

[73.]

W. D. Edgar, Musical Instrument.

No. 119,335.

Patented Sep. 26, 1871.

Fig. 1.

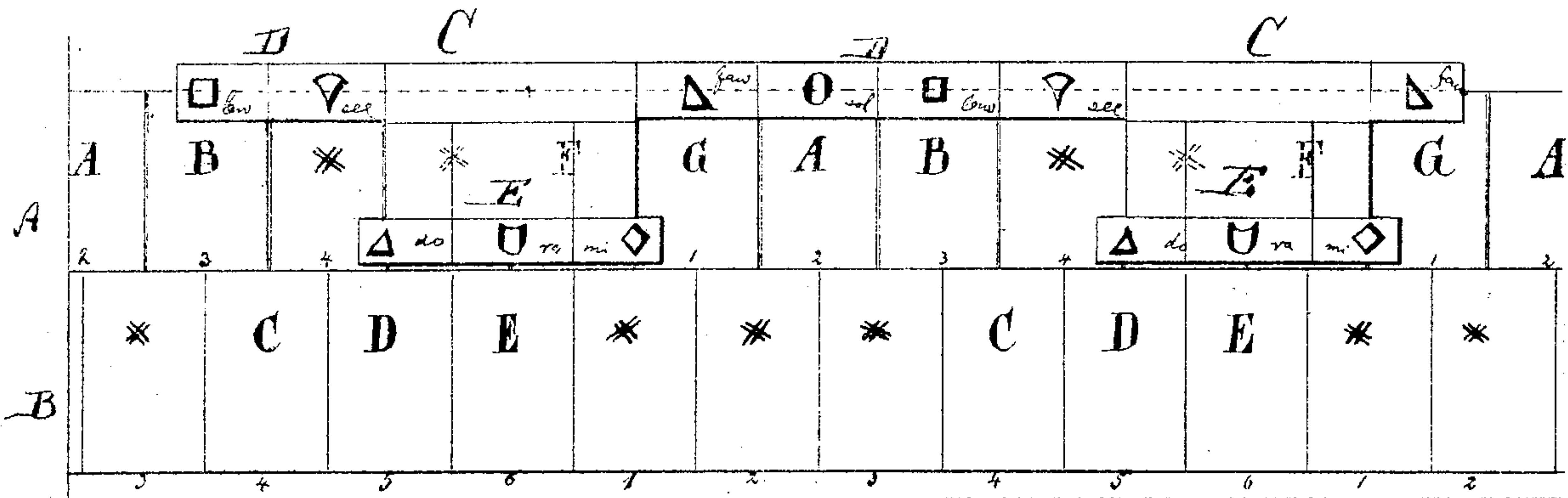


Fig. 2.

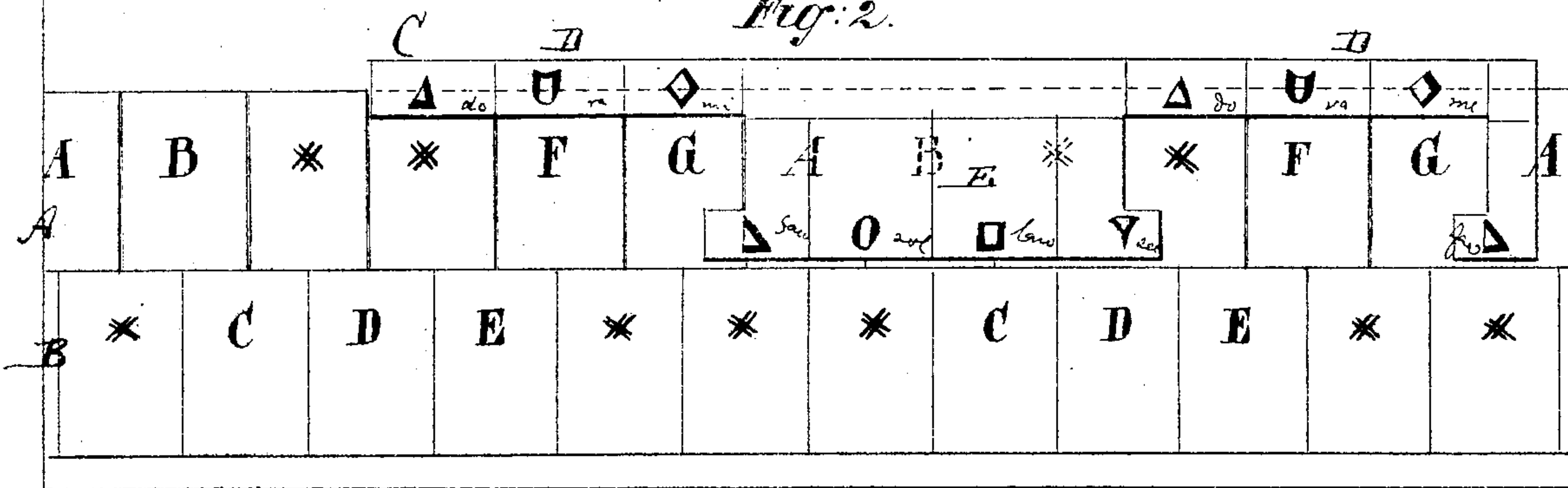
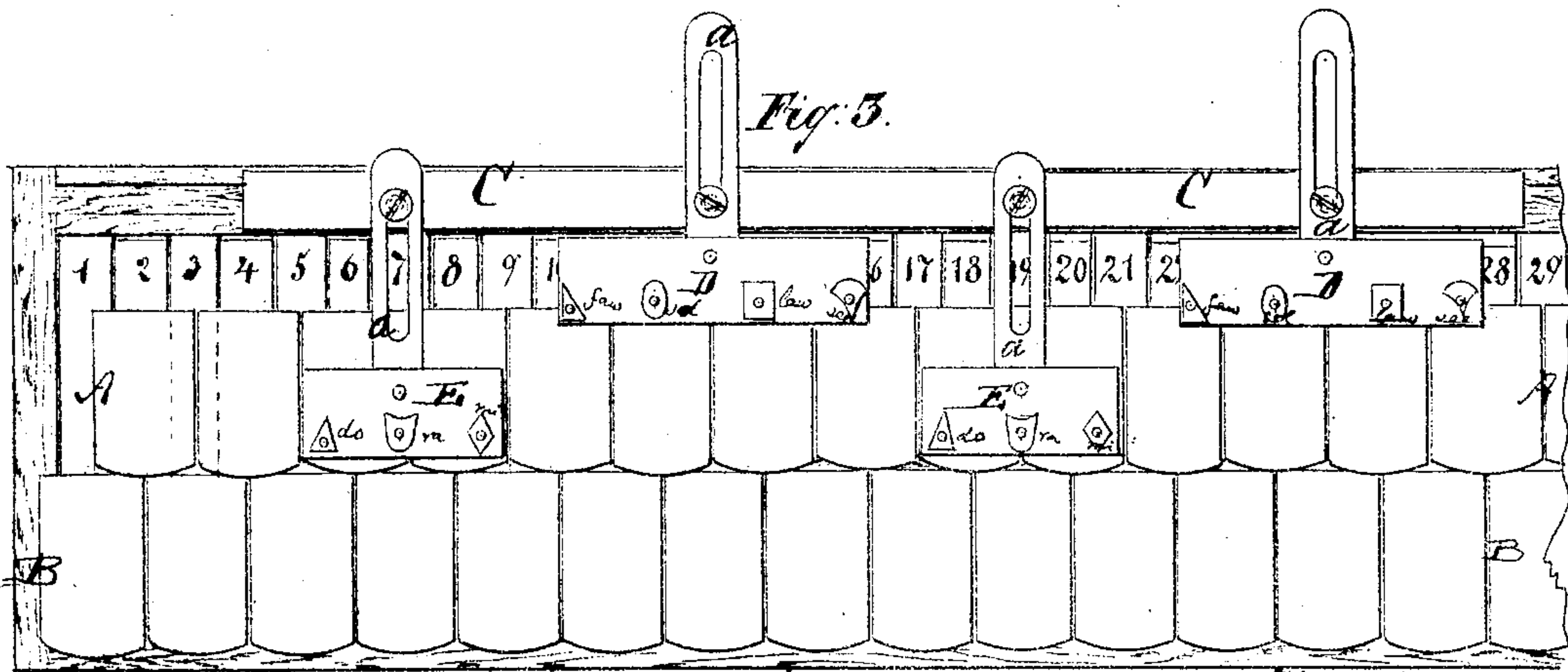


Fig. 3.



Witnesses:

G. Rattier.
Wm. H. L. Smith.

Inventor:

W. D. Edgar.

PER

Mumford
Attorneys.

[73.]

W.D. Edgar, Musical Instrument.

No. 119,335.

Patented Sep. 26, 1871.

Fig. 4.

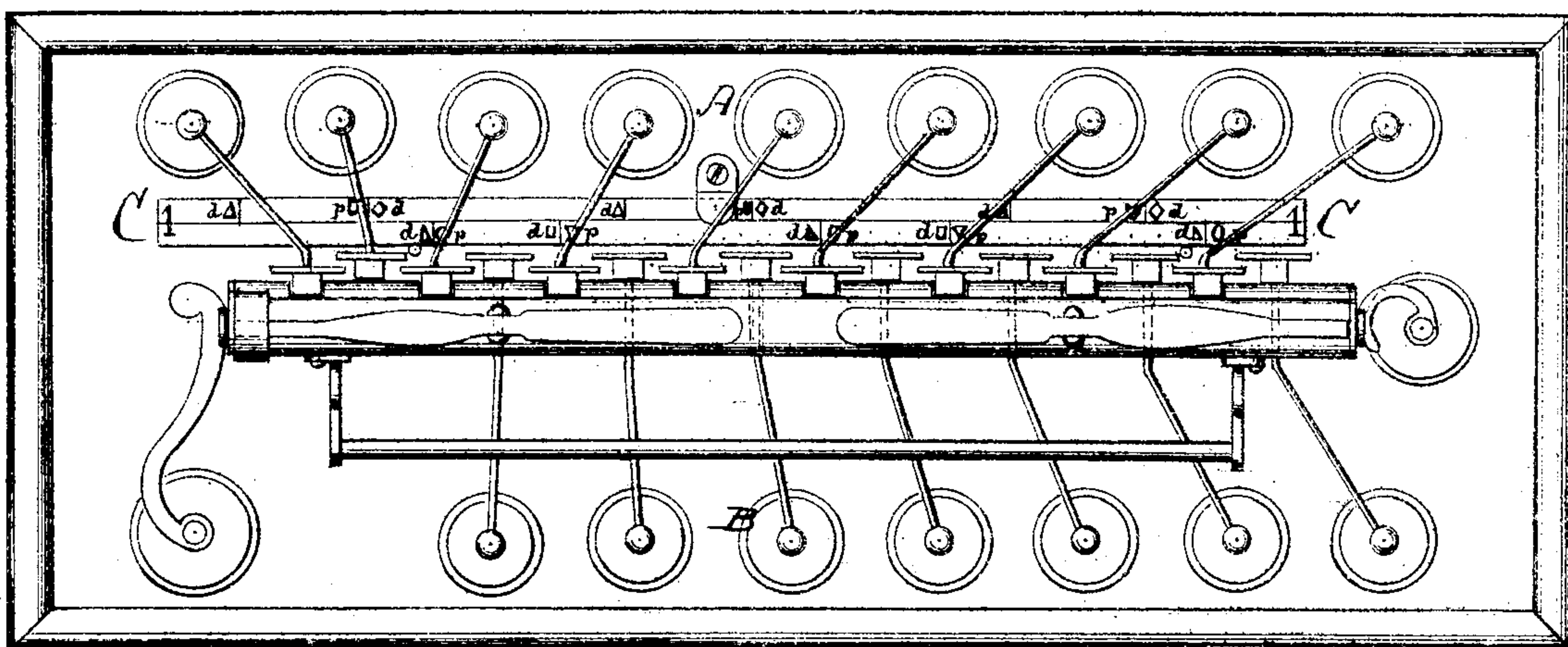
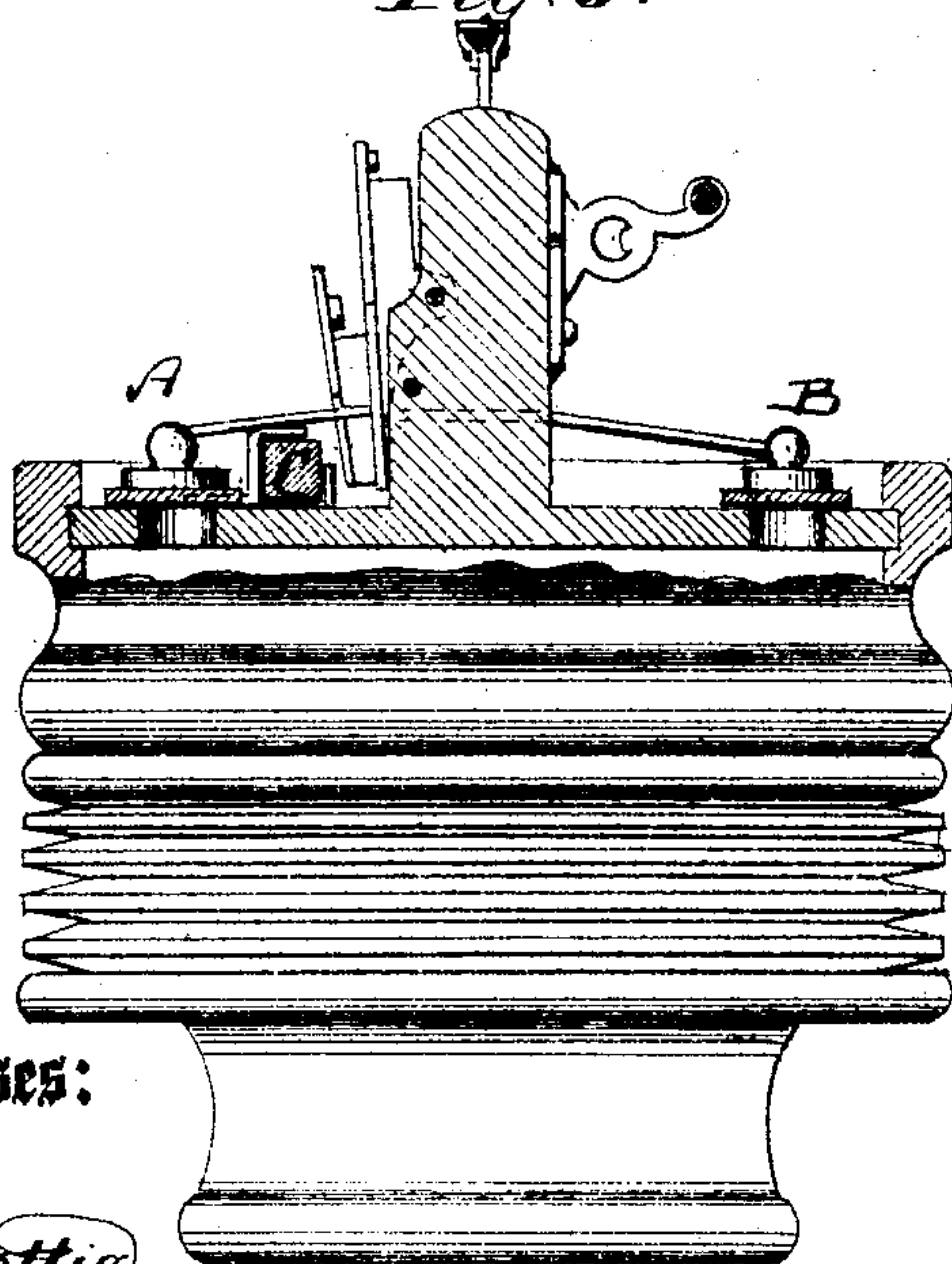


Fig. 5.



Witnesses:

C. Raettig.
Wm. H. C. Smith.

Inventor:

W. D. Edgar.

PER

M. M. L.

Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM D. EDGAR, OF OTTAWA, KANSAS.

IMPROVEMENT IN KEY-BOARDS FOR MUSICAL INSTRUMENTS.

Specification forming part of Letters Patent No. 119,335, dated September 26, 1871.

To all whom it may concern:

Be it known that I, WILLIAM D. EDGAR, of Ottawa, in the county of Franklin and State of Kansas, have invented a new and Improved Key-Board for Musical Instruments; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The object of this invention is to so arrange the key-board of organs, piano-fortes, melodeons, accordions, dulcimers, and all other musical instruments, that the keys can be struck in exact accordance with the prescribed notes in order to obtain the successive sounds of the several scales. The major scale has eight simple tones in every octave. The same are represented by the syllables do, re, mi, fa, sol, la, si. With the usual arrangement, however, the reading of music is made extremely difficult, and in fact ceases to be exact reading, as the notes are not set right on the staff. All the sharps and flats occupy in writing the places belonging by right to the full notes, and can only be known by constant reference to the explanatory marks at the beginning of the written music. By the aid of my invention these difficulties are to be entirely overcome, the keys on the key-boards, as well as the lines and spaces on the staff, being, for every new scale, named in accordance with the equivalent names of such scale in vocal music. My invention is based upon the proposition to give the full notes of every scale, however it may be started, the names do, re, mi, &c., which the same sounds of vocal music would have. With the same view I propose so to arrange the keys of the key-board that by the aid of an adjustable index the names of the keys will be varied in the same manner. The instrument will thereby become so simplified that every other scale can be played according to the same rule which plays the C-scale, and that it can be played upon by note instead of letters. My invention will be better understood by noticing that, while on the C-scale the notes C, d, e, f, g, a, b correspond, respectively, with the tones do, re, mi, fa, sol, la, si, the D-scale, if the tone do be applied to the first note, will call mi and si for f and C-sharp, yet the rule for fingering the latter scale is the same as for the first. Thus it is with every other

scale, the key-boards of our instruments being all arranged for the C-scale only, the others being only played by constant attention to the arbitrary signs of sharp and flat.

In the accompanying drawing, Figures 1 and 2 represent diagrams of my arrangement of key-board and adjustable register. Fig. 3 is a plan or top view of the key-board and register. Fig. 4 is a plan view of an accordion having my improved register. Fig. 5 is a transverse section of the same.

Similar letters of reference indicate corresponding parts.

The key-board I arrange with two rows, A and B, of keys, which I respectively denominate the primary and secondary range of keys. All the notes of the primary range are one tone apart. Those connected with the secondary range occupy the intermediate half tones, and are, therefore, also just one interval asunder. Thus the half tones can be produced by changing from one range to another at any point. The first row contains the notes A, B, C-sharp, D-sharp, F, G, A, &c. The second has the notes A-sharp, C, D, E, F-sharp, G-sharp, A-sharp, &c., as is clearly indicated in Figs. 1 and 2. The complete piano key-board shown in Fig. 3 is arranged on the same plan. A slide, C, moving longitudinally at the head of the key-board and carrying transversely-adjustable plates D and E, serves as the register or index for the several scales. Each of the plates D D is made long enough to embrace the width of four keys, while each of the others is only as long as to cover three keys. Marks for the several vocal sounds are painted or printed on the plates D E.

Whenever a scale is to be played whose key-note is in the lower range B the plates D are set for the upper or primary and the plates E for the lower or secondary range, as in Figs. 1 and 3. The bar or slide C can be moved to bring the sign of do over that key which commences the scale. Thus in Fig. 1 it is shown to be set on D, indicating that it is the D-scale. The keys indicated by the several marks can be played, the others not. Thus, it is seen that on said D-scale the keys F-sharp and C-sharp are correctly indicated for play. By moving the slide so as to bring the do-mark over the key E, F-sharp, or G-sharp, the same degree of correctness will be found. For scales whose key-notes are in the

upper range the plates D are moved down and E up, so that the do-mark on the plate E can be set on the proper key. The shanks *a a* of the plates D E are slotted to permit such lateral adjustment, or equivalent means are provided.

The plates with their marks indicate with great precision the keys to be played for each particular scale and permit music to be easily read and played in exact accordance with the writing.

It is evident that this arrangement is equally applicable to all musical instruments, even to accordions, whose keys are set on a different plan, as each key regulates two tones, according as the bellows is expanded or contracted. The slide C of the accordion is, therefore, not provided with the adjustable plates, but has four sides, each of which is marked in a different way, one for the primary, the other for the secondary row of expansion, the third for the primary, and the fourth for the secondary row of contracting

play. The adjustable plates D E may, if desired, also be dispensed with, either by having a double slide or by properly marking one slide, so that an experienced player can tell to what row of keys the marks pertain.

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

1. A key-board, having the two rows of keys A B arranged with the keys of one between the keys of the other, as described, to enable a full tone to intervene between every two keys of each row.

2. The slide C and plates D E combined, as described, to serve as a register, in the manner set forth.

WILLIAM D. EDGAR.

Witnesses:

WILLIAM S. DAY,
F. A. WILKINSON.