No. 781,261. PATENTED JAN. 31, 1905.

F. H. WRIGHT.

PIANO ACTION FLANGE.

APPLICATION FILED JULY 23, 1903. RENEWED NOV. 21, 1904.

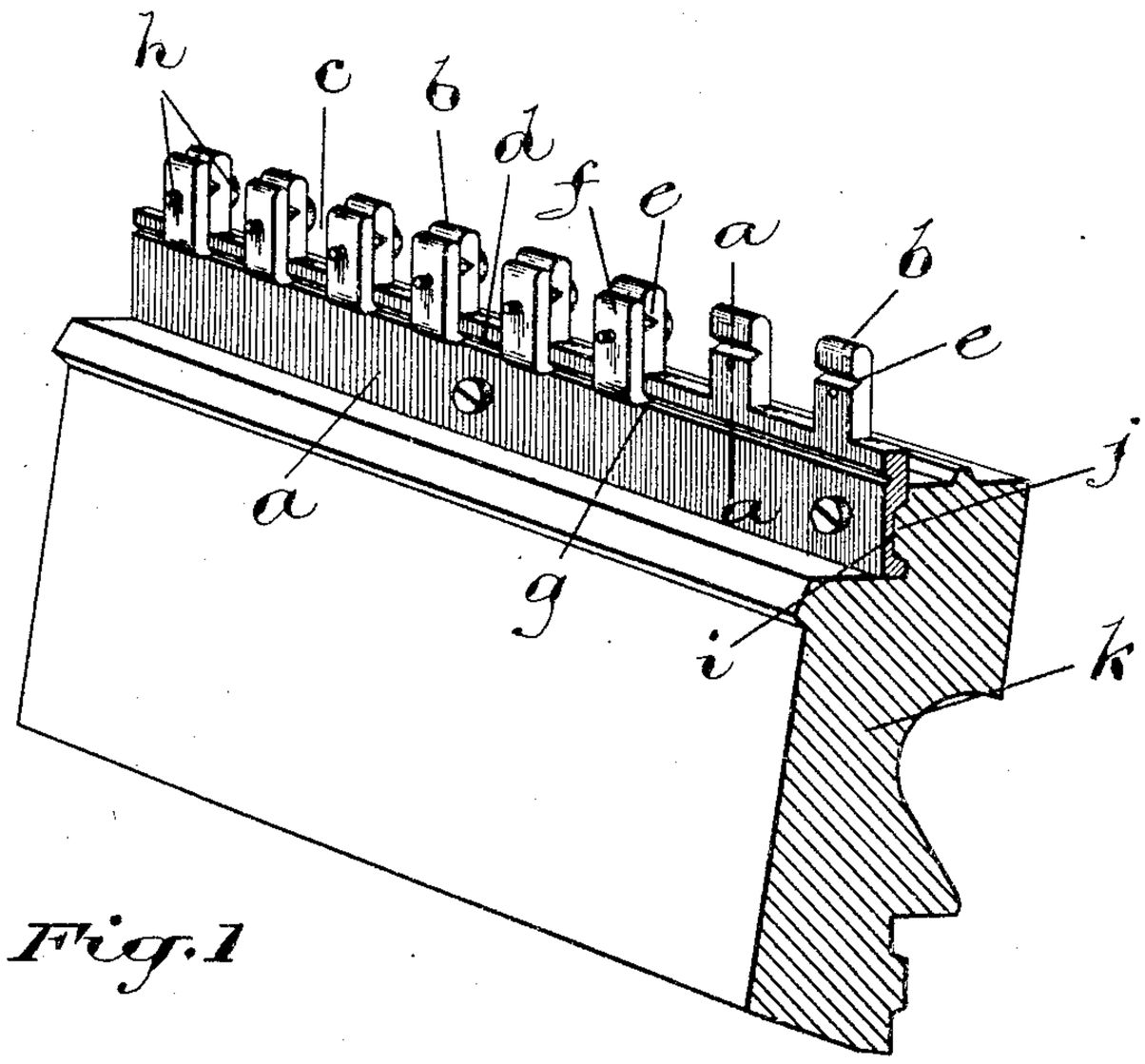

Fig. 1

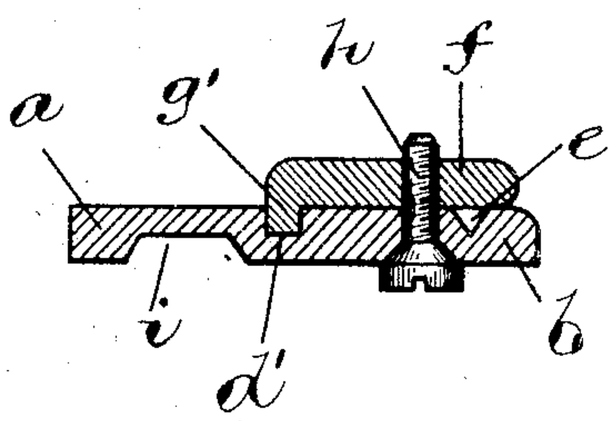

Fig. 3

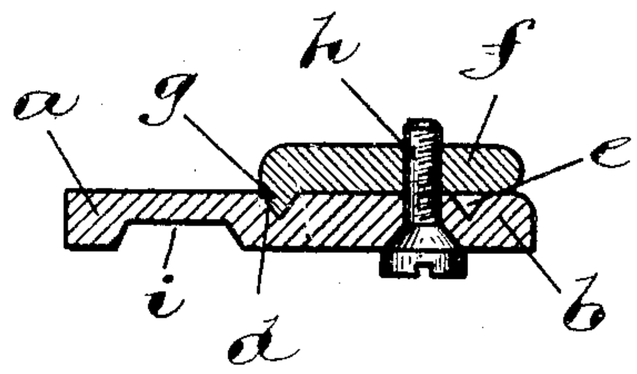

Fig. 2

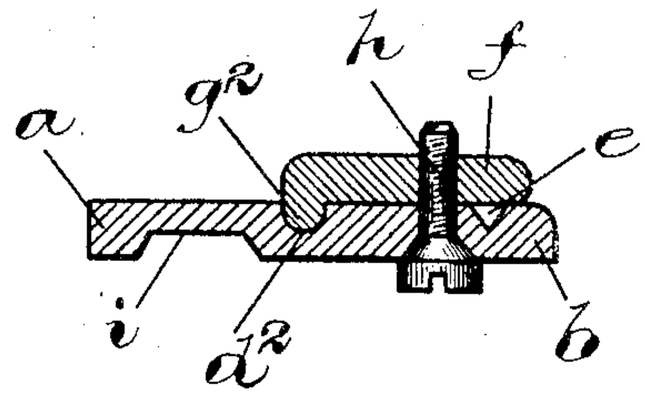

Fig. 4

Witnesses
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No. 781,261. Patented January 31, 1905.

UNITED STATES PATENT OFFICE.

FRANKLIN H. WRIGHT, OF TORONTO, CANADA.

PIANO-ACTION FLANGE.

SPECIFICATION forming part of Letters Patent No. 781,261, dated January 31, 1905.

Application filed July 23, 1903. Renewed November 21, 1904. Serial No. 233,695.

To all whom it may concern:

Be it known that I, FRANKLIN H. WRIGHT, mechanical engineer, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements on Piano-Action Flanges, (being an improvement on Canadian Patent No. 79,726, dated March 17, 1903;) and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to an improvement on a metal piano-action flange, and the objects of my invention are to provide a flange that will be as light as possible and at the same time strong. I groove the flange to effect lightness, and utilize the groove as a mortise to engage with a rib on the rail of the action. I provide the flange with a series of clamping members that may be quickly adjusted and are so constructed that in loosening or replacing they will always retain their true alinement and never become misplaced when fastening the knuckle-pins between the flange and clamping members. I attain these objects by the construction as illustrated in the accompanying drawings.

Figure 1 is a perspective view of a section of the flange and clamp, showing it in engagement with the rail. Fig. 2 is an enlarged cross-section through the flange and clamp on lines *a a*, Fig. 1. Figs. 3 and 4 are modified forms of same.

Like letters refer to like parts throughout the specification and drawings.

The flange *a* is formed from a metal strip of any desired length, width, or thickness, and projecting at intervals from one of the edges of the flange *a* are a series of arms or lugs *b*, leaving spaces *c* between the arms or lugs *b* to allow the hubs of the knuckles to swing in. Extending from end to end of the flange and back of the edge of the spaces *c* is a groove *d*, and on the same face and near the front of the arms or lugs *b* is a groove *e*, parallel with the groove *d*. The clamping member *f* of the flange is a rectangular piece of metal of the same width as the arms or lugs *b*, but slightly longer, and is provided on the under side at one end with a tongue or rib *g*. The tongue or rib *g* of the clamping member is adapted to fit into the groove *d* when parts are assembled and is provided to prevent side twisting or from becoming misplaced when setting up and regulating the action and arranging the knuckle-pins. The groove *e* is adapted to receive the pin the knuckle swings on. Passing through the arms or lugs *b* and through the clamping member *f* are screws *h* for the purpose of fastening and adjusting the clamping member *f* to the arms or lugs *b*. The pivot-pins of the knuckles are pivoted between the clamping members *f* and the arms or lugs *b* and fit in the grooves *e*.

In providing the clamping member with a tongue *g* and the flange *a* with a groove *d* I can, by inserting tongue *g* into the groove *d*, clamp them together much more rigidly and do away with a great deal of fitting that is required by older methods.

On the obverse side of the flange *b* and extending from end to end is a groove *i*. The groove *i* is for the purpose of lightening the flange, and the different angles of the grooves prevent the flange to a certain extent warping and also strengthens the flange. In arranging the flange in position the groove *i* engages with a rib *j*, formed on the side face of the action-rail *k*, forms a lock and prevents the flange *a* from moving through the effect of vibration.

In Figs. 3 and 4 I show modifications. In Fig. 3 the tongue or rib *g'* is rectangular and is adapted to engage with a rectangular groove *d'*, and in Fig. 4 the tongue or rib *g²* is rounded and is adapted to engage with a circular concave groove *d²*. The grooves *d'* and *d²*, respectively, are arranged to extend from end to end of the flange *a*.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a piano-action flange, a metal strip, arms projecting at intervals from one of the edges of said strip, and integral therewith, a channel or groove extending from end to end in each of the side faces of said metal strip, and a groove extending across the face of each of the said arms, a clamping member detachably affixed to each of said arms, and engaging with one of said channels or grooves, substantially as set forth.

2. In a piano-action flange, a metal strip, arms projecting at intervals from one of the edges of said strip, and integral therewith, a channel or groove extending from end to end of each of the faces of said metal strip, each of the said arms having a groove extending across it, a clamping member detachably affixed to each of the said arms, and having on its under side a tongue or rib adapted to fit into one channel or groove on the said strip, substantially as set forth.

Toronto, 23d day of June, A. D. 1903.

FRANKLIN H. WRIGHT.

In presence of—

A. A. ADAMS,

G. B. MACCANOCHIE.