upwardly inclined, the tightening-screws having T-shaped lower ends the latterly-projecting portions of which have their upper edges downwardly inclined, said screws designed to be turned at right angles across the slots to lock the frame in an adjusted position, as set forth. 20 25

In testimony whereof I affix my signature in presence of two witnesses.

DAVID FRANKLIN RANKIN.

Witnesses:

DANIEL R. SAUNDERS,  
L. H. HILL.