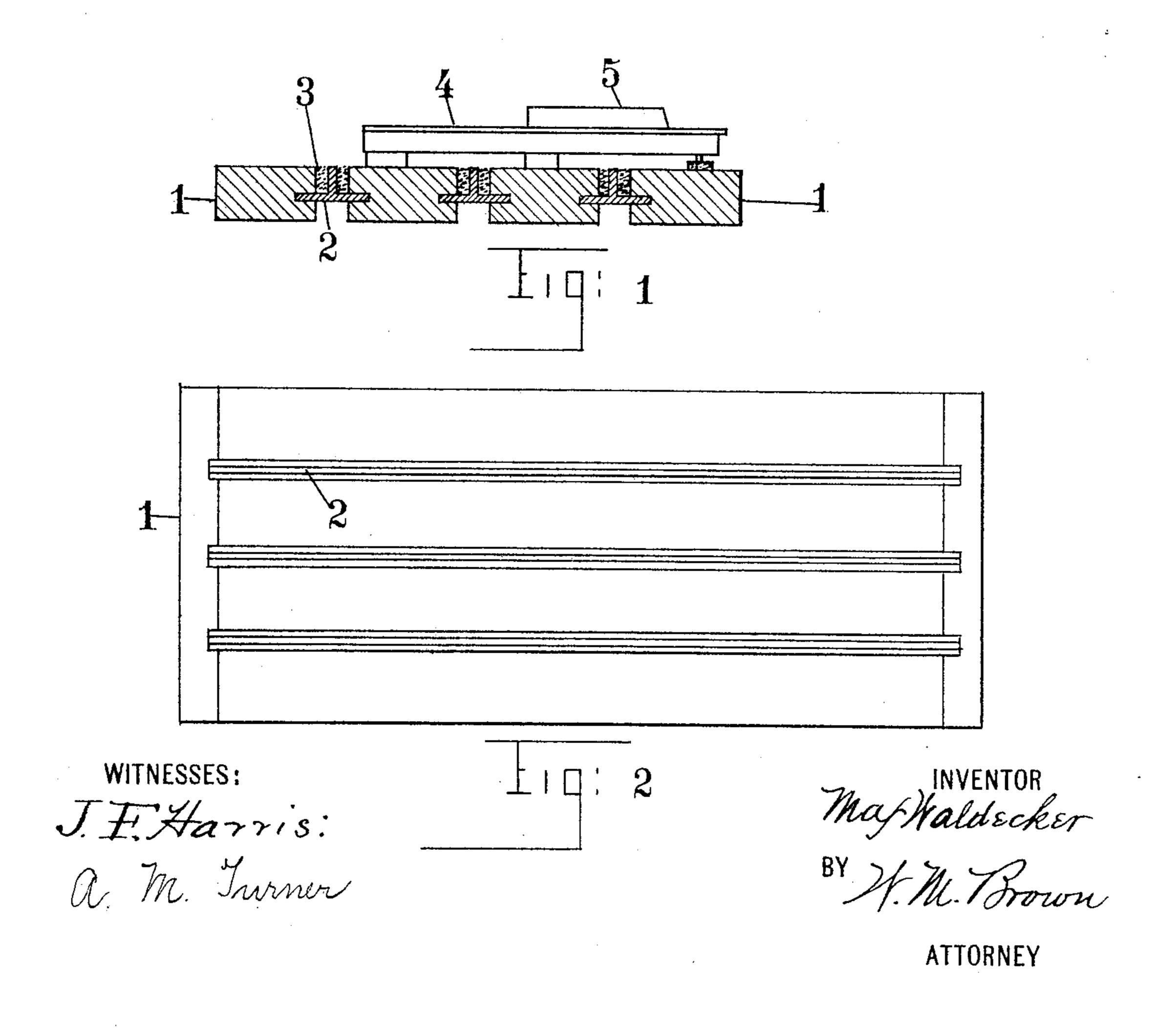
(No Model.)

## M. WALDECKER. PIANO KEYBOARD BOTTOM.

No. 583,103.

Patented May 25, 1897.



THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

## United States Patent Office.

MAX WALDECKER, OF ALBANY, NEW YORK.

## PIANO-KEYBOARD BOTTOM.

SPECIFICATION forming part of Letters Patent No. 583,103, dated May 25, 1897.

Application filed April 4, 1896. Renewed December 22, 1896. Serial No. 616,687. (No model.)

To all whom it may concern:

Be it known that I, MAX WALDECKER, a citizen of the United States, residing at Albany, Albany county, New York, have invented certain new and useful Improvements in Piano-Keyboard Bottoms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

The object of my invention is to produce a new and improved key bottom board for pianos.

In the drawings, Figure 1 shows a transverse sectional view of my key bottom board with a side view of two piano-keys, and Fig. 2 a plan view of my key bottom board.

Heretofore key bottom boards have been made by forming the completed board of strips tongued and grooved together and by inserting wooden strips between them, but it has been found in practice that all such boards would, after considerable use, spring and sag, throwing the keys out of line and adjustment. To remedy this trouble is the object of my invention.

The numeral 1 shows a bottom keyboard composed of strips of well-seasoned material, wood preferably, having grooves formed in their edges.

2 shows a metal **T**-piece let into said grooves, the vertical part or stem of the **T** rising between the boards, and in order to prevent rattling I stuff the spaces between the stem and the strips with a cushioning material, preferably felt. The keys rest on this improved board and act as they do in ordinary pianos, but the metal **T**-pieces stiffen the board so it cannot spring or sag.

4 shows one of the longer or white keys, and 5 one of the shorter or black keys.

In Fig. 1 I have shown the space between the strips forming the board 1 very much more spread than they are in actual practice, and have done this in order to make the drawings clear and to clearly show the cushion or 50 felt 3. In practice the strips are forced very near to the stem of the T-irons, so that but very little space is left. I use any material in forming the T-pieces, prefering iron, however, on account of its cheapness.

Having described my invention, what I claim is—

1. A keyboard-bottom for pianos and similar instruments consisting of strips arranged to receive and having a metallic **T**-piece be- 60 tween them and united to form a complete board substantially as described.

2. A key-base bottom for pianos and similar instruments consisting of a base stiffened by a metallic **T**-piece arranged in connection 65 with the base substantially as described.

3. A key-base bottom for pianos and similar instruments consisting of a base stiffened by a metallic T-piece arranged in connection with the base, and a cushioning material arranged between the T-piece and the base to prevent jar or rattle substantially as described.

4. A keyboard-bottom for pianos and similar instruments consisting of strips arranged 75 to receive and having a metal strengthening strip between them and united to form a complete board substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

MAX WALDECKER.

Witnesses:

J. F. HARRIS, A. M. TURNER.