

(No Model.)

2 Sheets—Sheet 1.

E. KALBE.
ACCORDION.

No. 429,763.

Patented June 10, 1890.

Fig. 1.

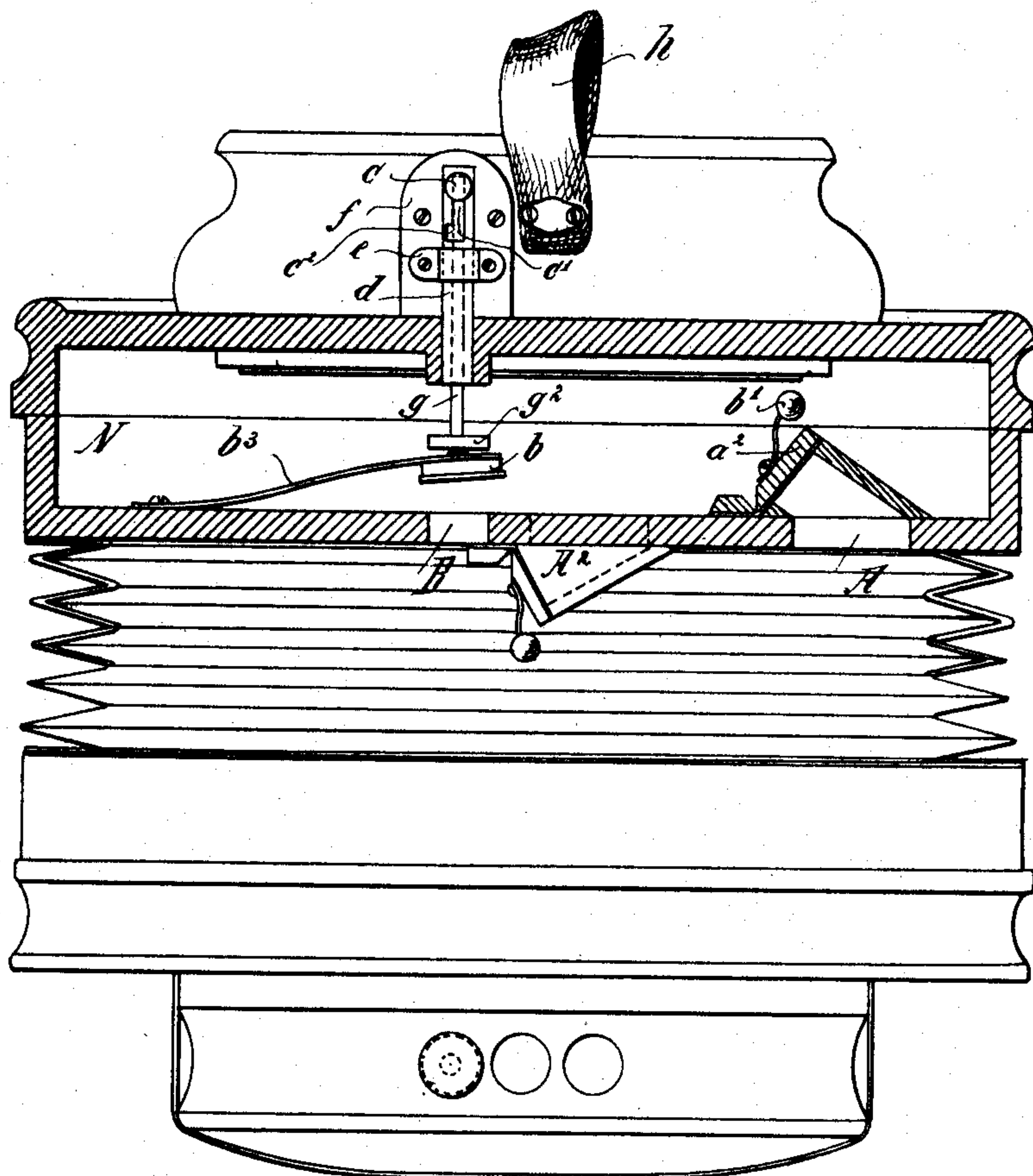
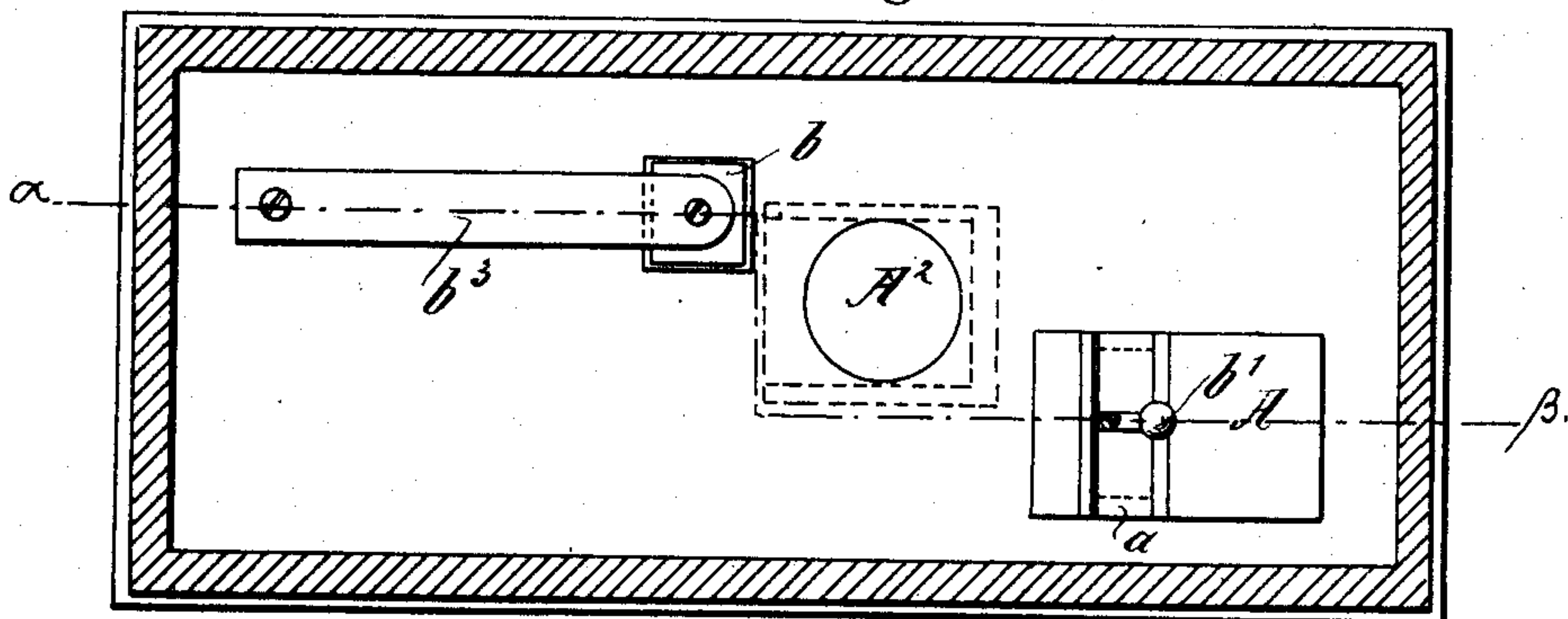


Fig. 2.



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Theodor Heese

Inventor
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by
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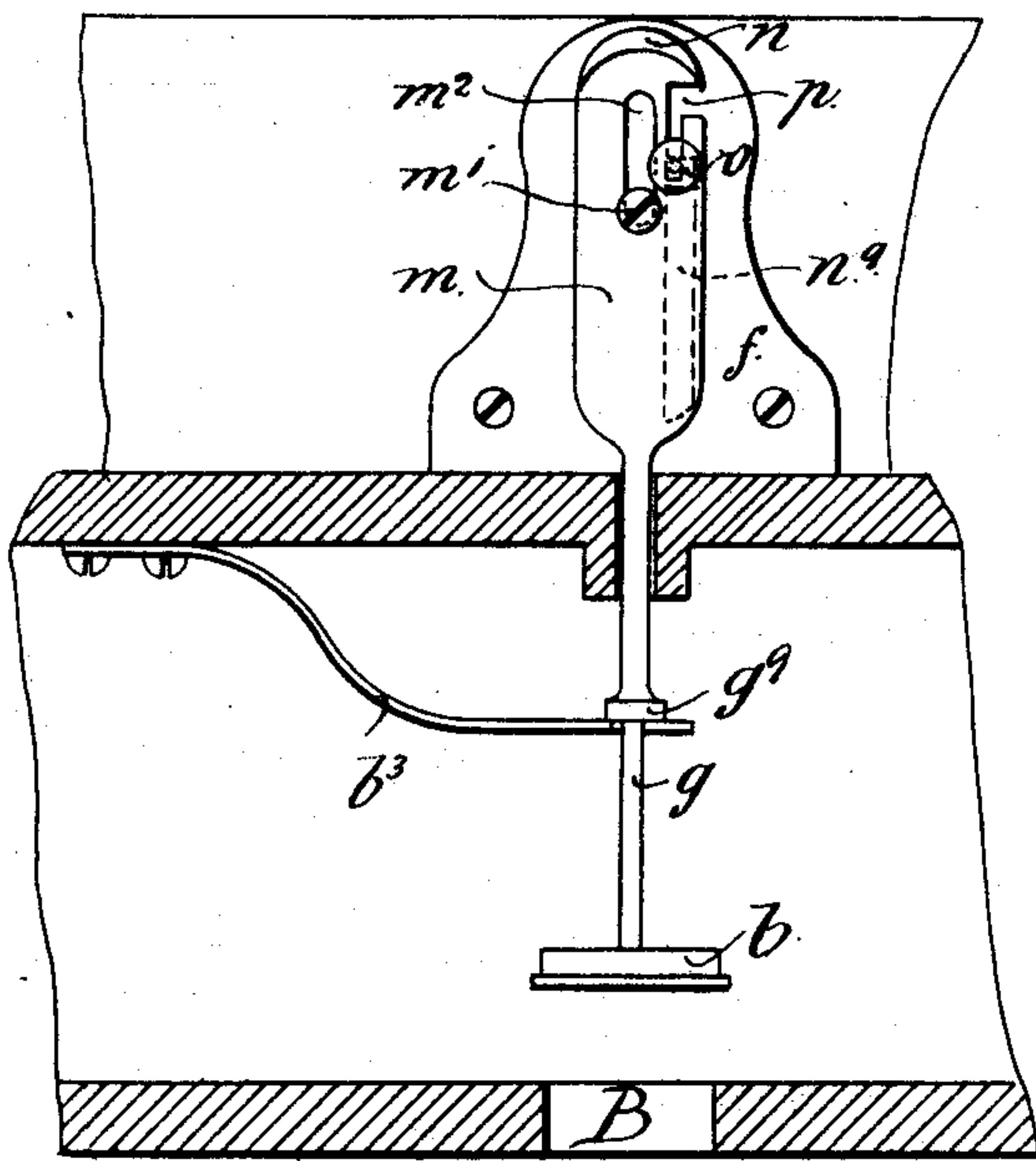
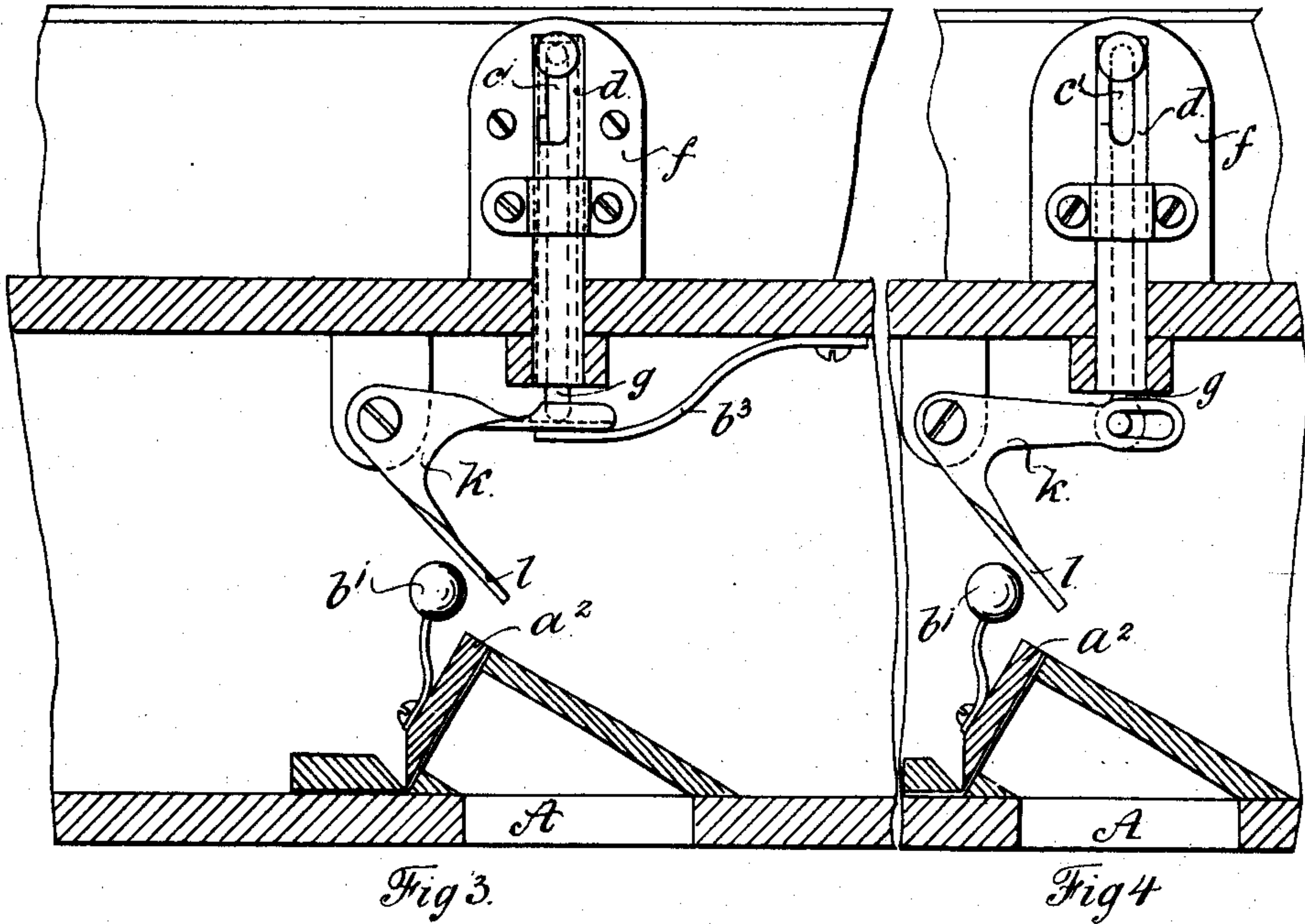


Fig. 5.

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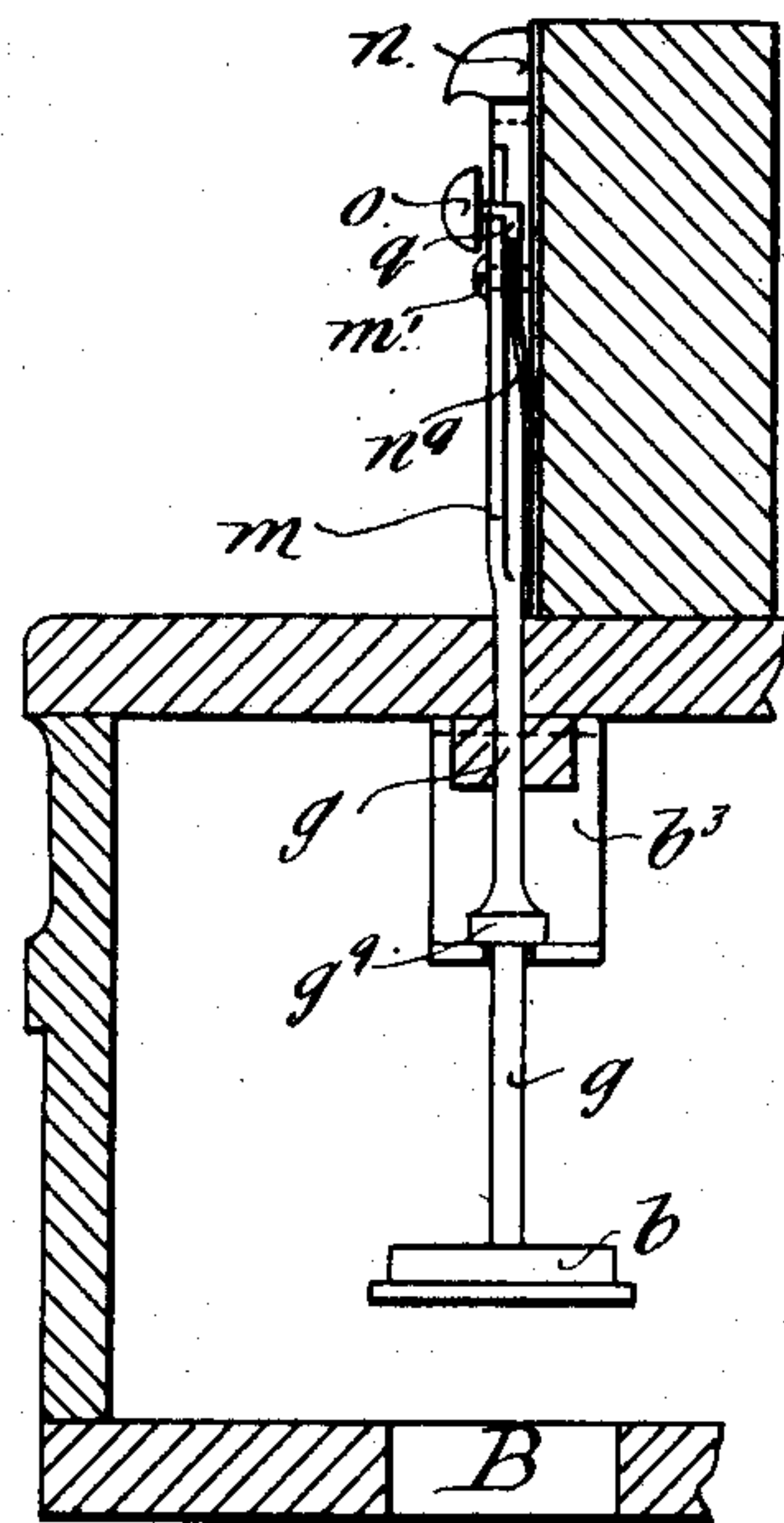


Fig. 6.

Inventor.
Eugen Kalbe
by
Arthur R. Wink
attys

UNITED STATES PATENT OFFICE.

EUGEN KALBE, OF BERLIN, GERMANY.

ACCORDION.

SPECIFICATION forming part of Letters Patent No. 429,763, dated June 10, 1890.

Application filed April 12, 1889. Serial No. 307,054. (No model.) Patented in England February 1, 1889, No. 1,833.

To all whom it may concern:

Be it known that I, EUGEN KALBE, merchant, a subject of the King of Prussia and German Emperor, residing at 13 Gips Strasse, Berlin, Germany, have invented new and useful Improvements in Accordions, (for which I have applied for Letters Patent in Germany, dated November 3, 1888, and England, No. 1,833, dated February 1, 1889,) of which the following is a full description.

My improvements in accordions consist of arrangements by means of which it is possible to produce a tremulous effect when playing by pressing a button placed conveniently near the thumb of the player.

In order to make my invention more clear in the following description, I make use of the accompanying sheets of drawings, in which similar letters denote similar parts throughout the several views.

Figure 1 is an elevation of an accordion, showing the upper half in vertical section through the line $\alpha \beta$. Fig. 2 is a section through the upper box of the accordion, showing a top view of the "tremolo-valves." Figs. 3, 4, 5, and 6 show slight modifications in the construction of the mechanism for opening and shutting the tremolo-valves.

In Fig. 1, b is the valve through which the air passes in playing the accordion without the tremulous effect. As soon, however, as the valve b , which is held away from the opening B by the spring b^3 , is pressed down, the air is forced through the tremolo-valve A or A^2 , as the case may be—that is to say, according to whether the accordion is being drawn out or pressed together. The tremolo-valves are constructed in the usual manner. The valve b is held continually open by means of the spring b^3 . When the valve is open, the small disk g^2 rests on the valve b , as shown in Fig. 1. To this disk g^2 is fixed the rod g , which slides in the tube d . The rod g has the button c on its other end, and this button c runs in the angular slits $c' c^2$ of the tube d . The tube d is held to the plate f by means of the collar e and two screws, and the plate f is screwed to the accordion, as shown in Fig. 1, near the thumb-band h , so that in playing the button c can be conveniently pressed

down and turned in the corner c^2 of the slit c' by the thumb of the player.

When the tremulous effect is required, the button can be pressed down by the thumb and turned into the corner c^2 of the angular slits $c' c^2$, and when the tremulous effect is no longer required the button can be pushed out of the corner c^2 of the slit c' , and the valve opens of its own accord under the influence of the spring b^3 .

Instead of having a separate valve for closing to effect the tremolo, I can obtain the same effect by the arrangement shown in Figs. 3 and 4, where the tremolo valve itself is held open by pressing the button c down, which moves the angle-lever k . The arm l of the angle-lever k then presses against the weight b' of the flap a^2 of the tremolo-valve, holding the same open and permitting the air to pass through without causing the tremulous effect. The arrangement for opening or letting this tremolo-valve loose can be effected with or without a spring. As shown in Fig. 4, it works without a spring, the rod g running tightly in the tube d . In this case a straight slit c' only is necessary in the tube, as the rod g will remain in the position into which it is placed by the movement of the thumb. In this modification a spring b^3 may also be introduced, as shown in Fig. 3, with an angular slit in the tube. I can also arrange the movement of the valve as shown in Figs. 5 and 6, where the valve b is directly fixed to the rod g , which rod has a collar g^9 , against which the spring b^3 presses. The rod g is fixed to the plate m . This plate m is movable on the bottom plate f by means of the screw m' , which slides in the slit m^2 of the plate m . The plate m has a notch n on its upper end, against which the thumb presses. In addition to the spring b^3 there is another spring n^9 lying behind the plate m , between it and the bottom plate f . The spring n^9 has its one end fastened to the bottom plate f . On its other end, which presses against the under side of the plate m , is fixed the button o , over which the angular slit p slides. Besides the button o there is a little block q fixed to this end of the spring n^9 .

This arrangement works in the following

manner: In playing, when the tremulous effect is desired, it is only necessary to press against the notch *n* with the thumb. The valve *b* will now be pressed down and the spring *b*³ will be stretched. As soon as the valve *d* is down on its seat and the hole B closed, the block *q* on the end of the spring *n*³ snaps into the broad part of the angular slit *p* and prevents the spring *b*³ from pressing the valve *b* up again. Accordingly the air is driven through the tremolo-valves A and A². To stop the tremulous effect, it is only necessary to press the button *o*, when the block *q* is pressed out of the corner of the angular slit *p*. The spring *b*³ then presses the valve up, and with it the plate *m*, so far until the end of the slit *m*² strikes against the screw *m*'. Lastly, I can also make the arrangement of the valve *b* to work without any spring at all by fixing the valve *b* directly to the rod *g* and making this rod *g* slide in the tube *d* tightly enough to prevent the button *c* from slipping about of its own accord. In this case the arrangement would be the same as in Fig.

1, only the valve *b* would be fixed to the rod *g* instead of the disk *g*². The spring *b*³ would be left away and the slit *c c'* would be a straight instead of an angular one.

Having thus fully described my invention, what I claim as my invention, and desire to secure by Letters Patent in the United States, is—

1. In accordions, a bar *g*, in connection with a valve *b* and a spring *b*³, working on valve *b*, for the purpose as described.

2. A bar *g*, with a stopping mechanism, in connection with a valve *b*, for the purpose as described.

3. A bar *g*, with a stopping mechanism, in connection with a valve *b* and a spring *b*³, working on the valve *b*, for the purpose as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

EUGEN KALBE.

Witnesses:

B. ROI,

THEODOR HEESS.