M. H. McCHESNEY.

Key-Board for Musical Instruments.

No. 161,806. Patented April 6, 1875.

Fig. 1.

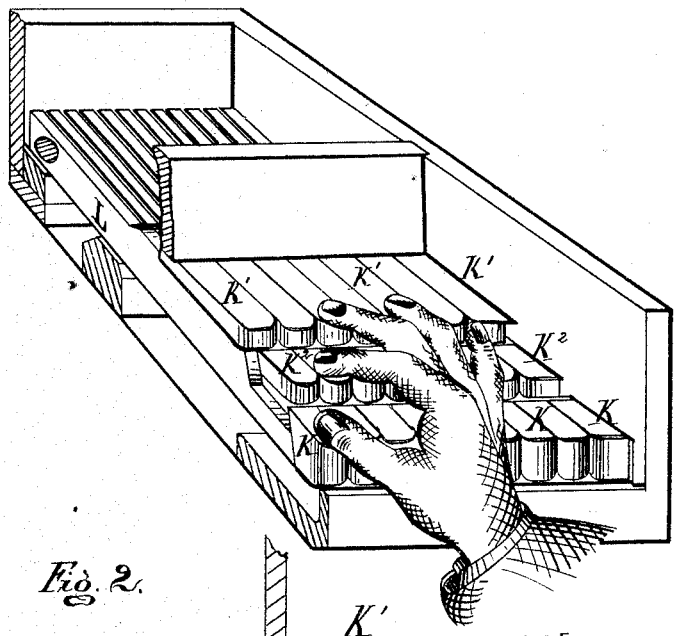

Fig. 2.

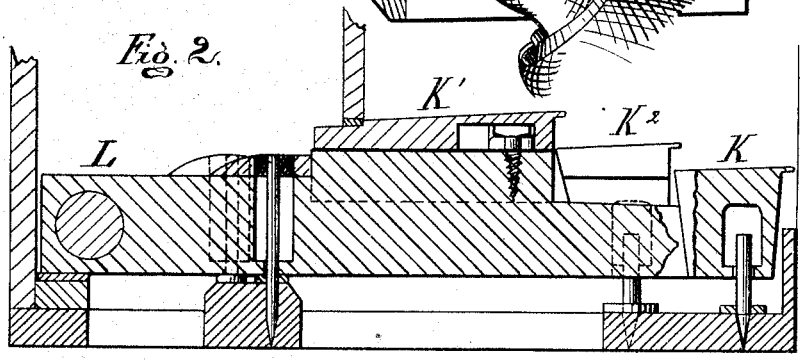

Fig. 3.

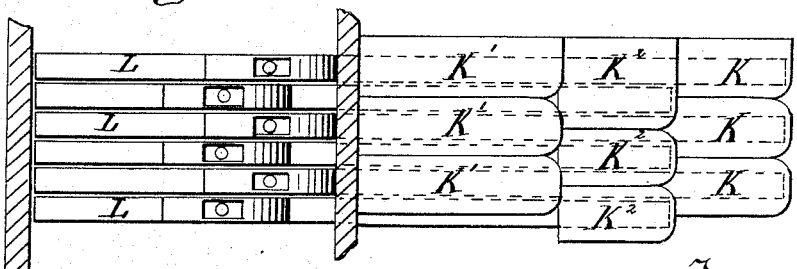

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Fig. 4

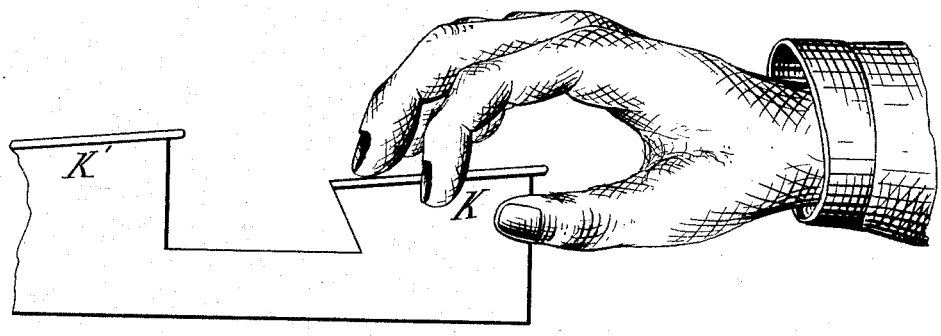
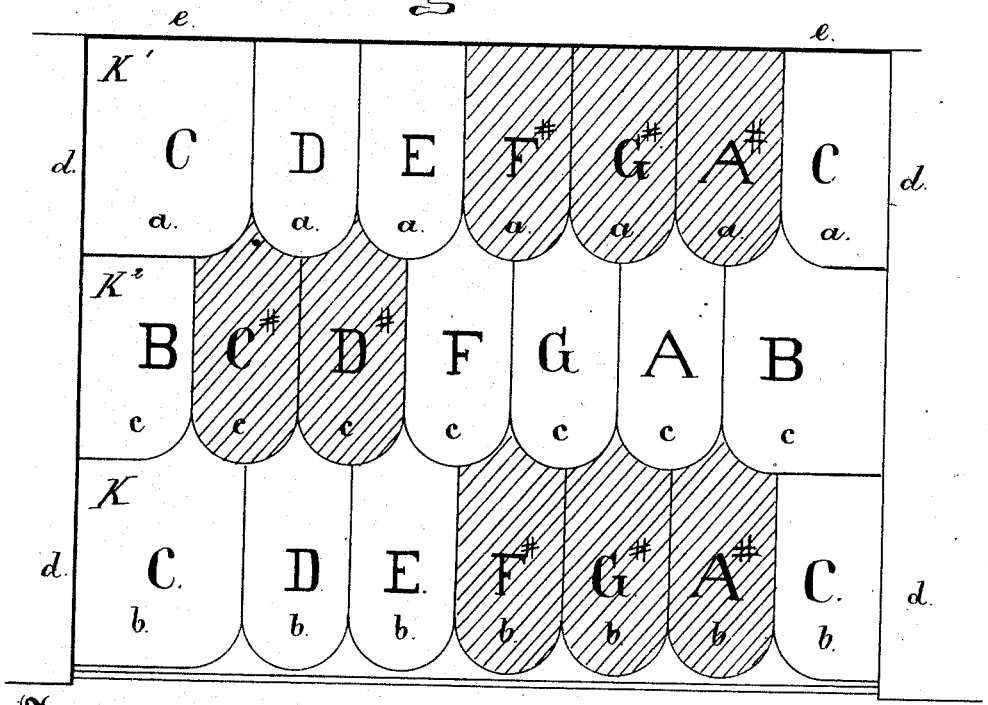


Fig. 5.



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UNITED STATES PATENT OFFICE.

MARTIN H. McCHESNEY, OF PONTIAC, MICHIGAN.

IMPROVEMENT IN KEY-BOARDS FOR MUSICAL INSTRUMENTS.

Specification forming part of Letters Patent No. **161,806**, dated April 6, 1875; application filed October 21, 1874.

To all whom it may concern:

Be it known that I, MARTIN H. McCHESNEY, of Pontiac, in the county of Oakland and State of Michigan, have invented an Improvement in Key-Boards for Musical Instruments, of which the following is a specification:

The first part of my invention relates to an improvement in the construction and arrangement of the key-board of a musical instrument, whereby the manipulation of the keys is rendered much easier than on the ordinary key-board; and it consists in the arrangement of the keys, all being uniform in size and shape, in two banks, those of the lower bank having a raised playing part behind and above the keys of the second key-board, giving the appearance of a third bank, while, in fact, the key-board is that of a single-bank instrument.

The second part of my invention relates to the inclination of the playing-surface of the keys backward, the highest point being nearest the performer, when properly seated at the instrument. By this arrangement or inclination of the surface of the key the ends of the finger-nails will not come in contact with it, and the hand is allowed to assume a more natural and correct position.

Figure 1, Sheet 1, is a sectional perspective view, showing the upper end of my improved key-board. Fig. 2 is a cross-section. Fig. 3 is a plan of a portion of the keys and action. Fig. 4, Sheet 2, is a side elevation of a lower key and its playing-surfaces, showing the position of the player's hand. Fig. 5 is a plan of one octave of the key-board, the keys being lettered.

In the drawing, K represents the keys of the lower or first bank, mounted on the front ends of the action-levers L. The rear ends of the keys K have a raised playing-surface, K^1 behind, and on a higher plane than the keys K^2 of the second bank, which are mounted on their action-levers intermediately between the keys K. The surfaces KK^1, it is evident, will strike the same note when either of said surfaces is struck. The surfaces of all the keys are inclined, as shown in Figs. 2 and 4, for the reason hereinbefore given. The keys next the key-blocks at the ends of the key-board are necessarily wider than the others, alternately, in the three banks, in order to close up gaps which would occur at the ends of the key-board, if they were uniform in width with the others.

In my invention the surface shape of all the keys of the key-board is the same, therein differing from the surface shape of the keys in the ordinary key-boards, inasmuch as the last-named are of two different shapes—viz., wide keys, which are white and contiguous to each other, and narrow keys, which are black and are not contiguous, but are separated by the white keys.

In my invention every key presenting the same surface shape and width renders the touch more uniform, secure, and certain. My arrangement of the keys is such that each bank contains both white and black keys—the white keys representing the so-called naturals, and the black keys the so-called flats and sharps, as shown in Fig. 5.

The upper and lower key-banks $K\,K^1$ being permanently connected, the letters C, D, E, F-sharp, G-sharp, A-sharp, and C of the musical alphabet are contiguous, both banks being alike. The middle bank contains the contiguous letters, B, C-sharp, D-sharp, F, G, A, and B.

By this arrangement of the musical alphabet any musical form whatsoever—a scale, an arpeggio, a chord, or a melody—can be executed by the same manipulation of the hand, in any key or signature. Each major scale is thus rendered a duplicate of each other major scale, each minor scale is rendered a duplicate of every other minor scale, and each chord is rendered a duplicate of every other chord of like component parts.

With the key-board heretofore in common use, each scale demands a different manipulation of the hand, different positions and extensions of the fingers.

If the learning of one scale be called a study, then the learning of twelve scales will require the learning of twelve studies, each requiring a different manipulation. The learning of the twelve minor scales will require the learning of twelve more studies, each different from the other.

Upon my key-board the twelve major scales,

being all manipulated and fingered alike, will demand the learning of but one study, and so with the minor scales; and if any passage or piece of music be played in a certain key, and then be transposed to any other key, all the movements of the hands and fingers required to execute the piece before transposition will be required to execute it after transposition, the manipulations being exactly the same in every detail.

By my arrangement of the keys all musical forms are made simpler and more systematic, and the student is enabled to become an expert performer in less than one-fifth the time that has heretofore been required, while in no case is the position of the hand more difficult, or the evolutions of the fingers more intricate, and in most cases they will be found easier and more natural.

What I claim as my invention, and desire to secure by Letters Patent, is—

The improved key-board herein described, consisting of a series of keys having the inclined and double faces K K^1 and the incline-faced keys K^2, all combined and arranged as and for the purpose described.

MARTIN H. McCHESNEY.

Witnesses:

H. S. SPRAGUE,

H. F. EBERTS.