

No. 810,701.

PATENTED JAN. 23, 1906.

F. C. BILLINGS.
FLANGE FOR PIANO ACTIONS.
APPLICATION FILED APR. 14, 1905.

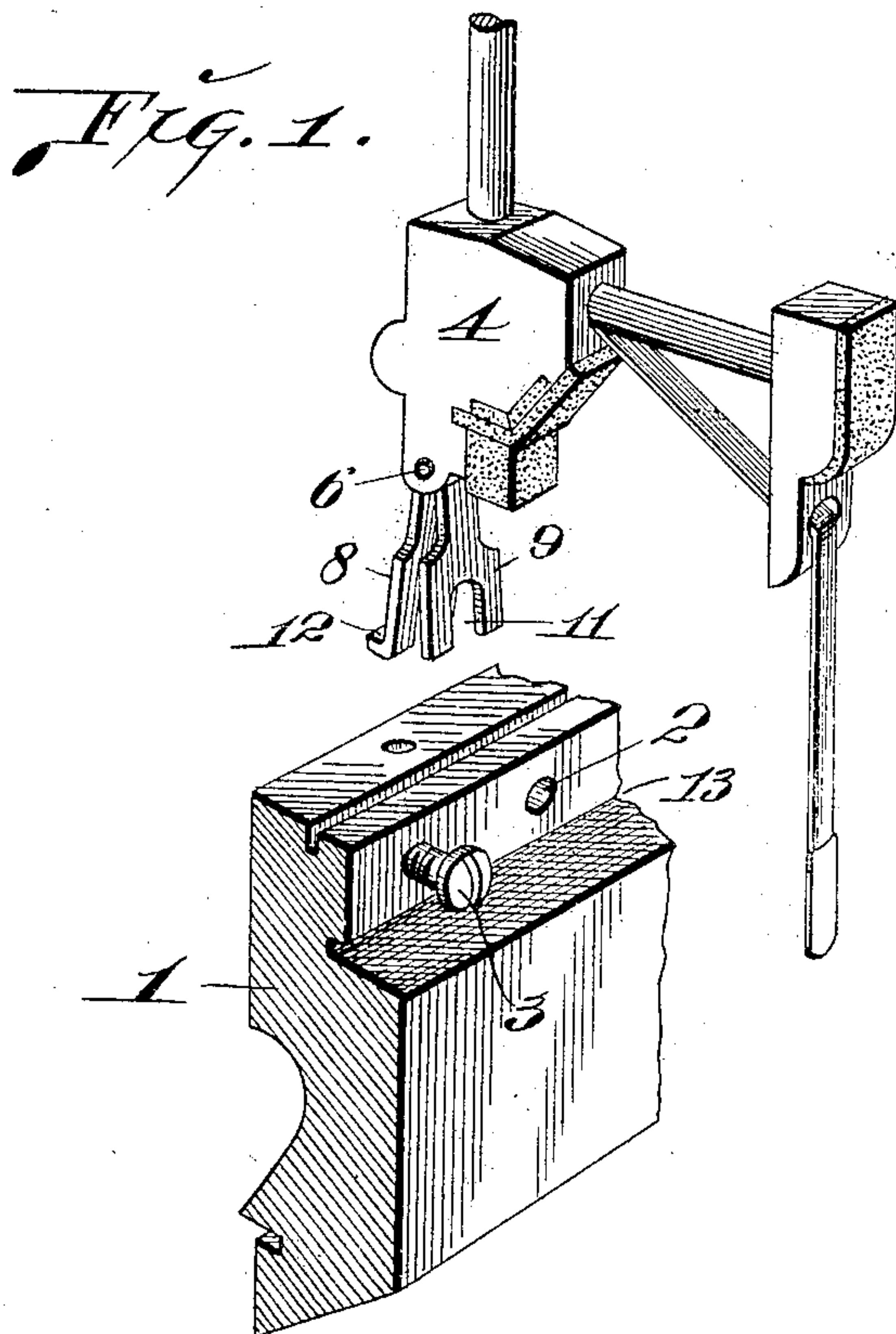
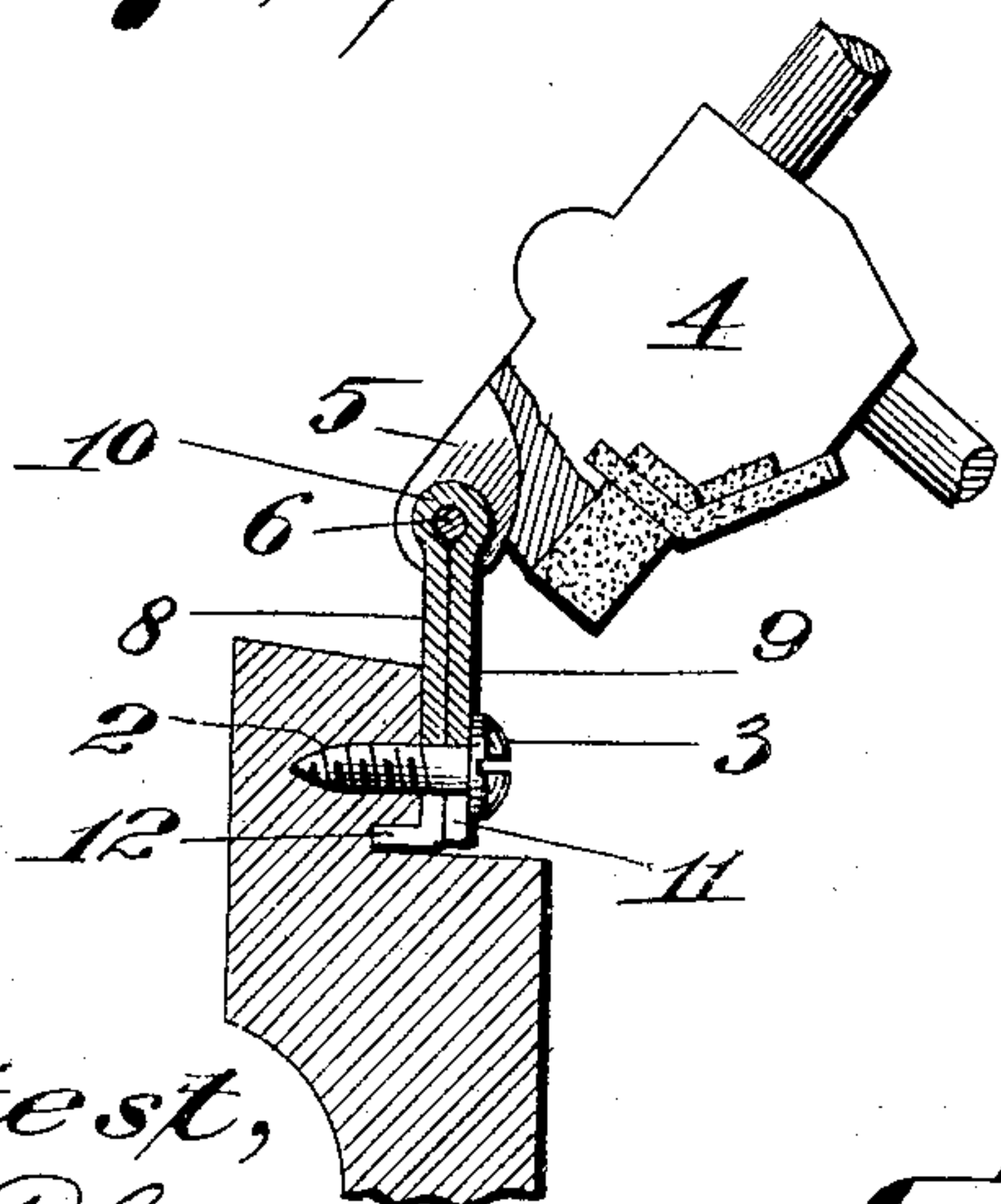


Fig. 2.



Attest,
M. Smith
Edw M Harrington

Fig. 3.

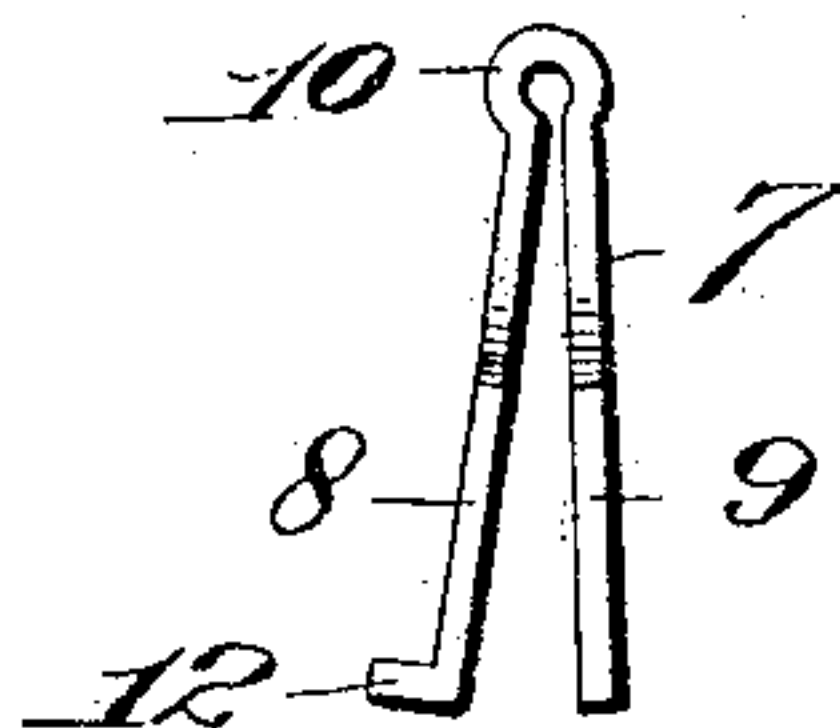
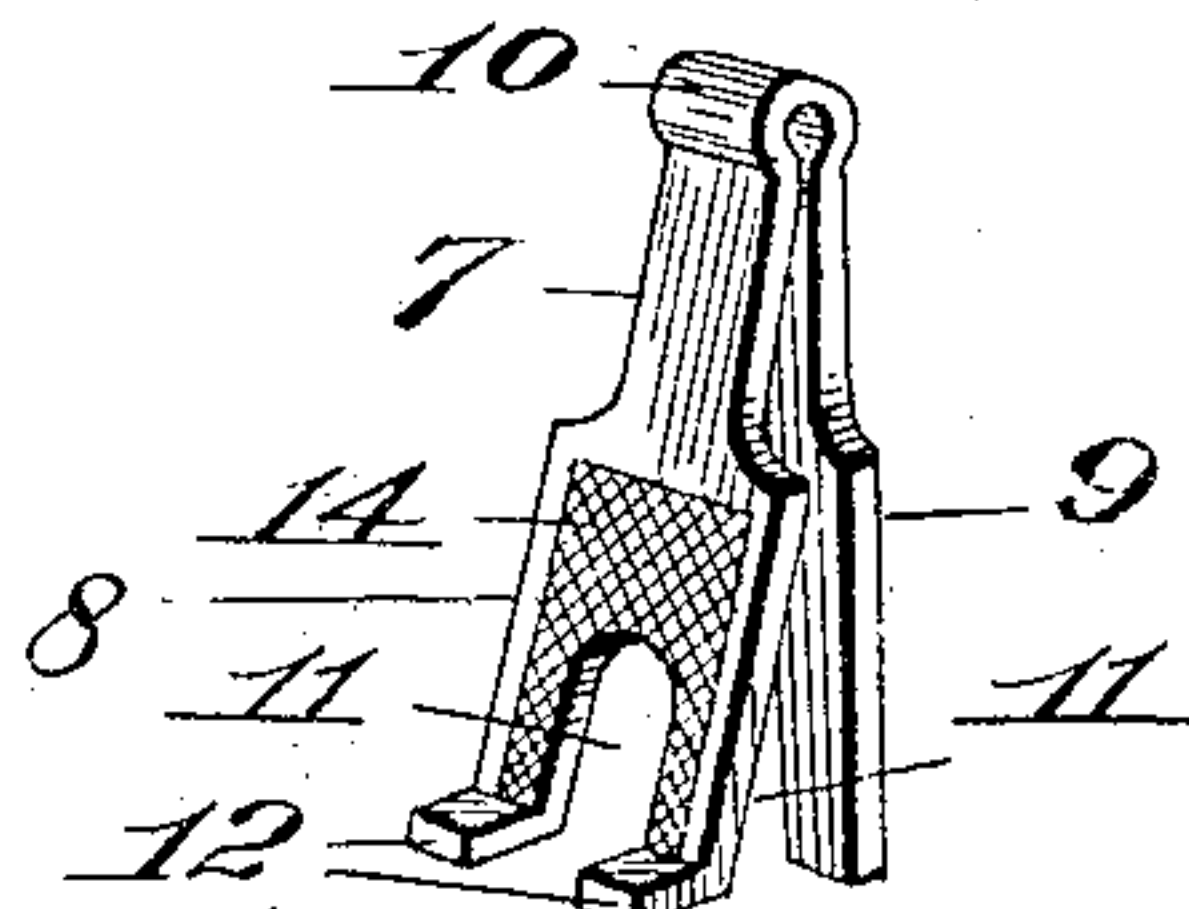


Fig. 4.



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UNITED STATES PATENT OFFICE.

FREDERICK CHRISTOPHER BILLINGS, OF ROCKFORD, ILLINOIS.

FLANGE FOR PIANO-ACTIONS.

No. 810,701.

Specification of Letters Patent.

Patented Jan. 23, 1906.

Application filed April 14, 1905. Serial No. 255,599.

To all whom it may concern:

Be it known that I, FREDERICK CHRISTOPHER BILLINGS, a citizen of the United States, and a resident of Rockford, Illinois, have invented certain new and useful Improvements in Flanges for Piano-Actions, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to a flange for piano-actions and similar musical instruments, it being particularly adapted for use as a butt, damper, whip, tongue, or fly flange.

The object of my invention is to construct a flange especially adapted for easy adjustment and detachment from the different rails in a piano-action without removing the retaining-screws from the rails, this convenience readily permitting the removal or replacement of the flange and the various parts connected thereto.

The present method when removing or replacing parts of a piano-action is to first entirely remove the screws holding the flanges, this operation requiring some little time and labor and often resulting in the dropping of the screws and losing the same in the lower portion of the piano, and where a screw is seated in and removed from a screw-hole a number of times the thread of said hole becomes worn. These difficulties are overcome by the use of a flange of my improved construction, as the screw holding my improved flange is only removed part of the way to allow the removal of the flange from the part to which it is attached, and this results in a great saving of time and labor in assembling or taking apart piano-actions.

To the above purposes my invention consists in certain new and novel features of construction and arrangement of parts, that will be hereinafter more fully specified, pointed out in the claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of the center rail of a piano with the hammer-butt immediately above said rail and the flange carried by said hammer-butt, which is attached to said center rail. Fig. 2 is a vertical section taken through the center of the flange that connects the hammer-butt to the center rail. Fig. 3 is a side elevation of one of my improved flanges. Fig. 4 is a perspective view of the flange.

Referring by numerals to the accompany-

ing drawings, 1 indicates the center rail, which is of the usual form and construction, it being provided with suitably-located screw-holes 2, in which are seated the screws 3, that retain the flanges that pivotally connect the hammer-butts to said center rail. The hammer-butt 4 is of the usual form, having a bifurcated lower end 5, through which passes the transversely-arranged pivot-pin 6.

The flange 7 is in general shape similar to the flanges now in use, it being constructed of a single piece of material, preferably sheet metal, bent double, so as to form the two arms for plates 8 and 9. The upper ends of these arms are somewhat narrower than the lower portions, and at the extreme upper end where said arms unite they are formed into a bearing 10, through which the pivot-pin 6 passes. The lower ends of the arms 8 and 9 are slotted, as indicated by 11, the lower ends of said slots being open in order that the screws which retain the flange in position may readily be seated in the upper ends of said slots, which terminate at points approximately in the center of the lower widened portions of the arms 8 and 9. The lower ends of the plate 8 on each side of the slot 11 are bent laterally at right angles to the body portion of the arm 8, as indicated by 12, in order to seat in a horizontally-arranged groove or slot 13, formed in the center rail 1. The outer face of this arm 8 may, if desired, be roughened or checkered, as indicated by 14, in order that the flange will adhere more tightly to the center rail when the screw holding said flange is tightened against the opposite arm 9.

When my improved flange is placed in position, it is arranged in its proper place upon the center rail and a screw, such as 3, is placed through the slots 11 and into one of the screw-holes 2. When said screw is driven into the center rail to its limit of movement, the arms 8 and 9 are brought together and very rigidly located against the center rail. When it is desired to disconnect the flange from the center rail in order to take out certain parts of the piano-action, the screw 3 is merely loosened or partially removed, as seen in Fig. 1, and the flange is then free to be pulled upward away from said screw, this being possible by the provision of the slots 11.

A flange of my improved construction is simple, strong, and durable, is applicable for use at various points in a piano-action, and by its employment much time and labor is saved in assembling or taking apart piano-actions.

What I claim is—

1. In a flange of the class described, a single piece of resilient sheet metal, bent double and having a bearing formed at the point
5 where said piece is bent, the ends of said piece being provided with open-ended slots, and the end of one of the arms formed by the bend being turned at right angles to the body portion; substantially as specified.
- 10 2. The combination with the center rail of a piano-action in which is formed a horizontally-arranged slot, of a flange constructed of a single piece of material, a bearing formed at

the upper end of said flange, there being a slot at the lower end of the flange for the re- 15
ception of the retaining-screw that enters the rail, and a lip integral with the lower end of the flange which enters the groove in the rail; substantially as specified.

In testimony whereof I have signed my 20
name to this specification in presence of two
subscribing witnesses.

FREDERICK CHRISTOPHER BILLINGS.

Witnesses:

M. M. CORBETT,
D. P. GRAY.