No. 809,042.

PATENTED JAN. 2, 1906.

C. P. BLINN.

HAMMER SUPPORTING FLANGE FOR PIANO ACTIONS.

APPLICATION FILED SEPT. 25, 1905.

Fig. 1.

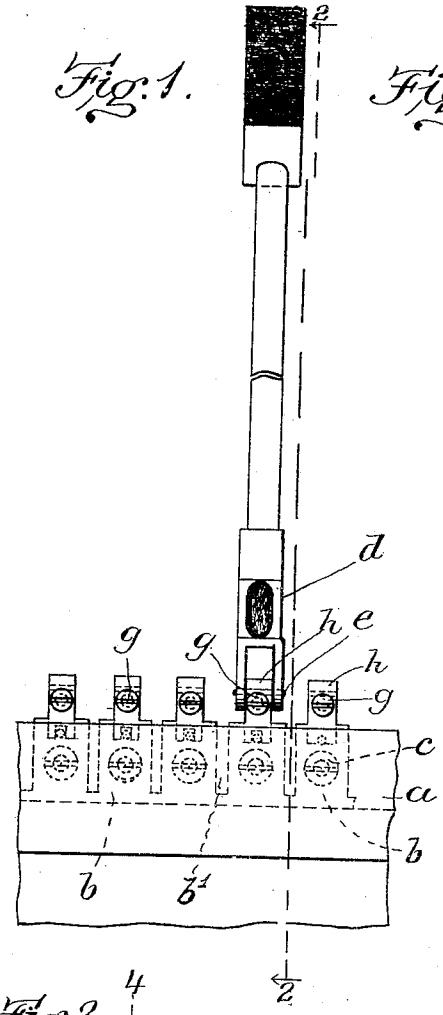


Fig. 2.

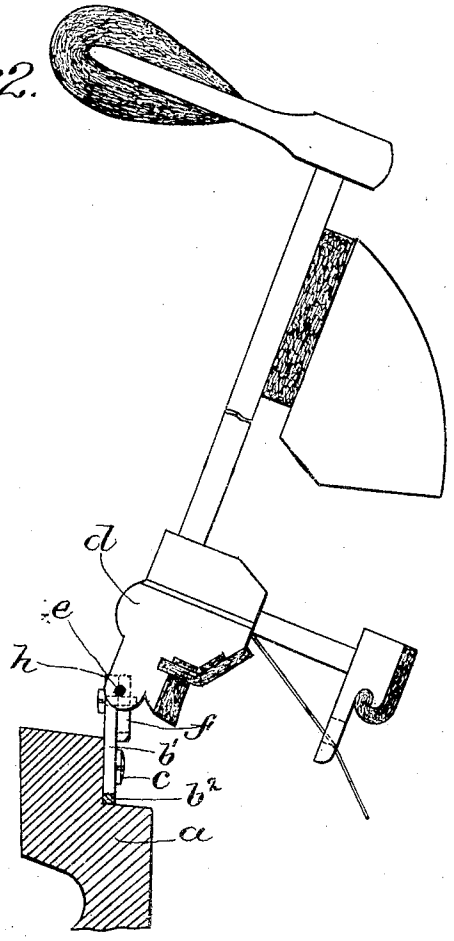


Fig. 3.

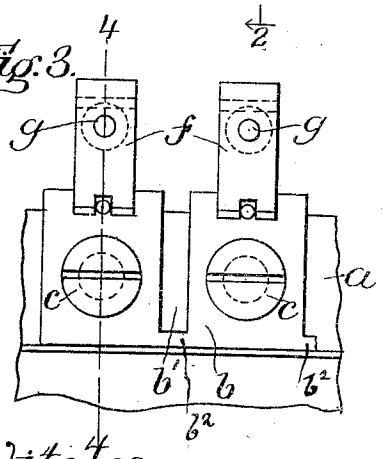
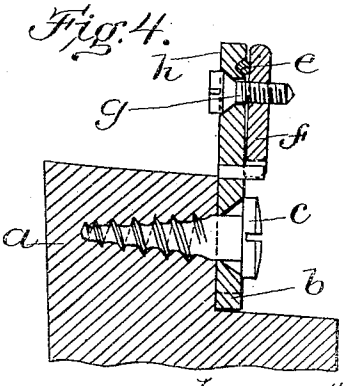


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

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HAMMER-SUPPORTING FLANGE FOR PIANO-ACTIONS.

No. 809,042. Specification of Letters Patent Patented Jan. 2, 1906.

Application filed September 25, 1905. Serial No. 279,892.

To all whom it may concern:

Be it known that I, CHARLES P. BLINN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Hammer-Supporting Flanges for Piano-Actions, of which the following is a specification.

This invention relates to what is commonly termed the "continuous" flange of a piano-action, which flange supports the pivots for the hammers. The necessity of having this flange continuous or of one piece from end to end is well known and need not be explained herein. It is supported by the hammer-rail, which is of wood.

The object of this invention is to provide a flange for supporting the hammers, which flange shall be so constructed that any one of the pivot-supports for the hammers may be removed when broken and a new one inserted without incurring the necessity of removing all of the hammers and other appurtenances of the entire flange. With this end in view I construct the flange so that it shall be frangible at predetermined points—that is, at points between the lugs which support the individual pivots of the hammers. By this construction I am enabled to break out any one of the lugs and so much of the flange as immediately supports such lug without removing the rest of the flange or more than one hammer that was supported by the broken lug and then replace that one by a section of a flange.

The invention consists in the construction of the flange substantially as hereinafter described and claimed.

Of the accompanying drawings, Figure 1 is a detail elevation of a portion of a hammer-rail and metallic continuous flange embodying my invention, a hammer-body being shown as pivoted to one of the lugs of the flange. Fig. 2 represents a section on the line 2 2 of Fig. 1. Fig. 3 is a detail elevation on a larger scale than Fig. 1 and looking from the other side. Fig. 4 represents a section on line 4 4 of Fig. 3.

Similar reference characters indicate the same or similar parts throughout all of the views.

The usual wooden hammer-rail *a* supports the continuous flange *b*, which is of metal, such as brass, by means of the screws *c*. Each hammer-body *d* is provided with a pivot-pin *e*, which is secured in place by a clamp *f* and screw *g*. The pivot-pin *e* is held in a narrow groove or depression formed in the face of the lug *h*, extending up from the flange *b*. So far as described the construction is similar to the usual one. The flange *b* as heretofore constructed, so far as I am aware, has been continuous from end to end, excepting for the lug portion *h*. When a lug *h* breaks, as frequently occurs, it is necessary to remove all of the hammers and other appurtenances of the entire flange so that the necessary repairs can be made. This involves a large amount of labor and time. In carrying out my invention I form the body portion of the flange *h* with cuts or kerfs *b'*, extending downward between the lugs *h* nearly to the lower edge of the flange, leaving enough metal in the form of narrow necks b^2 to preserve the continuity of the flange and insure the normal alinement of the hammer-pivots *e*. I increase, however, the usual number of screws *c* employed, using a screw-hole between each pair of cuts or kerfs *b'*, so that each portion of the flange between adjacent kerfs and the lug *h* on said portion are independently supported by a screw *c*. While this number of screws would not be necessary so long as the flange *b* requires no repairs, they serve to strengthen the flange and prevent any liability of any displacement due to the weakening caused by the cuts or kerfs.

If a lug *h* is broken, so that it is necessary to supply a new support for a hammer, it is only necessary to remove the screw *c*, which supports the portion of the flange immediately below the broken lug, and then with a suitable tool, such as a hammer or pliers, break out and remove the portion of the flange *b* from which the broken lug projects. Another flange portion of the same form as the removed portion and having a lug *h* may be now substituted for the removed portion and secured by the screw *c*, that formerly held the removed portion, the substituted lug *h* being engaged with the hammer to support the same. This can be done without removing anything further than the one hammer.

It will be understood that the narrow piece of metal below the cut or kerf *b'* pre-

serves the continuity of the flange and insures the retention of the hammer-pivots in their normal alinement. If a breakage should occur, such as has been described, a new piece can be readily substituted for the damaged one after the latter has been broken out.

Having now described my invention, what I claim is—

1. A continuous flange for piano-actions, comprising a body portion having a series of lugs or hammer-supports, and a corresponding series of screw-holes, the body portion being weakened between the screw-holes.

2. A continuous flange for piano-actions, comprising a body portion and a series of lugs or hammer-supports, projecting from one edge of the body portion, the latter being provided with a series of screw-holes corresponding in number and position with the lugs, and with cuts or kerfs partially subdividing the body portion between the screw-holes.

3. A flange for piano-actions having pivot-supporting lugs for the hammers projecting from one edge of the flange, the portions of the flange between said lugs being transversely weakened to permit the crosswise breakage of the flange between the lugs, whereby any lug-supporting portion of the flange may be broken out and removed without removal of the entire flange.

4. A flange for piano-actions having pivot-supporting lugs for the hammers projecting from one edge of the flange, the portions of the flange between said lugs having cuts extending from one edge of the flange partly across the flange, the inner ends of said cuts being separated from the opposite edge of the flange by narrow necks, which, while preserving the continuity of the flange, may be easily broken to permit the removal of any lug-supporting portion of the flange without removal of the entire flange.

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

CHARLES P. BLINN.

Witnesses:

C. F. BROWN,

E. BATCHELDER.