

No. 670,875.

Patented Mar. 26, 1901.

C. R. S. J. HALLÉ.
PIANOFORTE.

(Application filed Aug. 14, 1900.)

(No. Model.)

4 Sheets—Sheet 1.

Fig. 1.

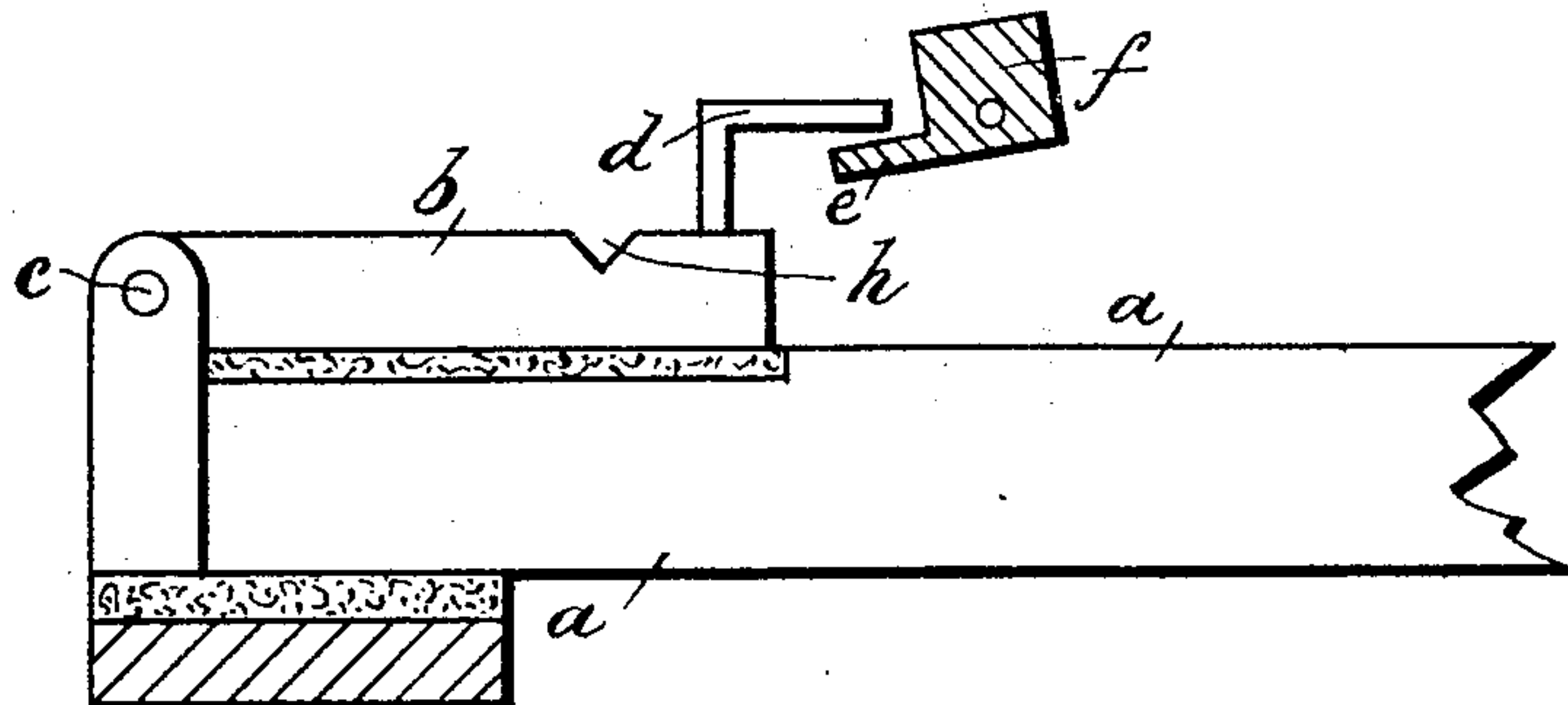
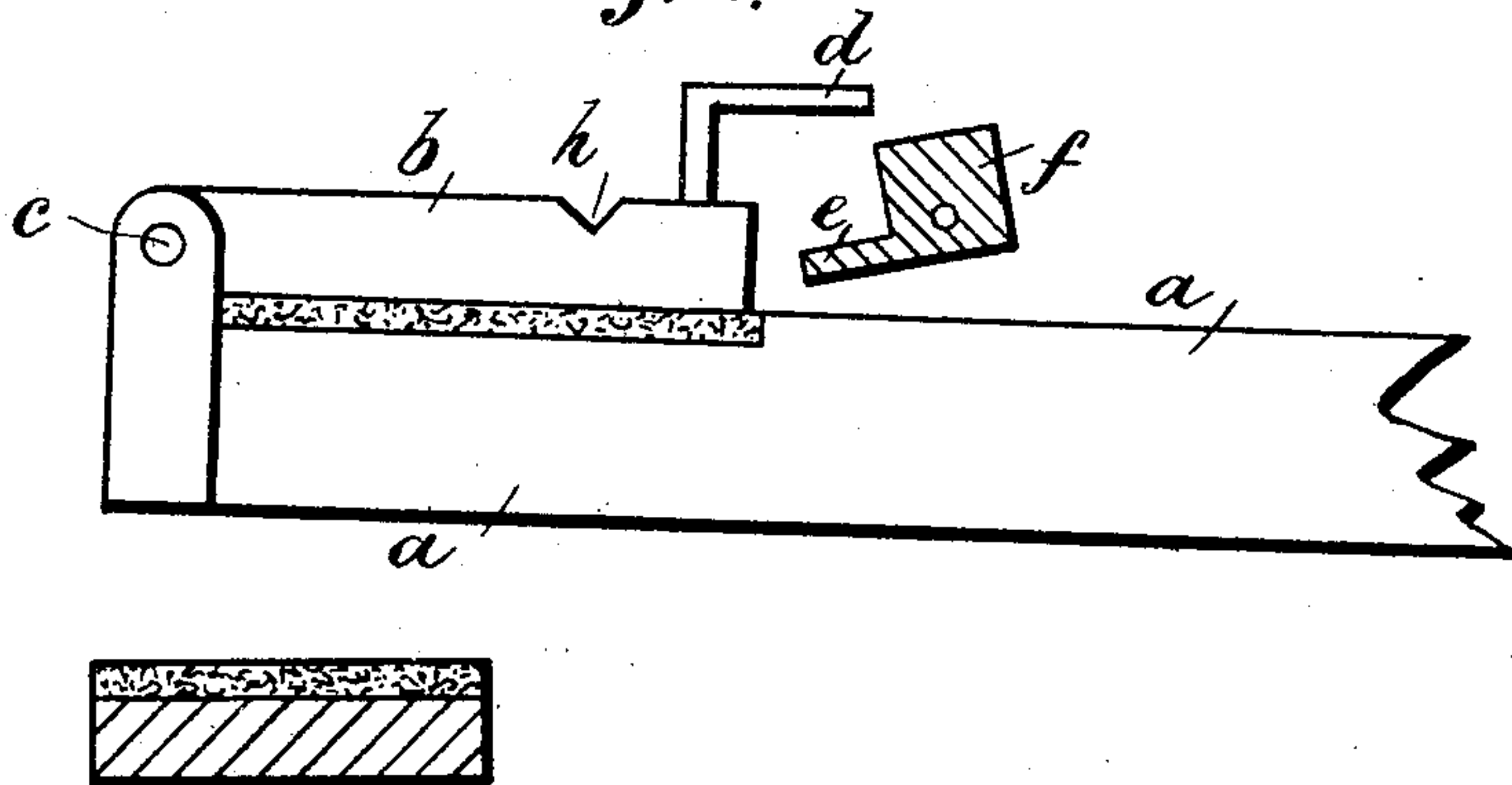


Fig. 2.



Witnesses

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Fig. 3.

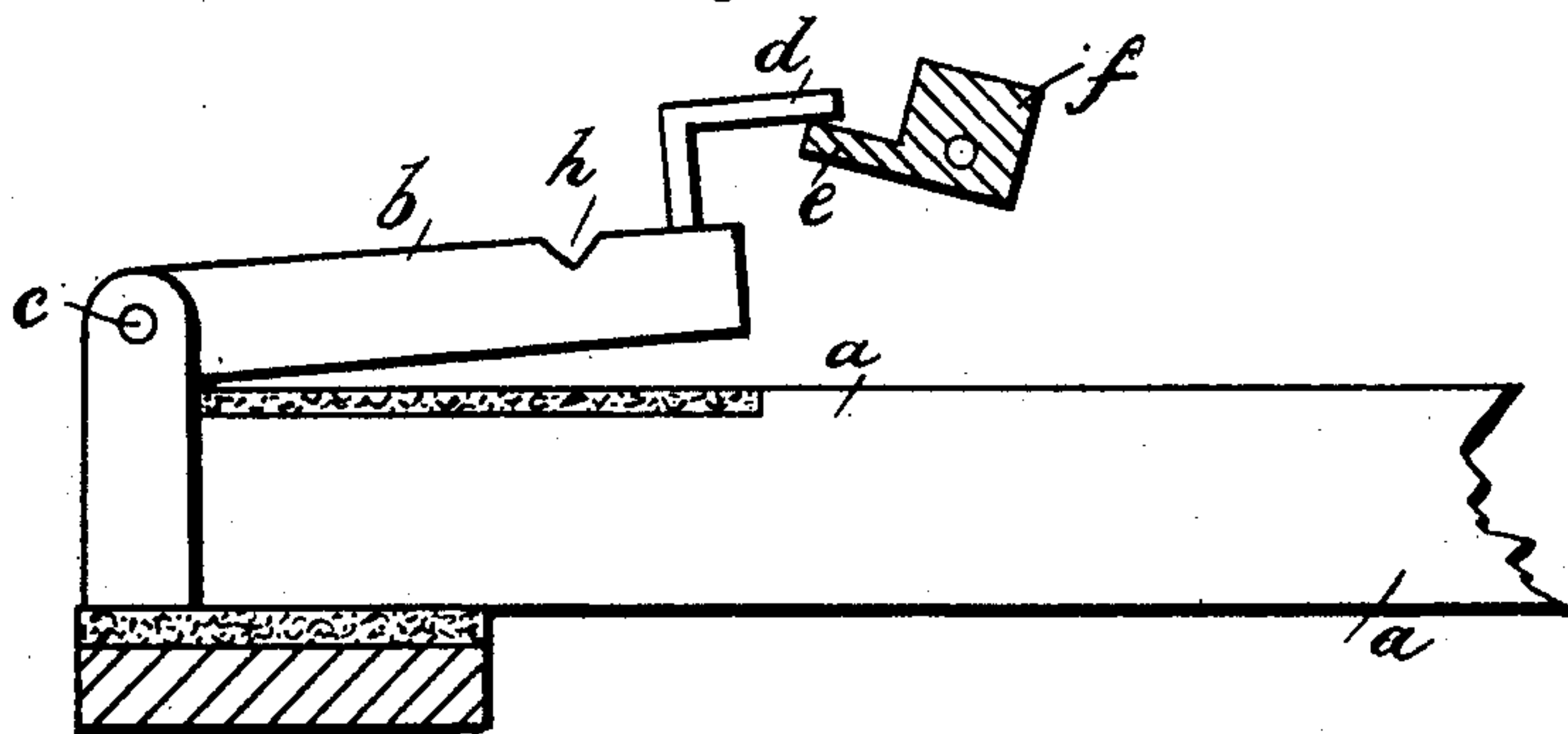
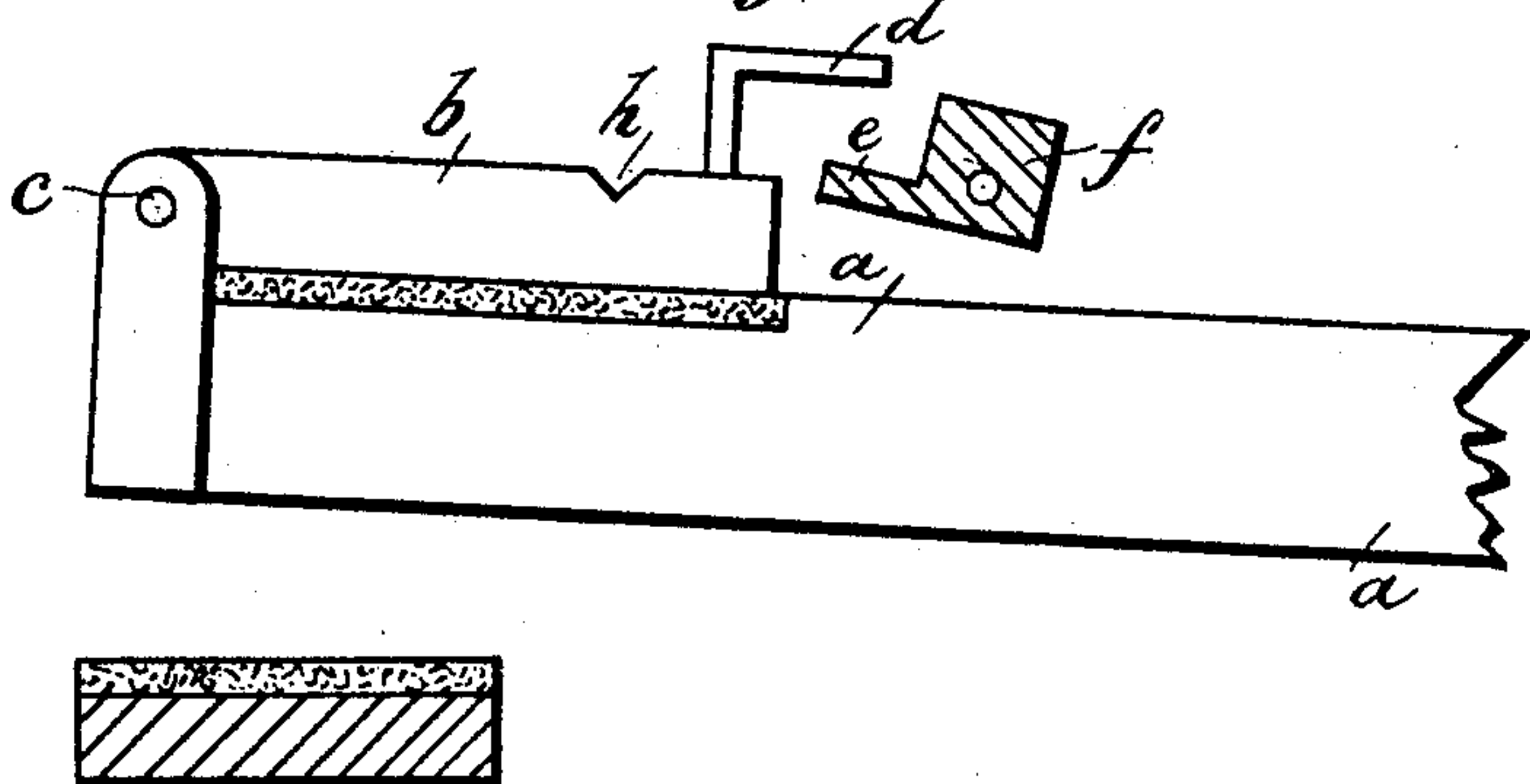


Fig. 4.



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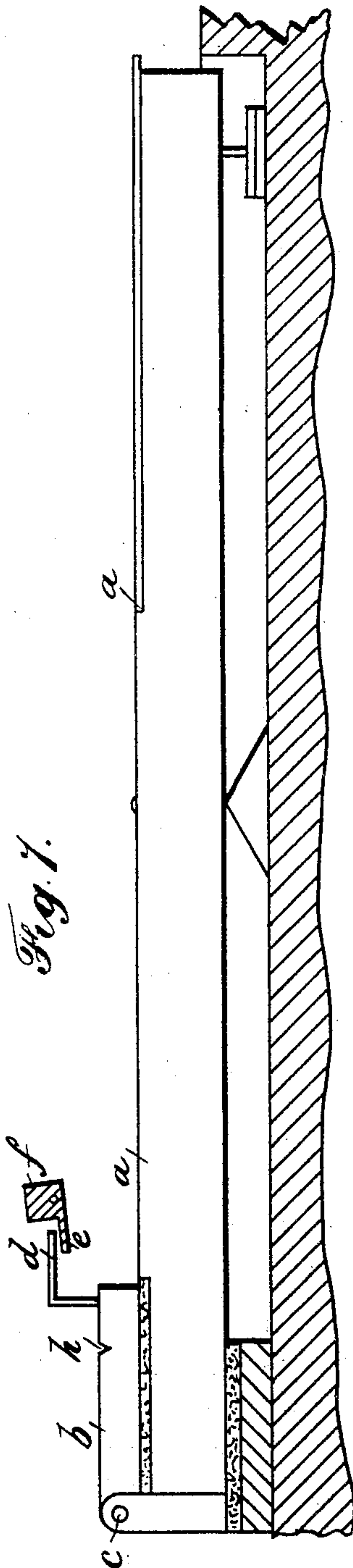
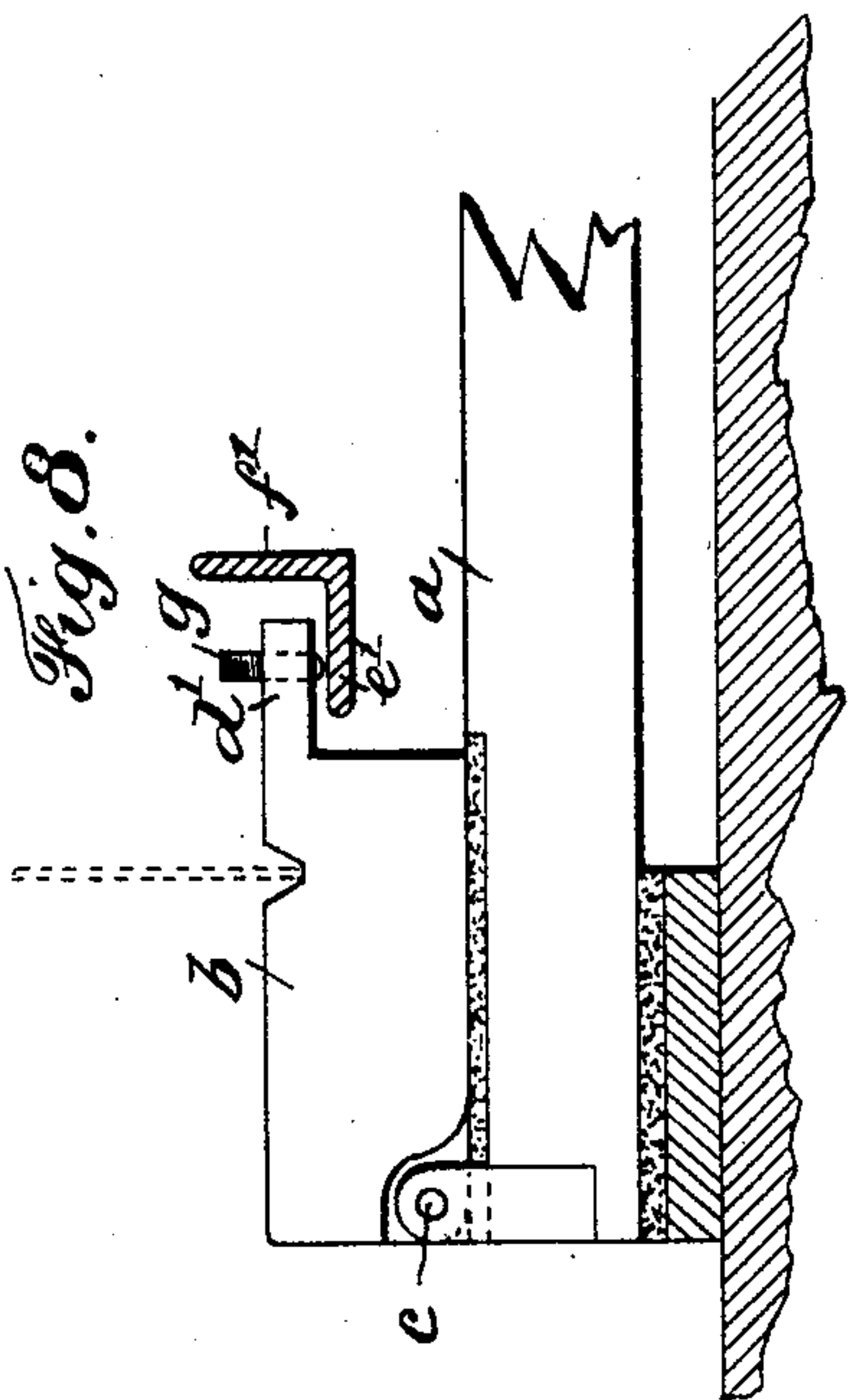
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(No Model.)

4 Sheets—Sheet 4.



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UNITED STATES PATENT OFFICE.

CLIFFORD ROBERT STEPHEN JOHN HALLÉ, OF LONDON, ENGLAND.

PIANOFORTE.

SPECIFICATION forming part of Letters Patent No. 670,875, dated March 26, 1901.

Application filed August 14, 1900. Serial No. 26,891. (No model.)

To all whom it may concern:

Be it known that I, CLIFFORD ROBERT STEPHEN JOHN HALLÉ, a subject of the Queen of Great Britain, residing at 50 Lincoln's Inn Fields, London, England, have invented certain new and useful Improvements in Pianofortes, of which the following is a specification.

The object of this invention is to provide appliances in connection with the keys and hopper-lever of a pianoforte whereby on the movement of a pedal the hammers can be shifted to a position that when a key is struck by a player the hammer corresponding to that key only has a shorter movement according to the degree of movement of the pedal for producing a softer note. The manner in which I accomplish this object will be readily understood from the accompanying drawings.

Figure 1 shows the position of parts at the beginning of the full blow, and Fig. 2 the position at the end of the full blow. Figs. 3 and 4 show the same for the medium blows, and Figs. 5 and 6 for the shortest blows. Fig. 7 is an elevation of a complete key with the short lever in position upon the key for striking a full blow. Fig. 8 is an elevation of part of a key with the short lever in position upon the key for striking a full blow, the bar *f*' in this case being raised to operate the short lever.

a is the key.

b is a short lever centered at *c* onto the end of the key and lying on the key.

d is a hook of metal, Figs. 1 to 7, or other prolongation of the lever *b*, or the lever may be undercut, as at Fig. 8, which hook or lever end *d'* engages onto the projection *e'* of the bar *f*', which extends right across the key-board.

The bar *f* or *f'*, with the projection *e* or *e'* thereon, is caused to rise, Fig. 8, or revolve, Figs. 1 to 7, by a crank actuated by a pedal. When the bar *f* is in the position shown in Fig. 1, the lever *b* lies on the key *a* during the whole of the blow, and the point *h*, on which the sticker of the action rests, travels the whole distance; but when the bar *f* is in the position shown in Fig. 3 the lever *b* is partly raised from the key *a* by the projection *e* lifting the hooks *d*. Consequently the point *h* only travels during the raising of the key

a portion of the distance it moves with the full blow.

It will be seen that at the end of the blow the hook *d* has left the projection *e*, and the blow ends at the same point as before.

In Fig. 5 the bar *f* is raised farther and the hook *d* is raised higher, so that at the end of the blow the lever *b* will again be lying flat on the key *a*, as shown in drawings. In this case it will be seen that the point *h* travels a still less distance than in Fig. 3 during the lift of the key; but in all three cases the position of the lever *b* at the end of the blow is the same.

It will be seen by this invention that at no time are the keys detached from the action and the slightest movement of the key will operate the action, thus insuring an equal touch in playing the piano at whatever the position of the bar *f* happens to be in for giving the differential blow.

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

1. The combination with the keys of a piano, of an action-lever pivotally connected to the inner end of each of the keys and provided with a projection, and means extending across the said keys and adapted to engage said projection for altering the position of said action-lever for producing a different blow of the piano-hammer.

2. The combination with the keys of a piano, of an action-lever pivotally connected thereto and lying its entire length upon the upper face thereof, and pivotally connected thereto, and means adapted to engage and change the position of said lever for producing a different blow of the piano-hammer.

3. The combination with the keys of a piano, of a lever pivotally connected at its inner end to the inner end of each of said keys and lying upon the upper face thereof, an outwardly-extending projection connected to said lever, and means adapted to engage said projection for altering the position of said lever for producing a different blow of the piano-hammer.

4. The combination with the keys of a piano, of an action-lever lying its entire length upon the upper face of each of the keys, and means extending across the keys and adapted to engage the action-lever to alter the position

thereof for producing a different blow with the piano-hammer.

5 5. In combination with the keys of a piano, of an action-lever mounted upon each of the said keys, means for pivotally connecting the inner end of said levers to the inner end of the said keys, and a bar adapted to engage the said lever to alter the position thereof for producing a different blow of the piano-ham-
10 mer.

6. The combination with the keys of a piano, of an action-lever lying its entire length upon the upper face of said keys, means for piv-

otally connecting the inner end of said lever to the inner end of the said keys, a projection 15 carried by the said lever, and means adapted to engage said projection for altering the position of said lever to produce a different blow of the piano-hammer.

In testimony whereof I have hereunto set 20 my hand in presence of two subscribing witnesses.

CLIFFORD ROBERT STEPHEN JOHN HALLÉ.

Witnesses:

EDMUND S. SNEWIN,
WM. O. BROWN.