

No. 864,051.

PATENTED AUG. 20, 1907.

J. W. VOSE.
PIANO KEY BASE.
APPLICATION FILED DEC. 17, 1906.

Fig. 1.

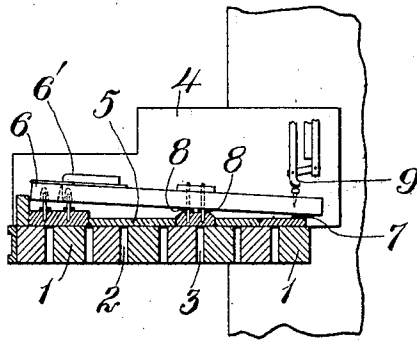
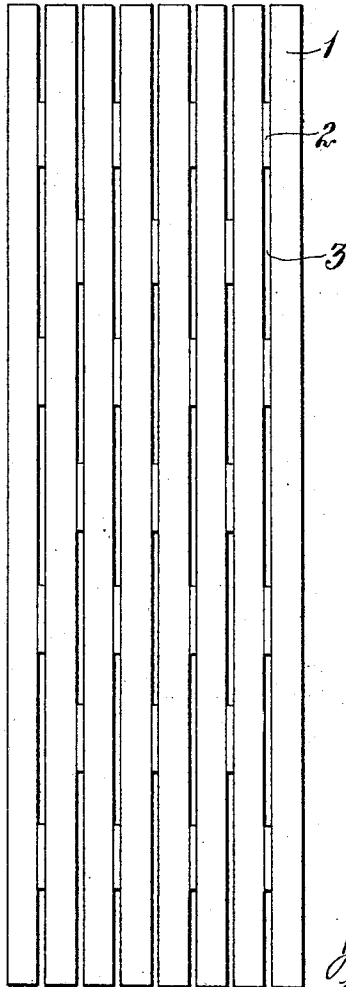


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JULIEN W. VOSE, OF EDGARTOWN, MASSACHUSETTS, ASSIGNOR TO VOSE & SONS PIANO COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

PIANO-KEY BASE.

No. 864,051.

Specification of Letters Patent.

Patented Aug. 20, 1907.

Application filed December 17, 1906. Serial No. 348,336.

To all whom it may concern:

Be it known that I, JULIEN W. VOSE, a citizen of the United States, and a resident of Edgartown, county of Dukes, Massachusetts, have invented certain new and useful Improvements in Piano-Key Bases, of which the following is a specification.

The invention relates to pianos and more especially to an improvement in the construction of that part of the piano known as the key base.

10 In pianos as usually constructed the keys are mounted and supported in position upon a comparatively light frame which is in turn secured upon the upper face of the key base. After the proper adjustments have been made between the keys and the actions operated
15 thereby, it is important that the positions of the keys with relation to the actions be exactly maintained. Since any change in or distortion of the upper surface of the key base will result in a change in the relation of some of the keys to the corresponding actions, it is
20 extremely important to the maintenance of the proper playing qualities in the piano that the danger of distortion or warping of the key base under changes in atmospheric conditions be reduced to a minimum or eliminated.

25 It is accordingly the object of the present invention to provide a construction of key base in which the expansion and contraction in the various parts of the base which may take place under varying conditions of temperature and moisture and of unequal exposure
30 of the different parts of the base will not distort or displace the upper surface of the base in such manner as to impair the adjustments of the keys with relation to the actions. To this end my key base is provided with parallel rows of vertical slots or spaces, the slots in each
35 row being separated by solid portions which are staggered transversely of the rows.

In practicing my invention I prefer to construct this key base of longitudinal strips or sections of wood united at intervals by spacing blocks interposed between the strips, the whole structure being firmly glued
40 together. The spacing blocks between the different sections are out of line or staggered transversely of the base so that at any point throughout the length of the base the base will be divided transversely into a series
45 of sections separated by intervening spaces. I also prefer to so arrange the spacing blocks that there are open spaces at each end of the base which extend in for some distance from the end of the base between the adjacent sections.

50 A key base thus constructed is sufficiently elastic transversely to allow of expansion or contraction even when such expansion or contraction is unequal at different points without warping or distorting the base vertically. The expansion or contraction may distort

the sections transversely but at any point throughout 55 the length of the base the comparatively narrow sections or sections and spacing blocks are separated by intervening spaces so that the lateral distortion may take place without any material change in the plane of the upper surface of the base. The parts on the
60 key-frame which support the keys and determine their positions and movements will therefore remain in fixed positions and the adjustments with relation to the actions will remain fixed and be practically unaffected by variations in the atmospheric conditions which would
65 impair the adjustments with key bases of the usual construction.

For the purpose of illustration I have shown in the accompanying drawings one form of key base embodying my invention.

70 In these drawings Figure 1 is a transverse sectional view through the key base showing the key frame and keys secured thereon and so much of the piano frame and one of the actions as is necessary to an understanding of the invention. Fig. 2 is a plan view of the key
75 base before it is inserted in the piano frame and before the usual molding is glued to the front side and ends of the base.

As shown in the drawings a key base consists of a series of sections or strips 1 and interposed spacing
80 blocks 2, the blocks and strips being firmly glued together to form a substantially integral whole. The strips 1 extend longitudinally of the key base and the spacing blocks 2 are arranged at suitable intervals between adjacent sections so that the series of compar-
85 atively long slots or spaces 3 are provided between adjacent sections which extend vertically through the base. The spacing blocks 2 are staggered or out of line transversely of the key base so that the key base is
90 divided transversely at any point into a series of comparatively narrow sections separated by intervening open spaces.

I prefer to arrange all of the spacing blocks at some distance from the ends of the sections 1 as indicated, so that each section is free to expand and contract inde-
95 pendently at the ends of the base. This allows each section of the base to be firmly united to the cheek pieces 4 of the piano frame without danger of any distortion of the key base by atmospheric changes.

The key base thus constructed is secured to the cheek
100 pieces 4 of the piano frame and the key frame 5 is secured to the upper face of the base in the usual manner. The keys 6 6' are mounted upon the key frame and are supported by the felt strips 7 and the felt washers 8 in the usual manner and are arranged to operate the actions
105 9 as is usual in piano construction.

As already explained any expansion or contraction of the key base which may be caused by variations in at-

mospheric conditions, will result merely in lateral distortion or change in the parts of the key base owing to the presence of the spaces 3 between the sections of the base at any point transversely of the base.

- 5 It will be understood that the relative proportions of the sections and the spaces between them may be varied to secure the best results.

What I claim and desire to secure by Letters Patent is:—

- 10 1. A piano key base consisting of longitudinal sections united by interposed spacing blocks which are staggered transversely of the base and leave an open space at each end of the base between each strip and the adjacent strip, substantially as described.
- 15 2. In a piano a key base consisting of longitudinal sections united by interposed spacing blocks which are staggered transversely of the base, a key frame secured to the base and keys mounted on the key frame, substantially as described.
- 20 3. In a piano, a key-base provided with parallel rows

of slots, the slots in each row being separated by solid portions which are staggered transversely of the base, and keys supported on the base, substantially as described.

4. A piano key-base consisting of longitudinally extending strips of wood separated at intervals by spacing blocks which are staggered transversely of the base and are firmly glued between the strips, substantially as described. 25

5. In a piano, a key base consisting of a unitary wood structure adapted for attachment to the piano and provided with a multiplicity of openings throughout its area, thereby rendering it transversely elastic at all points throughout its area, and keys supported on said key base. 30

6. In a piano, a wood piano key base divided into a multiplicity of transversely elastic sections throughout its area, and a series of keys supported on said key base. 35

In witness whereof, I have hereunto set my hand, this 10th day of December 1906.

JULIEN W. VOSE.

In the presence of—

IRA L. FISH,
KATHARINE A. DUGAN.