

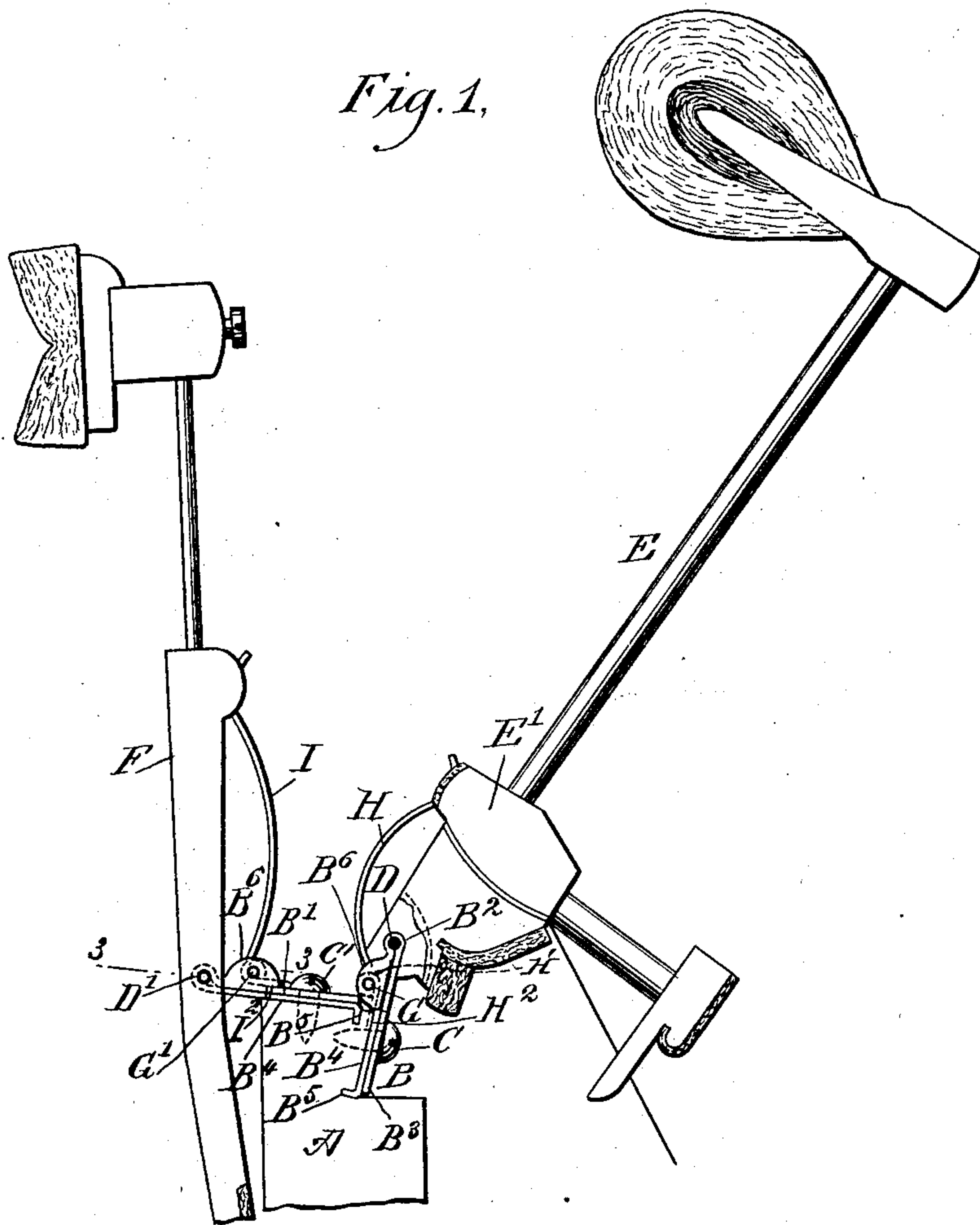
No. 740,796.

PATENTED OCT. 6, 1903.

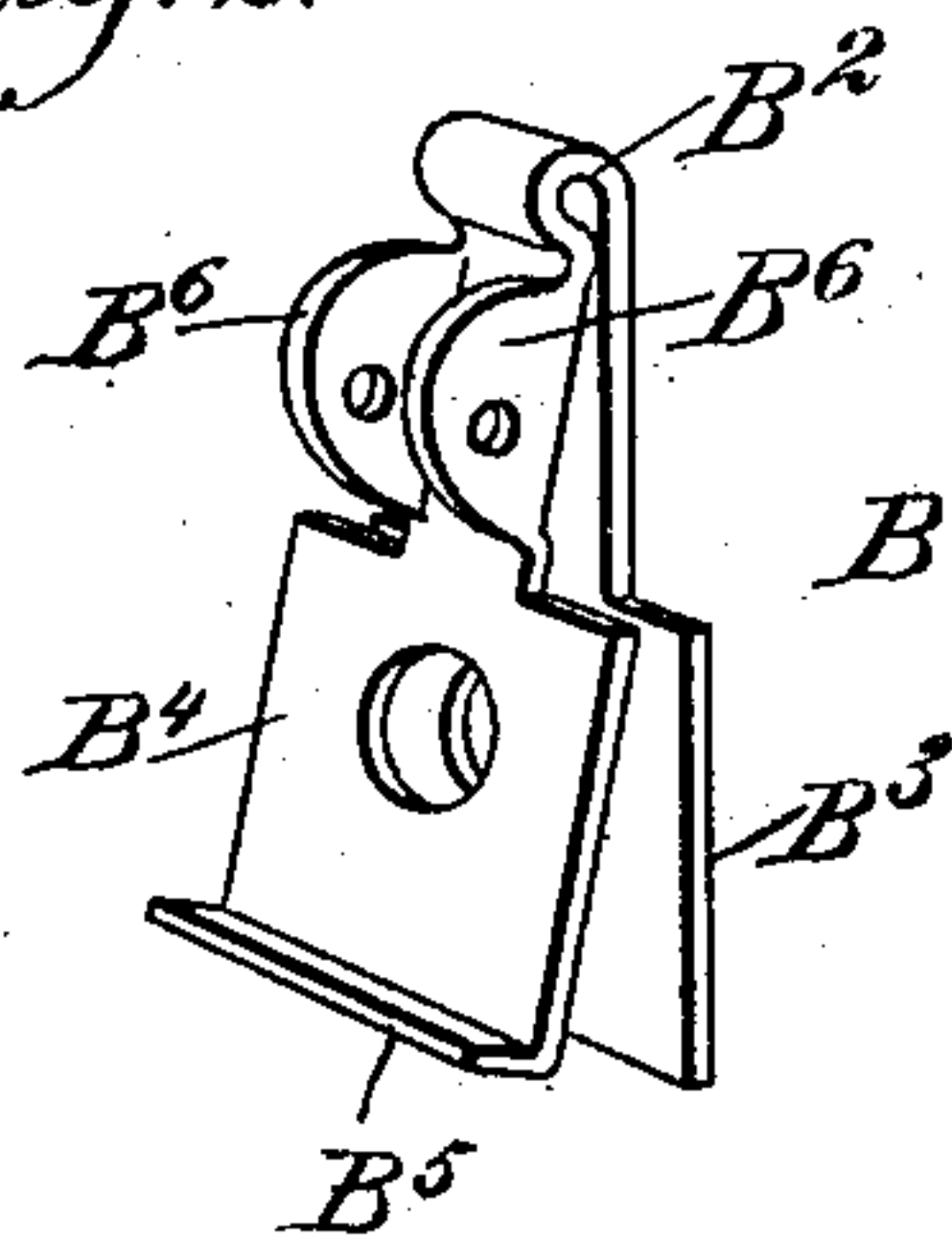
F. C. BILLINGS.  
FLANGE.

APPLICATION FILED FEB. 12, 1903.

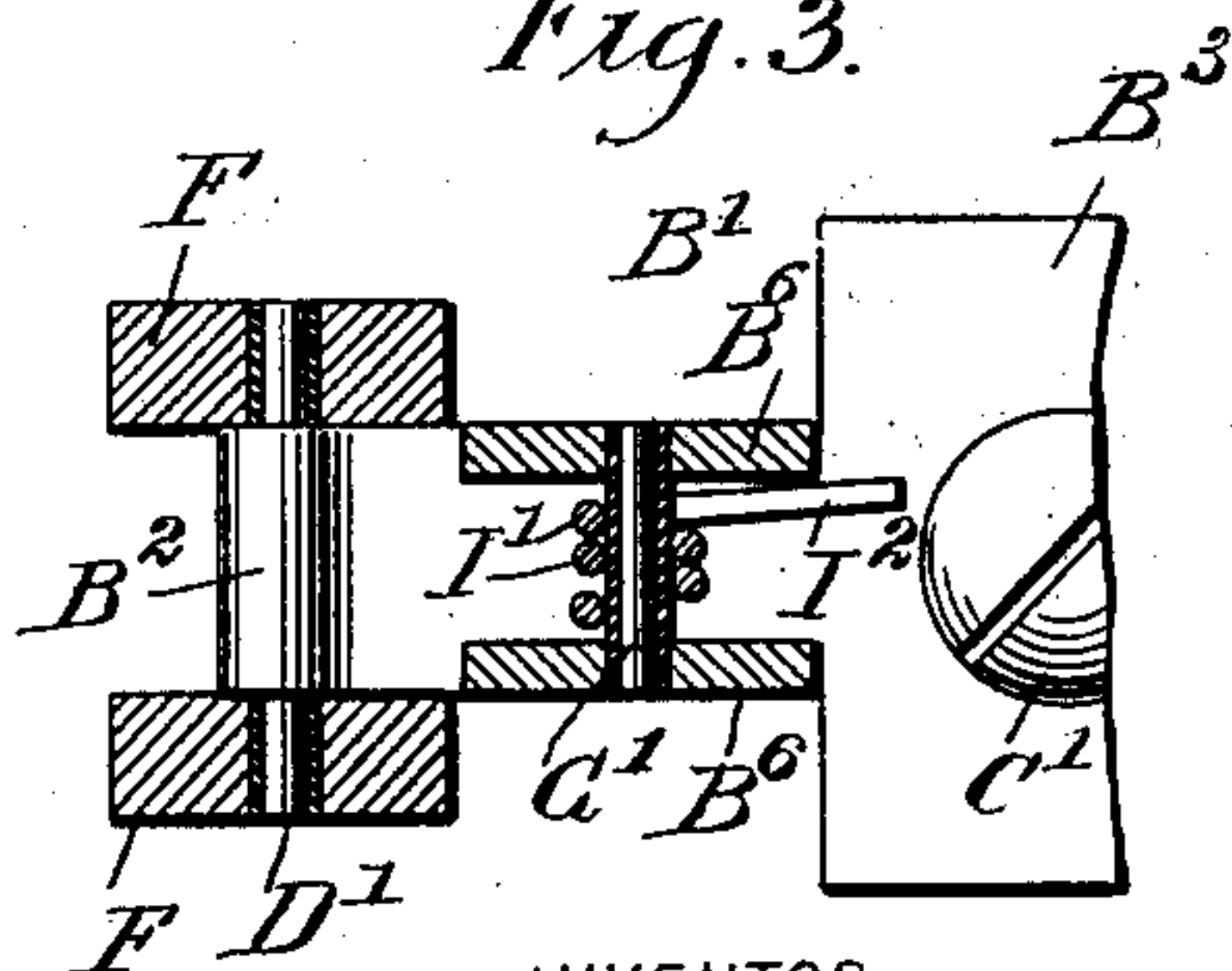
NO MODEL.



*Fig. 2.*



*Fig. 3.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FREDERICK CHRISTPHOR BILLINGS, OF MACON, MISSOURI, ASSIGNOR TO HIMSELF, AND WAYNE B. ALLEN, OF COLUMBIA, MISSOURI.

## FLANGE.

SPECIFICATION forming part of Letters Patent No. 740,796, dated October 6, 1903.

Application filed February 12, 1903. Serial No. 143,008. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK CHRISTPHOR BILLINGS, a citizen of the United States, and a resident of Macon, in the county of Macon and State of Missouri, have invented a new and Improved Flange, of which the following is a full, clear, and exact description.

The invention relates to piano-actions; and its object is to provide a new and improved flange arranged for convenient and secure attachment to a rail or other part of the piano-action, and more especially designed to form a means for supporting the spring employed to press the part hinged on the flange.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement applied to the center rail for carrying the damper-lever and the hammer-butt. Fig. 2 is a perspective view of the improvement, and Fig. 3 is an enlarged sectional plan view of the improvement on the line 3 3 of Fig. 1.

On the hammer or center rail A of the piano-action are secured flanges B B' by means of flange-screws C C', and the said flanges carry at their free ends pivots D D', of which the pivot D is engaged by the hammer-butt E' of a hammer E, while the pivot D' is engaged by a damper F, so that the said hammer and damper are free to swing on the said pivots in the usual manner.

The flanges B and B' are approximately alike in construction, and each is formed from a single piece of spring metal bent upon itself to form a pivot-bearing B<sup>2</sup> for the corresponding pivot D or D' and diverging members B<sup>3</sup> B<sup>4</sup>, having registering apertures for the passage of the corresponding flange-screw C or C'. One of the members has one end turned up to form a lug B<sup>5</sup> for engaging a

longitudinal groove in the rail A, and one of the said members of each flange B or B' has upturned lugs B<sup>6</sup> for carrying bushed pins G G', of which the bushed pin G in the flange B is engaged between the lugs by the coil H' of a spring H, pressing with its free end the hammer-butt E' and having its other end H<sup>2</sup> resting on the member of the flange B, carrying the upturned lugs B<sup>6</sup>. The flange B' carries in its lugs B<sup>6</sup> the bushed pin G' for receiving the coil I' of a spring I, pressing with its free end the damper F and having its other end I<sup>2</sup> resting on the top member of the flange B'.

By reference to Fig. 1 it will be seen that the inner member B<sup>4</sup> of the flange B is provided with the lugs B<sup>6</sup>, while the top or outer member B<sup>3</sup> of the flange B' carries the said lugs B<sup>6</sup>; but in either case the lugs support bushed pins for receiving the coils of the springs H or I, so that each flange has integral means for supporting the spring employed to press the part hinged on the flange.

It is to be understood that the improvement can be applied to other parts of the piano-action besides the hammer and damper action shown.

From the foregoing it will be seen that the device is very simple and durable in construction, is not liable to get out of order, and requires no special devices for holding the springs and securing the same to the flanges as heretofore practiced.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A flange made from a single piece of spring metal, bent upon itself to form a pivot-bearing and diverging members, one of the members having integral upturned lugs, and a transverse pin carried by the said lugs, for receiving the coil of a spring pressing the part held on the said pivot-bearing, as set forth.

2. A flange made from a single piece of spring metal, bent upon itself to form a pivot-bearing and diverging members, one of the



members having integral upturned lugs, a  
pin held on the said lugs, and a spring hav-  
ing a coil between its ends, the coil engaging  
the said pin, one end of the spring pressing  
5 the part held on the said pivot-bearing, and  
the other end of the spring resting on the  
member carrying the lugs, as set forth.

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

FREDERICK CHRISTPHOR BILLINGS.

Witnesses:

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R. I. MATTHEWS.