

No. 753,756.

PATENTED MAR. 1, 1904.

H. S. STRAUSS.  
KEY ATTACHMENT FOR PIANOS.

APPLICATION FILED JAN. 29, 1903.

NO MODEL.

Fig. 1.

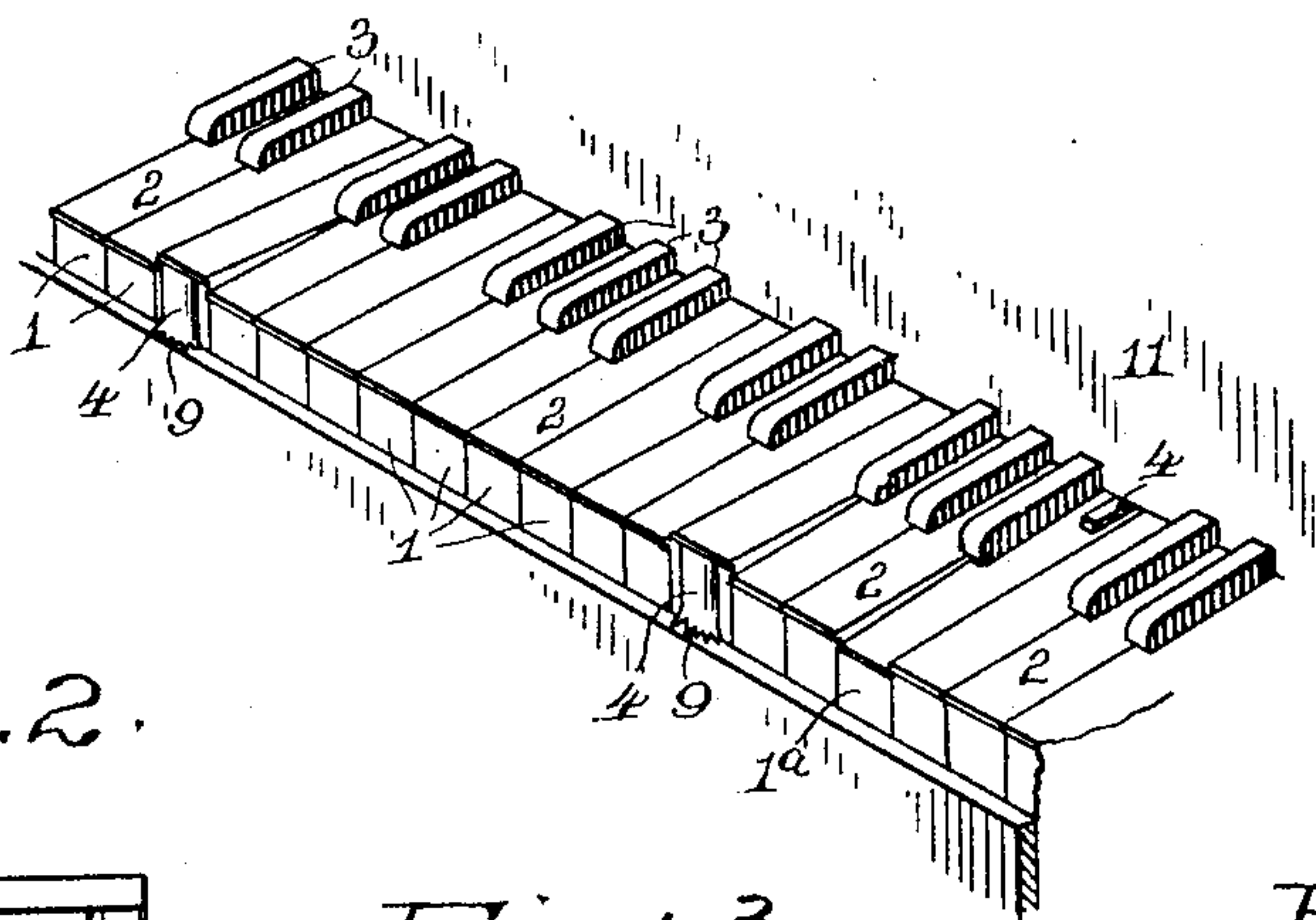


Fig. 2.

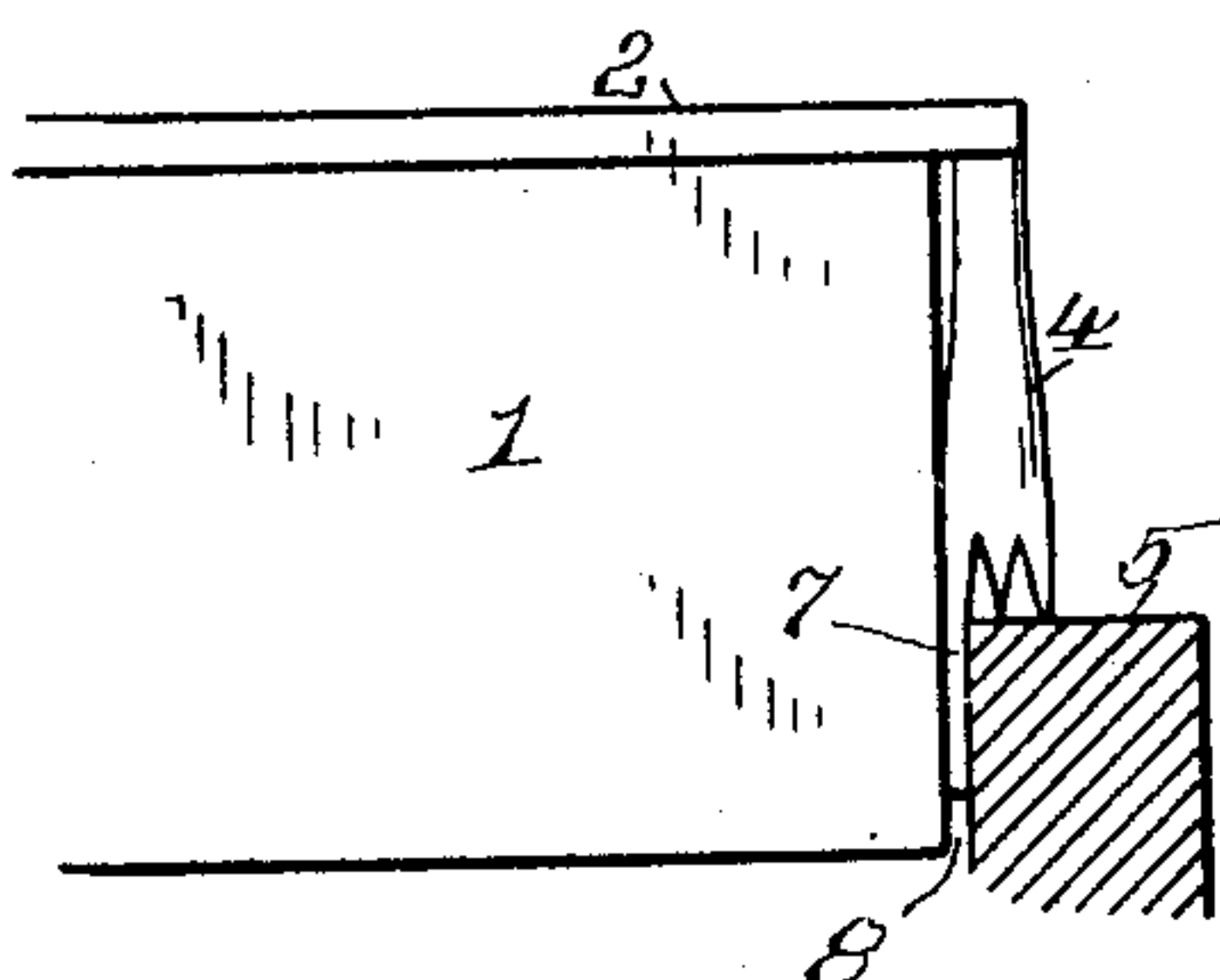


Fig. 3.



Fig. 4.



Fig. 5.

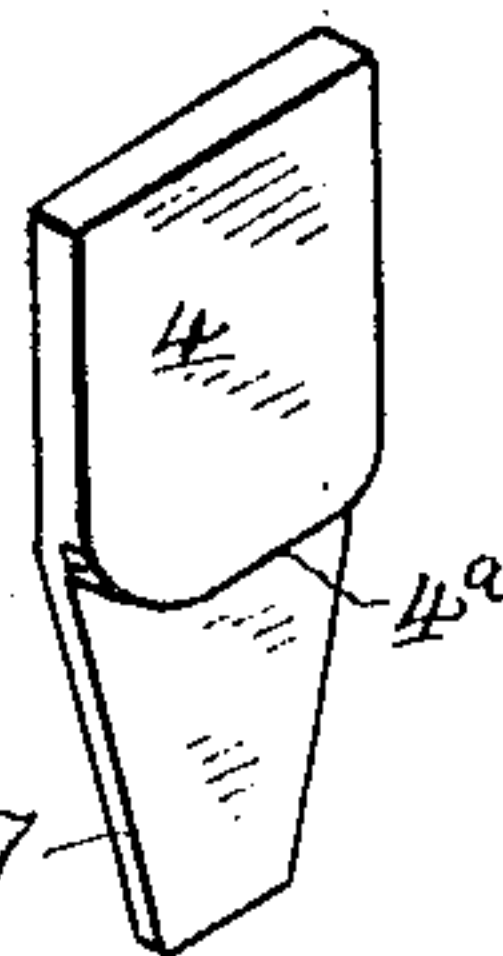


Fig. 8.

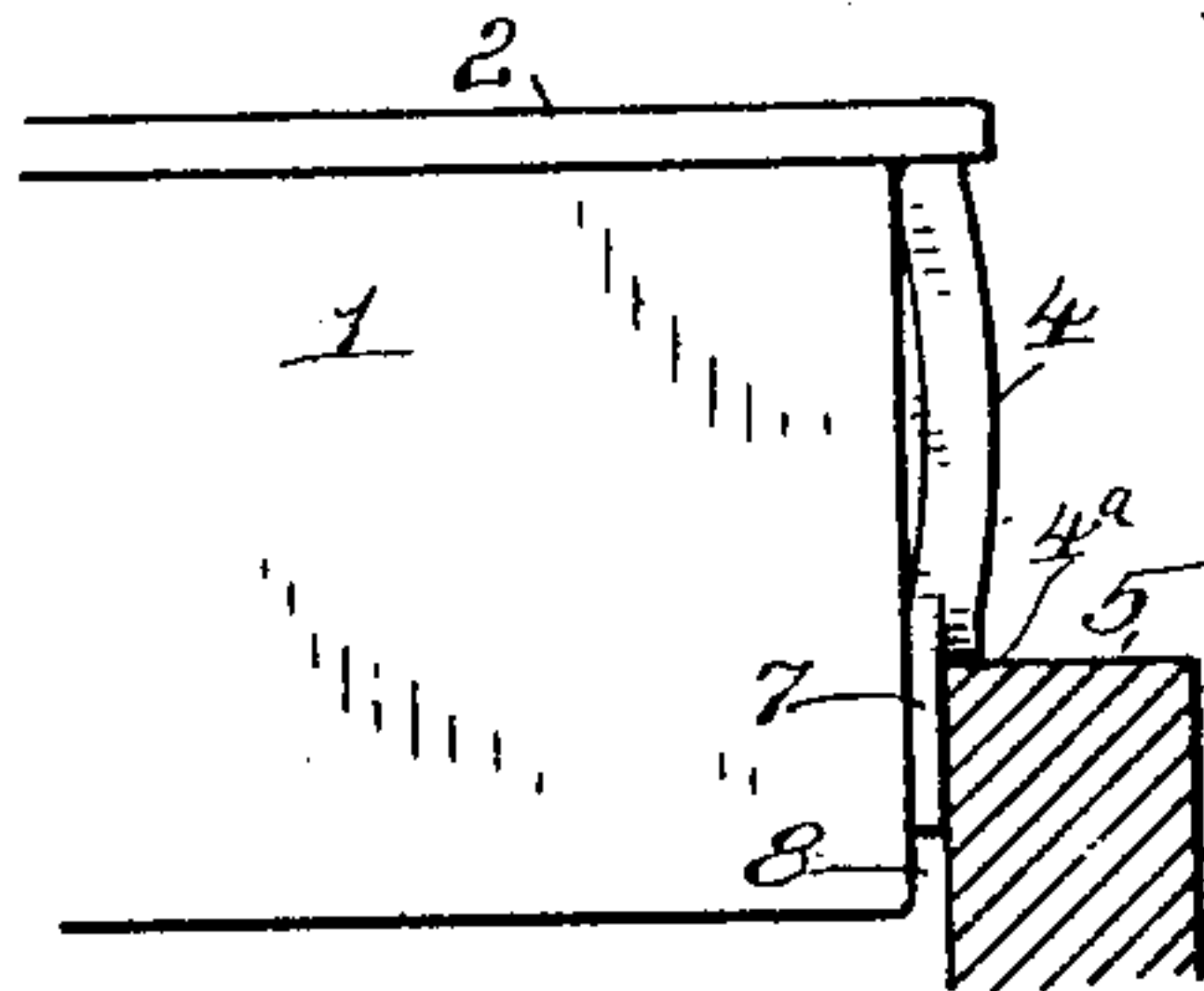


Fig. 6.

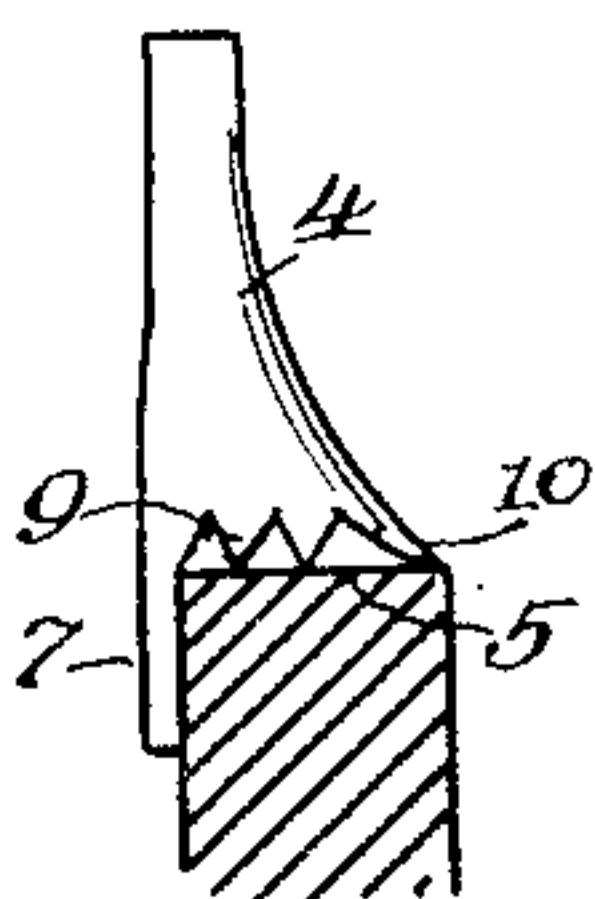


Fig. 9.

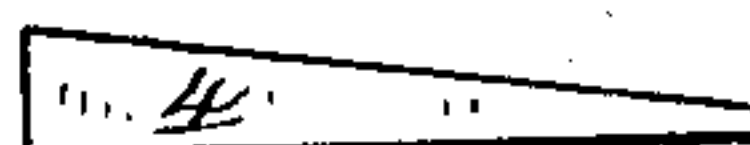


Fig. 7.



Fig. 10.

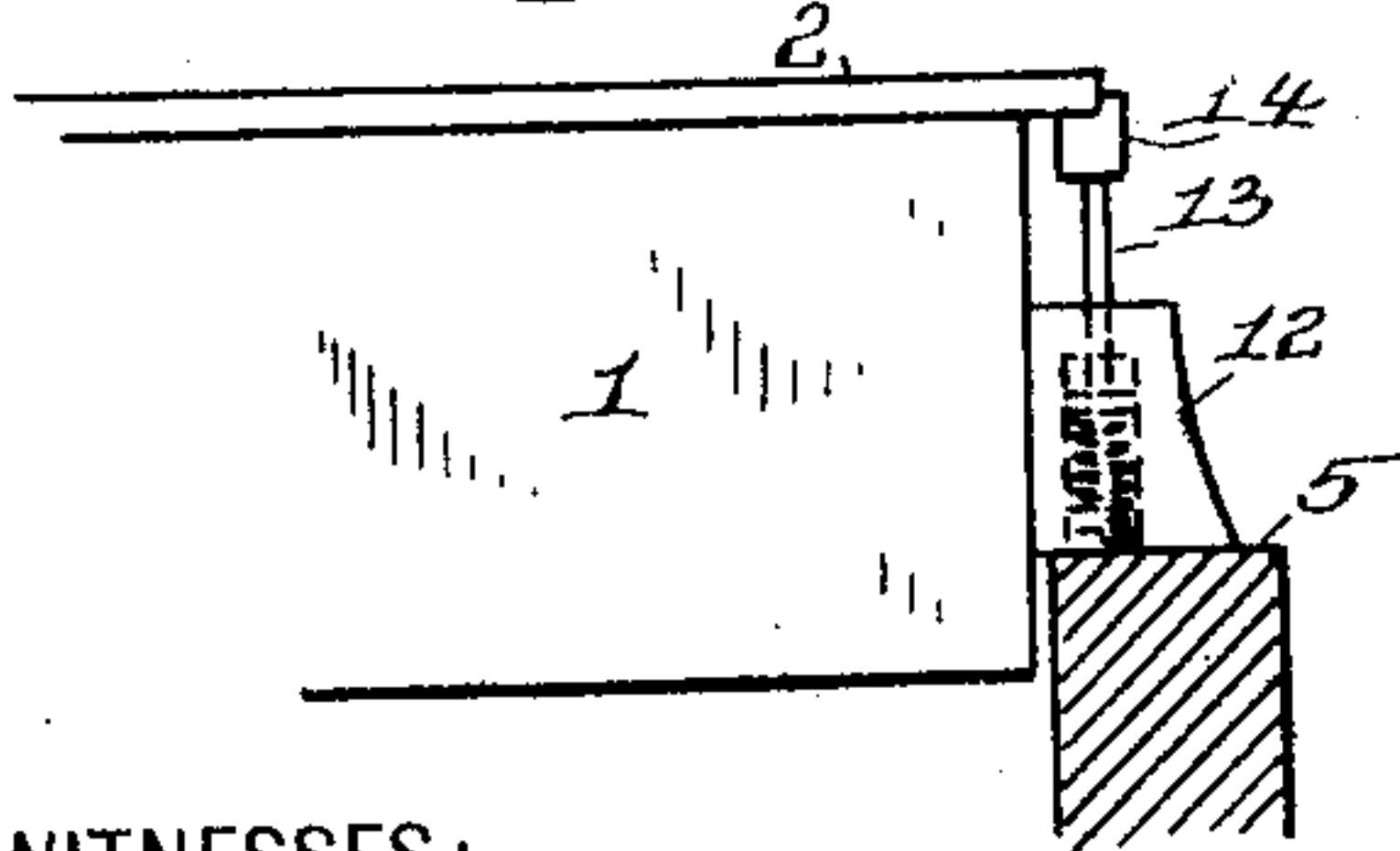
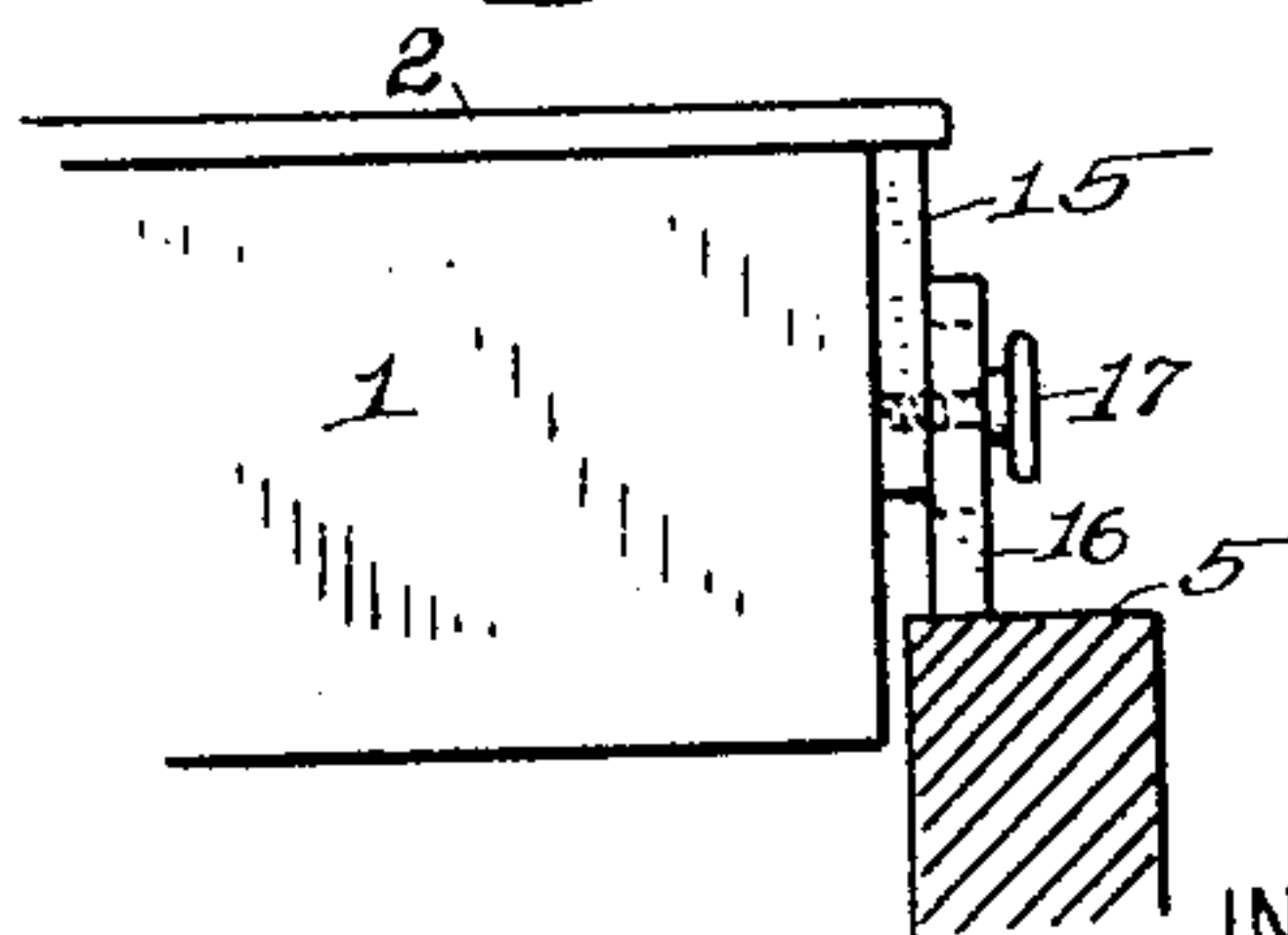


Fig. 11.



WITNESSES:

H. A. Lamb.  
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Fig. 12.

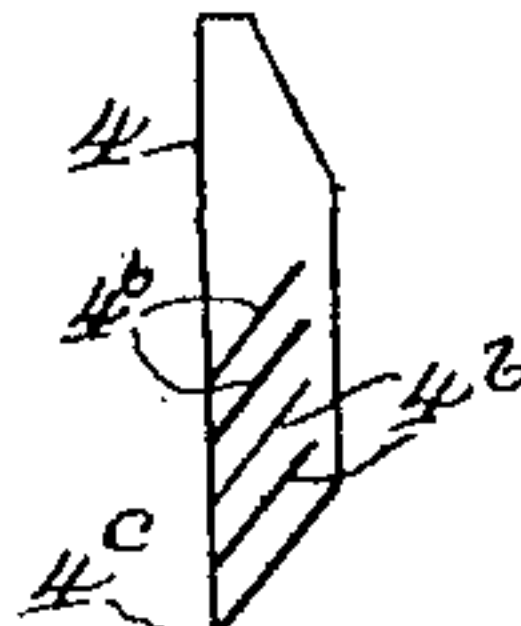
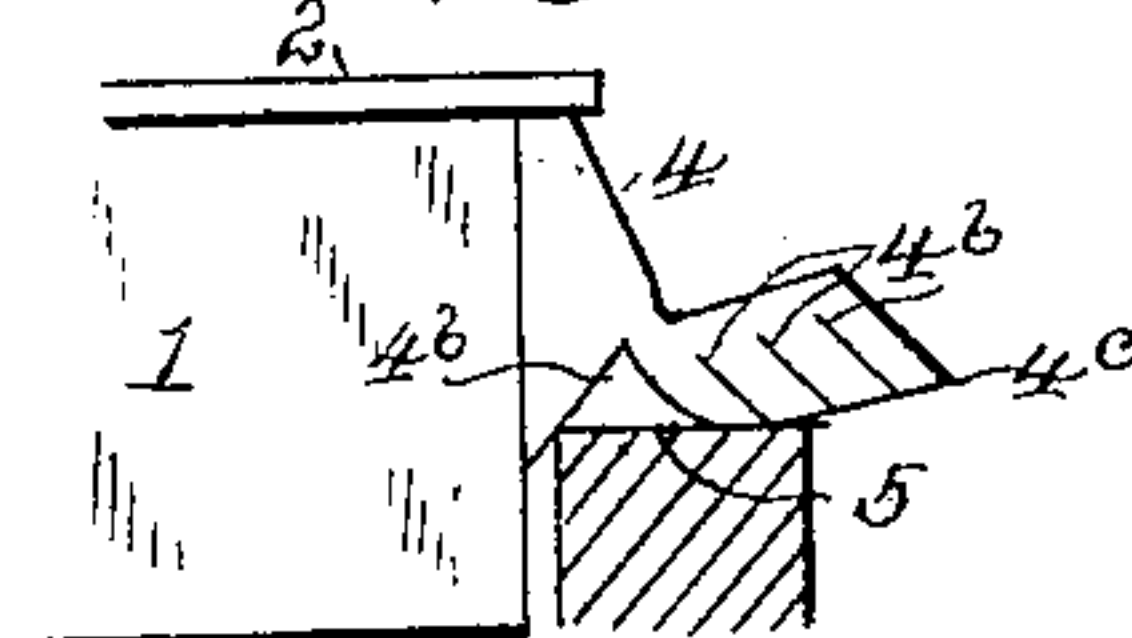


Fig. 13.



INVENTOR:

Harry S. Strauss.

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# UNITED STATES PATENT OFFICE.

HARRY S. STRAUSS, OF DERBY, CONNECTICUT.

## KEY ATTACHMENT FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 753,756, dated March 1, 1904.

Application filed January 29, 1903. Serial No. 141,023. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY S. STRAUSS, a citizen of the United States, and a resident of Derby, in the county of New Haven and State of Connecticut, have invented certain new and useful Key Attachments for Pianos, of which the following is a specification.

My invention relates to pianos, its object being to remind beginners when and where to strike the sharps and flats on the keyboard. It is a well-recognized fact among music teachers that one of the most difficult things to impress upon pupils' minds is to locate and sound the sharps and flats at the proper time. As their fingers are normally over the natural keys and the sounding of these are uppermost in their minds, they have to be continually reminded where the key is located for the sharp or flat.

My invention consists in an attachment that will operate to silence any one of the natural keys in close proximity to the sharp or flat key, so that when the finger comes in contact with a natural key that has been silenced it will instantly remind the player that a sharp or flat is needed and without loss of time the hand is moved over to the proper key.

To enable others to understand my invention, reference is had to the accompanying drawings, in which—

Figure 1 represents a broken view of a piano-keyboard, showing two keys silenced by raising them and one key silenced by depressing it. Fig. 2 is an enlarged detail broken view of one of the natural keys, broken sectional view of the front board of the piano, and a stop interposed between said board and the overhanging ivory facing of the key. Fig. 3 is a full-size view in perspective of the stop shown at Fig. 2. Fig. 4 is a rear elevation of the same. Fig. 5 is a perspective view of a solid-rubber stop adapted for use as a key-stop. Fig. 6 is a broken sectional view of the front board of the piano, showing a modified construction shown at Figs. 2, 3, and 4. Fig. 7 is another modification of the stops shown at Figs. 2, 3, and 4. Fig. 8 is an enlarged detail broken view of a natural key, broken sectional view of the front board of the piano, with the key-stop similar to the one shown at Fig. 5

interposed between the key and front board of the piano. Fig. 9 is a view of a wedge-shape stop. Figs. 10 and 11 are enlarged detail broken side elevations of natural keys, showing modified constructions of the key-stop. Fig. 12 is a view of a stop having transverse kerfs formed therein, each to represent the different heights of the ivory plate of the key from the front board of the piano. Fig. 13 is an enlarged broken detail view of a natural key and broken sectional view of the front board with the stop shown at Fig. 12 interposed between the key and front board.

Its construction and operation are as follows:

1 represents the natural keys; 2, the ivory plates covering said keys; 3, the sharp and flat keys.

4 is a stop adapted, Figs. 1 and 2, to be inserted between the overhanging ivory plate 2 of the natural keys and the upper face 5 of the front board of the piano. As this distance varies in different pianos, it is necessary when using the stop at this point to compensate for this difference. The stops shown at Figs. 1, 2, 3, 4, and 6 are sections of rubber tubing like that shown at Fig. 7; but while this latter is left round the others are compressed at their upper end and the core 6 inserted therein, so as to make it firmer or stiffer at that point. The tailpiece 7 is adapted to be inserted in the narrow opening 8, Fig. 2, between the end of the key 1 and the inside vertical face of the front board. The teeth or serrations 9 are formed on the bottom of the stop to impart a certain degree of flexibility, and the depth of these teeth is supposed to represent the difference in the height between the under side of the ivory plate 2 and the board 5. Therefore these teeth will readily give and spread when it is necessary to crowd in the stop. At Fig. 6 another tailpiece, 10, is shown in front of the stop, which in some instances could be used to keep the stop upright and prevent its being forced from under the ivory plate 2.

The stop shown at Fig. 5 is made of solid rubber and will spring or bend outward in its body portion when placed under a key where the distance from the ivory plate and the front board is less than the distance from the upper



end of the stop and its shoulder 4<sup>a</sup>, as shown at Fig. 8.

Instead of holding the keys up, as before described, they may be held down or depressed by inserting the wedge-shape stop (shown at Fig. 9) between the vertical board 11 and the upper rear portion of the key. This will depress the key, as shown by key 1<sup>a</sup>, Fig. 1. In either case, however, the keys are silenced.

The modification shown at Fig. 10 consists of the base 12, adapted to rest on the front board 5. 13 is a spring-actuated rod whose head portion 14 engages the under side of the ivory plate.

The modification shown at Fig. 11 shows double plates. 15 and 16 are two pieces, each shorter than the shortest distance between the ivory plate of the key and the front board, with the tightening-screw 17 to firmly bind them together. However, the rubber stops previously described are the simplest and cheapest devices.

The stop shown at Figs. 12 and 13 consists of the solid-rubber body 4, having the transverse kerfs 4<sup>b</sup> formed therein. This will give as many different positions as there are points each side of said kerfs—for instance, when used for a key having the greatest distance from the front board 5 it will be inserted as shown at Fig. 12, the lower wedge-shape edge 4<sup>c</sup> being inserted in the narrow opening between the vertical faces of the key and front board. When used for a key having the least distance, the stop is opened at the first kerf, as shown at Fig. 13, and for all of the intermediate distances between the highest and lowest keys one or the other of the intermediate kerfs are opened corresponding to such distance.

While I show at Fig. 9 a wedge-shape construction adapted to depress a key, this construction is not absolutely essential, as any of the other devices, except those shown at Figs. 10 and 11, would serve the purpose. When necessary to silence a key from the front end, the essential requirement is that the device or stop should be made to adjust itself or be adjusted to the varying distances between the under side of the ivory plate and the front board of the piano. If so desired, the wedge-shaped construction shown at Fig. 9 could be inserted in the narrow space 8 between the vertical face of the natural key and the inner vertical face of the front board 5.

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

1. In combination with a piano, a removable flexible stop for temporarily holding a key out of action, said stop comprising a body portion divided into sections to suit the varying heights of keys, one or more sections interposed between the key and a stationary part of the piano, for the purpose set forth.

2. In combination with a piano, a removable flexible stop for engaging any one of the keys on the keyboard, said stop comprising a body portion interposed between the key and a stationary part of the piano, for the purpose set forth.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 26th day of January, A. D. 1903.

HARRY S. STRAUSS.

Witnesses:

W. J. TANNER,  
C. STERLING.