

(No Model.)

2 Sheets—Sheet 1.

J. BRACKEN.

EXTENSION KEY FOR TRANSPOSING MUSIC.

No. 471,713.

Patented Mar. 29, 1892.

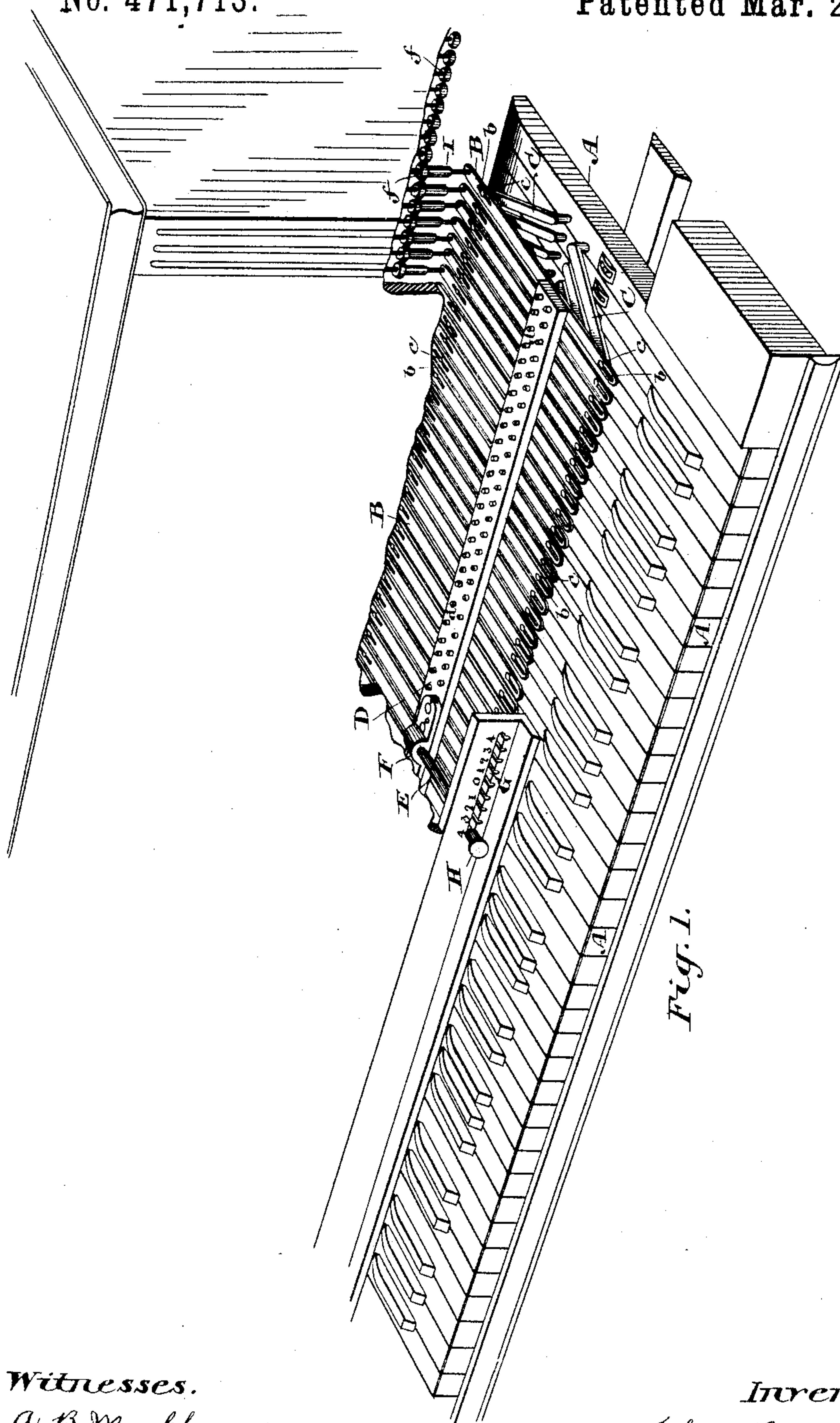


Fig. 1.

Witnesses.

A. B. Monkhouse

Lewis P. Abell.

Inventor.

John Bracken

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Fetherstonhaugh & Co  
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(No Model.)

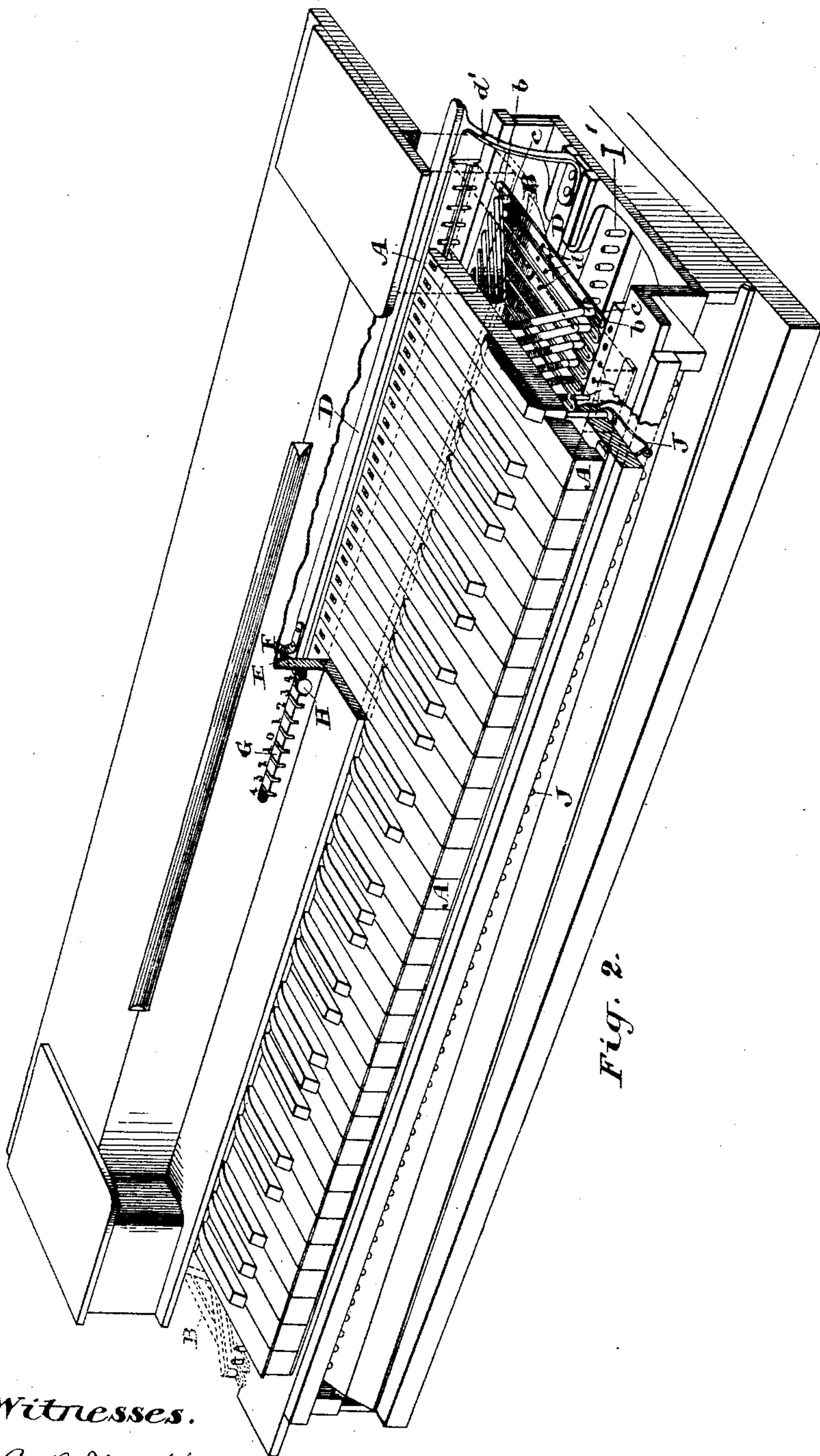
2 Sheets—Sheet 2.

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## EXTENSION KEY FOR TRANSPOSING MUSIC.

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*Fig. 2.*

*Witnesses.*

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# UNITED STATES PATENT OFFICE.

JOHN BRACKEN, OF TORONTO, CANADA, ASSIGNOR OF ONE-HALF TO JOHN KENNEDY, OF SAME PLACE.

## EXTENSION-KEY FOR TRANSPOSING MUSIC.

SPECIFICATION forming part of Letters Patent No. 471,713, dated March 29, 1892.

Application filed April 25, 1891. Serial No. 390,467. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN BRACKEN, piano-maker, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Extension-Keys for Transposing Music, of which the following is a specification.

The object of the invention is to design a simple, positive, and effective means of transposing music on the piano and organ from the key in which it is written or played to the desired key without the necessity of exercising the mental faculties in so doing; and it consists, essentially, of securing on the inner portion of the keys of the piano or organ extension-keys, which are connected to the keys proper by pivoted arms, the said extension-keys being held at equal distances and operated from a cross-bar, to which they are suitably connected, so as to bring each extension-key of the set to the right or left of the key proper the desired distance to either raise or lower the pitch of the music from the key in which it is written or played, the whole of the mechanism being arranged and constructed in detail as hereinafter more particularly explained.

Figure 1 is a perspective view showing my transposing extension-keys attached to the ordinary keys of a piano. Fig. 2 is a perspective view showing my transposing extension-keys attached to the keys of an organ.

In the drawings like letters of reference indicate corresponding parts in each figure.

A are the keys proper.

B are extension-keys, each of which is preferably attached to its corresponding key A by the two arms C, which are pivoted at one end on the key A. The other end of each arm C is connected to the extension-key B by the screw-pins c, which extend through slots b, made in the extension-key B, so as to permit of its free lateral adjustment.

D is a cross-bar extending throughout the width of the entire set of extension-keys B. Each extension-key is connected, preferably by two pins d, to the cross-bar, the said pins d extending through the cross-bar and fitting easily in the same, so as to allow each key A, with its corresponding extension-key B, to be easily manipulated.

E is a rod secured at its inner end in the bracket F, attached to the center of the cross-bar D. The rod E projects through the notched slot G and has a knob H formed on its end, so that it may be transferred from one notch to another, so as to raise or lower the pitch or tone.

On reference to Fig. 1, which exhibits the piano-key construction, it will be seen that I place my extension-keys B, preferably, above the keys proper and attach the pilots or pins I to the ends of the extension-keys B instead of to the ends of the keys proper A, so that the pins I come exactly beneath the extension-piece f, by which the hammer is operated to strike its corresponding string. When the piano is at concert-pitch, each extension-key B stands directly over the key A, to which it is connected, and each pin I stands under its corresponding extension-piece f, operating the hammer for the corresponding string. When, however, the knob H is moved to the left end of the slot G, as indicated in Fig. 1, which in this case is four semitones, the pin I is moved below the extension-piece f, which operates the string four semitones lower than that in which the piece is written. As every key in the piano is operated at the same time by the knob H, the entire pitch of the piano is changed into four semitones lower.

On reference to Fig. 2, which exhibits the organ-key construction, it will be seen that I place my extension-keys B, preferably, below the keys proper and operate the sticker-pins I', operating the reed-valves by the pressure of the extension-keys B when the keys A are manipulated instead of by the keys A direct. I also preferably provide, as shown in this figure, springs J and pins j, under which the springs J extend. A pin j and spring J extend under each key, so that all the keys are held up flush with each other when they are at rest. Commonly the sticker-pin I' supports the key; but I prefer this construction, so that the extension-keys may be held entirely above the sticker-pins I', and thereby greatly facilitate their lateral movement when it is required to transpose. When the organ is at concert-pitch, each extension-key B stands directly under the key A to which it is connected, and each sticker-pin I, which operates



the reed-valve, is under its corresponding extension-key *f*. When, however, the knob H is moved to the right end of the slot G, as indicated in Fig. 2, which in this case is four 5 semitones, the extension-key B is moved four keys to the right and extends over the sticker-pin I four semitones higher than that in which the piece is written. As every key in the organ is also operated at the same time, 10 the entire pitch of the organ is changed to four semitones higher. By moving the extension-keys in the opposite direction, as indicated by dotted lines in this figure, the pitch of the organ is changed into four semitones 15 lower than concert-pitch.

In Fig. 2 it will be seen that I provide a double cross-bar D, connected together by the arms *d'*.

In order to provide for raising or lowering 20 the pitch or tone four semitones, I of course provide four extra pins I, with their corresponding number of individual operating mechanism and strings or reeds at each end of the piano or organ.

25 From this description it will be seen that I can raise or lower the pitch of the piano or organ four semitones or less above concert-pitch or four semitones or less below concert-pitch.

30 Of course it will be understood that I could have the extension-keys so arranged as to cover a greater range in the raising or lowering of the pitch of the piano or organ; but I deem four semitones sufficient for the general purpose of musicians. It will also be apparent from this description that the pitch or 35 tone into which the music is transposed will be played by the musician manipulating exactly the same keys as if he were playing in the key in which the piece is written. 40

What I claim as my invention is—

1. In combination with the keys proper of a piano or organ, a set of rigidly-supported

extension-keys pivotally connected therewith and laterally adjustable to the right and left, 45 as and for the purpose specified.

2. A set of extension-keys B, adjustably supported on the keys proper A by the arms C, pivoted on the keys A, in combination with the cross-bar D, arranged as and for the pur- 50 pose specified.

3. A set of extension-keys B, adjustably supported on the keys proper A by the arms C, pivoted at one end on the keys A and having at the other end pins *c*, which extend through 55 slots *b* in the extension-keys B, in combination with the cross-bar D, arranged as and for the purpose specified.

4. A set of extension-keys B, adjustably supported on the keys proper A by the arms 60 C, pivoted on the keys A, in combination with the cross-bar D and pins *d*, projecting into the cross-bar D from the extension-keys B, as and for the purpose specified.

5. A set of extension-keys B, adjustably 65 supported on the keys proper A by the arms C, pivoted on the keys A, in combination with the cross-bar D, pins *d*, projecting into the cross-bar D from the extension-keys B, and a pin operating the sounding medium, arranged 70 as and for the purpose specified.

6. A set of extension-keys B, adjustably supported on the keys proper A by the arms C, pivoted on the keys A, in combination with the cross-bar D, spindle E, with knob H, and 75 slot G, as specified.

7. A set of extension-keys B, adjustably supported on the keys proper A by the arms C, pivoted on the keys A, in combination with the supporting-pins *j*, held in position by 80 springs J, as specified.

JOHN BRACKEN.

Witnesses:

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A. B. MONKHOUSE.