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FLANGE FOR PIANO ACTIONS.
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FLANGE FOR PIANO-ACTIONS.


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To all whom it may concern:

Be it known that I, JULIUS N. BROWN, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Flanges for Piano-Actions; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form a part of this specification.

This invention relates to an improved form of piano action flange and flange-comb adapted to be mounted upon the hammer-rail of a piano, said flange being formed to engage around an edge of the flange-comb and be removably clamped thereon in an aligned position to removably hold the pivot-pin of a hammer clamped between clamping jaws integrally formed on said hammer-rail and flange, thus affording a flange readily permitting the removal of a hammer or shifting of the flange along the flange-comb to any desired position thereon by simply releasing a retaining screw.

It is an object of this invention to provide a flange for a piano action adapted to be removably clamped in aligned position upon a flange-rail to pivotally hold a piano hammer in position upon a hammer-rail.

It is also an object of this invention to construct a combination flange-comb and flange adapted to removably and pivotally hold a piano hammer upon a hammer-rail. It is furthermore an object of this invention to produce a hooked flange having a clamping jaw thereon adapted to be removably secured in an aligned position upon a flange-rail to co-act with one of a number of notched clamping jaws forming a part of said flange rail to releasably and pivotally connect a piano hammer to a hammer-rail. It is an important object of this invention to create a flange for a piano action simple, inexpensive and of effective construction adapted to co-act with a flange member secured to the hammer-rail of a piano to movably and releasably hold piano hammers in position upon a hammer-rail.

Other and further important objects of the invention will be apparent from the disclosures in the drawings and specification. The invention (in a preferred form) is illustrated in the drawings and hereinafter more fully described.

On the drawings:

Figure 1 is a side elevational view of a piano action, showing an improved form of flange and flange-rail, embodying the principles of this invention, used to pivotally hold a hammer in position upon a hammer-rail.

Fig. 2 is a fragmentary front elevation of one end of a hammer-rail showing a flange-rail and flanges mounted thereon, with parts omitted to show the construction.

Fig. 3 is an enlarged section taken on line 3--3, of Fig. 2, with parts shown in elevation.

Fig. 4 is a fragmentary detail view taken on line 4--4, of Fig. 2, with the hammer-butt omitted.

Fig. 5 is a fragmentary front elevational view of a modified form of hammer-rail showing a flange mounted thereon.

Fig. 6 is a section taken on line 6--6, of Fig. 5, with parts shown in elevation.

As shown on the drawings:

The piano action shown in Fig. 1, is of the ordinary type and comprises a hammer-rail 1, to which are connected by any suitable means a damper 2, a whip or wippen 3, a jack 4, and a back-check 5. Pivotally mounted upon the upper front margin of the hammer-rail 1, by means of a flange and flange-plate embodying the principles of this invention, is the hammer-butt 6, of a piano-hammer 7.

The hammer-rail 1, is made of wood or any other suitable material, and has formed in the front face thereof, a short distance from and parallel to the top, a continuous longitudinally extending groove 8, forming a molding 9, extending from one end of the hammer-rail to the other end thereof along the upper front margin of said hammer-rail.

Secured upon the front face of the molding 9, by means of retaining screws 10, is a flange-comb, flange-rail or flange-plate 11, made of steel or other suitable metal, countersunk to receive said screws 10, and of a width sufficient to permit the lower edge thereof to extend beyond the lower edge of the molding 9, so that the upper side of said flange-rail extends above the upper edge of the molding. Integraly formed in the plane of the flange-rail 11, along the upper side thereof are a plurality of equidistantly spaced lugs or jaws 12, each having a transverse groove or channel 13, formed in the front face thereof near the upper or
outer end and parallel to the top and bottom edges of said flange-rail. Drilled in the flange-rail 11, between the screws 10, and the upper side of the flange-rail are a plurality of longitudinally aligned apertures 14, one disposed directly in line with each of the jaws 12. Removably secured upon the flange-rail 11, over each of the jaws 12, and its corresponding aperture 14, is a flange clip or clamp made of steel or other suitable metal and embracing a body portion or an attaching spring plate 13, having an elongated slot 16, disposed longitudinally and centrally therein adapted to register with one of the apertures 14, when the flange is in position. One end of the flange is bent downwardly and inwardly to form a hook 17, adapted to engage around the curved projecting lower edge of the flange-rail, while integrally formed on the other end thereof is a clamping lug or tongue 18, of reduced width equal to the width of the jaws 12. To make the flange act as a resilient clamping member it is slightly arched and bent between the ends thereof as designated by the numeral 19, to rigidly but removably clamp the pivot-pin 20, of a hammer-butt 6, seated in one of the channels 13, parallel to the hammer-rail 1. A fastening or mounting screw 30, is removably engaged through each slot 16, and through one of the apertures 14, of the flange-rail and is threaded into the hammer-rail, the head of the fastening screw contacts the arched portion 19, and tends to straighten the same out thus tightly clamping the pivot-pin 20, in the channel 13, between the jaw 12, and the respective clamping lug 18, of the flange, to pivotally hold a hammer-butt in position upon the hammer-rail 1, properly positioned at right angles to the hammer-rail.

In the modified form of the device shown in Figs. 5 and 6, the construction of the flange is similar to that already described. The hammer-rail 1, is however provided with a longitudinally disposed groove 22, narrower than the groove 8, forming a molding 23 between the groove and the top of the hammer-rail. Positioned upon the molding 23, is a flange-plate 24, made of steel or other suitable metal and of a length sufficient to permit the lower rounded end thereof to extend beyond the lower edge of the molding 23 when the upper end is flush with the upper edge of said molding. The flange-plate 24, is of a width equal to that of the spring plate 15, of the flange, and has an aperture therein. Integrally formed centrally on the upper end of the flange-plate and in a plane therewith is a jaw 25, having a transverse groove or channel 26, in the face thereof parallel to the ends of the flange-plate. To rigidly hold the flange-plate 24, in position upon the molding 23, with the jaw 25, extending upwardly beyond the upper edge of the hammer-rail, the flange is positioned upon the flange-plate with the hook 17, engaging around the rounded lower edge of the flange-plate, as clearly shown in Fig. 6. The flange is thus positioned with the upper end of the slot 16, registering with the aperture in said flange-plate, and with the clamping lug 18 positioned in front of the jaw 25. The flange and flange-plate may now be positioned upon the molding 23, with the outer central portion of the hook 17, contacting and parallel with the surface 27, of the hammer-rail to hold the device disposed at right angles to the edges of the hammer-rail. The pivot-pin 20, of a hammer-butt may now be positioned to seat in the channel 26, and a screw 21, is then inserted through the slot 16, and the registering aperture of the flange-plate, and is threaded into the hammer-rail, the head of the screw compressing the arched portion 19, of the flange and tightly clamping the lug 18, upon the pivot pin 20, to pivotally hold the hammer-butt in position disposed at right angles to the hammer-rail.

It will of course be understood that any number of flange members may be removably secured upon the stationary flange-plate 11, independently of one another to form a complete flange permitting the piano hammers to be readily removed for repairs, replacement or shifted into a different position upon the hammer-rail, by simply removing the mounting screws 21. In the form of the device shown in Figs. 5 and 6, any number of groups of moveable flange-plates and flange members may be removably mounted in proper position upon the hammer-rail molding 23, by means of the mounting screws 21. The flanges are mounted with the hooks 17, abutting the surface 27 of the hammer-rail, thus insuring a proper positioning of the flanges at right angles to the edges of the hammer-rail.

Of course it will be understood that while the flange as shown and described is adapted for use in pivotally mounting pin-hammers upon the hammer-rail of a piano action, said flange may be used as a holding flange for the wippen and damper or for pivotally mounting any of the other pivoted members of the piano action in position, or furthermore the flange may be used for any other suitable purposes other than those hereinbefore described.

I am aware that various details of construction may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted otherwise than necessitated by the prior art.

I claim as my invention:

1. A flange for pivotally mounting piano-hammers comprising an apertured flange-
4. The combination with the hammer-rail of a piano action, a molding formed thereon, a flange-plate mounted thereon extending beyond the edges thereof, a hooked flange member engaged around one edge of said flange-plate, and means engaging in said molding for clamping said flange-plate and flange member together to pivotally hold a piano-hammer removably mounted at right angles to the edges of said shoulder.

5. The combination with a hammer-rail of a grooved flange-plate thereon, an arched spring-plate thereon, a hook integrally formed at one end thereof engaged around one edge of said flange-plate, and a screw engaged through said plates and in said hammer-rail to hold said plates in position and also acting to hold said plates together to pivotally hold a piano-hammer in position on said hammer-rail.

6. The combination with a hammer-rail having a groove therein, a flange-plate secured thereon partly closing said groove, and a hooked flange contacting said flange-plate with the hooked portion thereof engaged around the lower edge of said flange-plate and contacting one wall of said groove to hold said flange and flange-plate from rotating and with said flange and flange-plate disposed at right angles to the edges of the hammer-rail.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

JULIUS N. BROWN.

Witnesses:
CHARLES W. HILLS, JR.
EARL M. HARDINE.

Copies of this patent may be obtained for five cents each, by addressing the “Commissioner of Patents, Washington, D. C.”