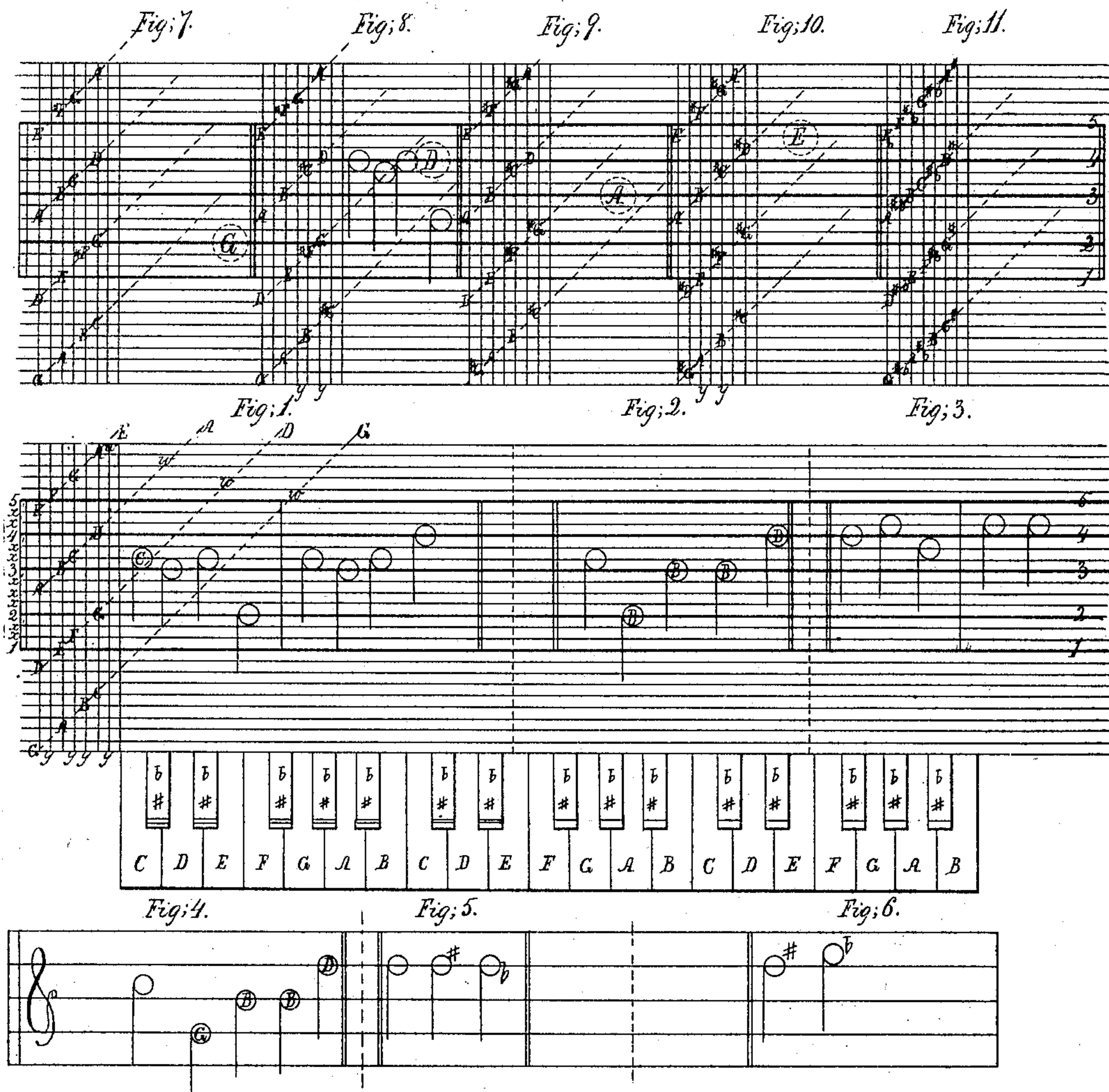


J. C. CLIME.
MUSICAL STAFF.

No. 52,534.

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Witnesses.
Wm. Albert Lister
John Parker.

Inventor.
J. C. Clime
By his attorney
H. Housley.

UNITED STATES PATENT OFFICE.

JOHN C. CLIME, OF PHILADELPHIA, PENNSYLVANIA.

MUSICAL STAFF.

Specification forming part of Letters Patent No. 52,534, dated February 13, 1866.

To all whom it may concern:

Be it known that I, J. C. CLIME, of Philadelphia, Pennsylvania, have invented an Improved Musical Staff; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, the diagrams in which represent my improved musical staff arranged for pieces in different keys and the ordinary staff with the same pieces.

In teaching music much time and patience are generally required to impress upon the minds of beginners, especially when young, the effect upon the notes of the signs \sharp and \flat , styled "sharps" and "flats."

With the ordinary staff the signs \flat \sharp \flat , which indicate three different notes, are frequently on the same line, Figure 5, while the same signs, when written as shown in Fig. 6, represent the same note. The pupil is thus apt to become confused and to mistake one note for another.

It has been my object to produce a staff in which the true position of each note in the scale and in relation to adjacent notes will be instantly observed, so that the pupil will not be obliged to pause in order to calculate the effect of signs to which he can only become accustomed by constant and long continued practice.

My improvement also greatly aids the pupil in quickly acquiring a correct knowledge of musical notation, and in learning the manner of fingering the strings of a violin.

I use a staff of five main lines, 1 2 3 4 5, Fig. 1, on which the signs indicating the notes E G B D F are placed, as in the usual staff. Between the main lines 1 2, 3 4, 4 5, however, are two supplementary lines, $x x'$, and between the main lines 2 3 are three supplementary lines, $x x' x''$, while in place of the ordinary clef-signs at the beginning of the staff are a number of parallel vertical lines, $y y$. At the point of junction of the staff-lines with the lines y are letters which indicate the names of the notes represented on the staff-lines, these letters being arranged in series of four letters each, and through each series is drawn a diagonal line, w , the distance between any two adjacent lines of the staff being intended to indicate the difference of a semitone between notes situated on these lines.

It will be seen that a piece of music written on the staff above described, Fig. 2, differs apparently but little from the same piece written in the same key, Fig. 4, on the ordinary staff, in both cases the notes E, G, B, D, and F being on the lines 1 2 3 4 5, while the notes F A C E are in the intermediate spaces. When, however, the pupil attempts to sing the piece as written on the ordinary staff, Fig. 4, he finds that there are two whole tones between the notes G and B, which are on adjacent lines, and therefore is naturally led to suppose that there will be two whole tones between the notes B and D, the signs of which are also on adjacent lines, whereas when the piece is written on the staff, Fig. 2, it is instantly apparent that there are three semitones only between the notes B and D. The distinction between the notes D, D sharp, and D flat, Fig. 3, is clearly shown, whereas when the same notes are indicated by the signs \sharp \flat on the usual scale, Fig. 5, the beginner is apt to confound them with each other, as before described.

By the use of a staff thus formed the pupil quickly learns the position of the semitones on the staff in the various keys, and is thus enabled, after a short course of study, to transpose a piece from one key to another. If, for instance, it is desired to transpose a piece from the key of C, Fig. 1, to the key of D, Fig. 8, the pupil selects a bar in the original piece in which the note C occurs, and then places this note in the same bar of the new key on the line D. The next note in the original piece is on the line B, one semitone below the note C. This note is therefore transferred to the line $C\sharp$, which is half a tone below the line D in the new key. The next note C is placed on the same line as the first, and the note G, which in the original key is two whole tones below the note B, is placed two whole tones below the note $C\sharp$ in the new key—that is, on the line A—this operation being continued in a like manner until the whole piece is properly arranged in the new key. It will be apparent that by a short practice at transposing in this manner the pupil becomes thoroughly acquainted with the variations in the positions of the semitones on the staff which occur in changing from one key to another.

When the pupil is learning to play on the

violin his attention is directed to the diagonal lines *w*, which represent the E, A, D, and G strings of the instrument and are marked as such, the letters through which each line extends indicating the notes which can be produced on that string of the instrument, the positions of the letters indicating the points where the fingers are pressed on the string and the distances these points are apart.

In playing a piece in the key of C, Fig. 1, for instance, it is apparent to the pupil that the first three notes, C B G, are produced on the A string, that he must press his finger on the string at a short distance from the end before drawing the bow to produce the note C, and that the string must be pressed nearer the end to produce the note B, while it is also apparent that the distance between the points B and C is less than between B and A, inasmuch as the interval between the latter notes is greater than between the former.

The higher or lower notes may be indicated above or below the staff in a similar manner to that in which they are arranged on the staff.

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

1. A musical staff consisting of the lines 1 2 3 4 5 of the ordinary staff, combined with the supplementary lines *x*, substantially as and for the purpose specified.

2. The diagonal lines *w*, arranged in respect to the staff and to the letters designating the notes on the staff substantially as and for the purpose set forth.

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

JOHN C. CLIME.

Witnesses:

CHARLES E. FOSTER,
W. J. R. DELANY.