

No. 816,791.

PATENTED APR. 3, 1906.

C. H. GOLLER.  
EXTENSION TABLE.  
APPLICATION FILED JULY 11, 1904.

3 SHEETS—SHEET 1.

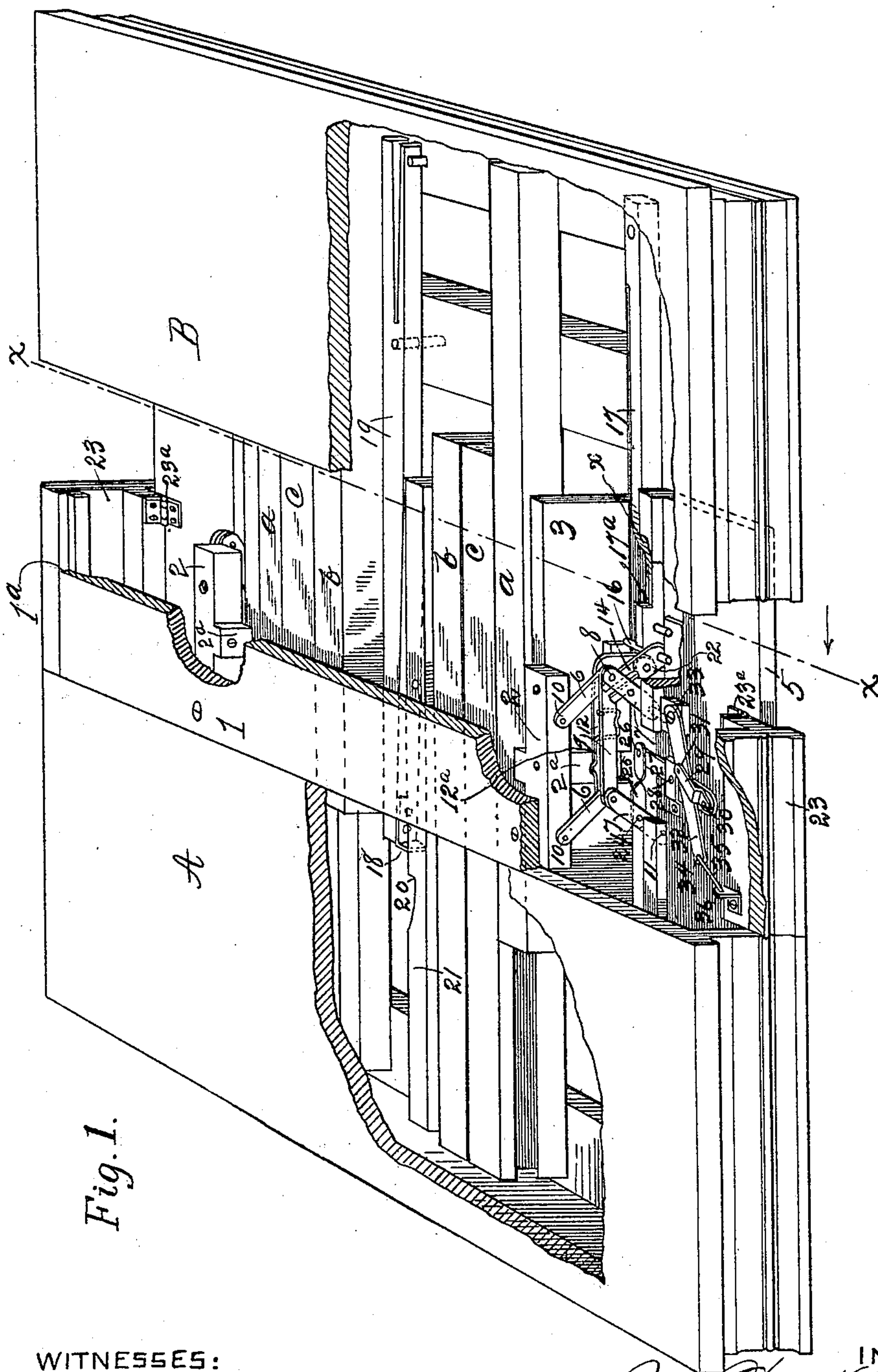


Fig. 1.

WITNESSES:

David C. Walter  
M. L. Marks.

INVENTOR:

Chas. H. Goller,  
By Howard Hall, His Atty.

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3 SHEETS—SHEET 2.

Fig. 2.

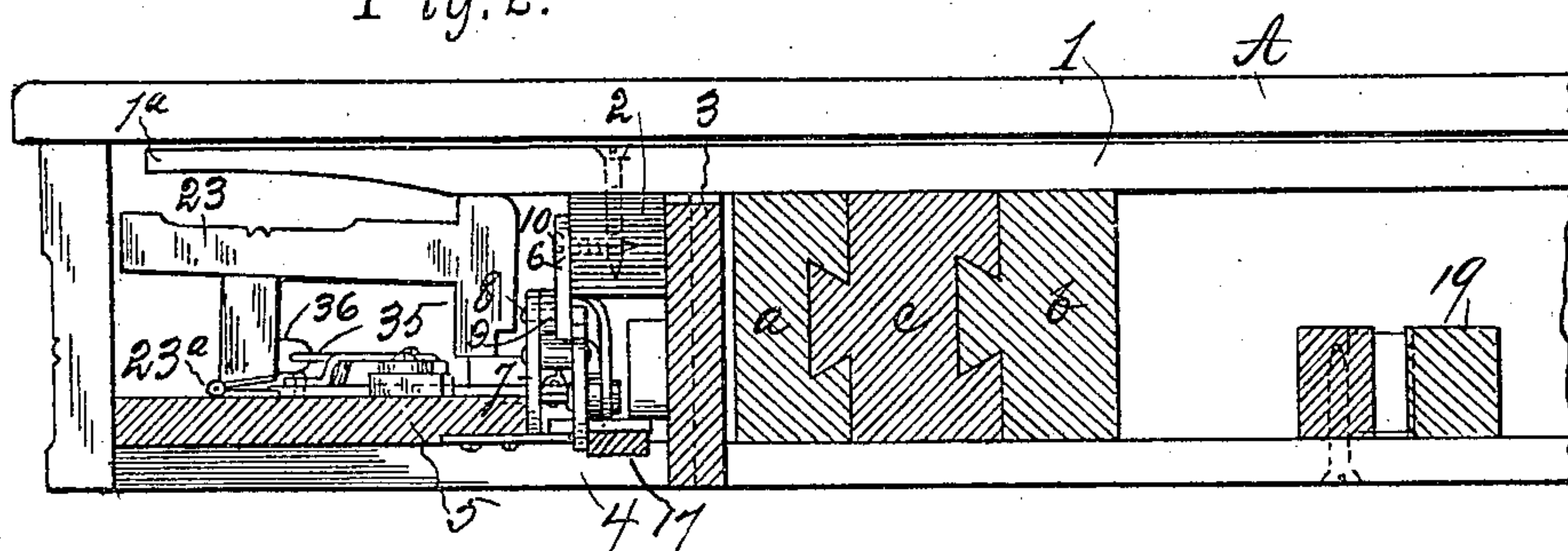


Fig. 3.

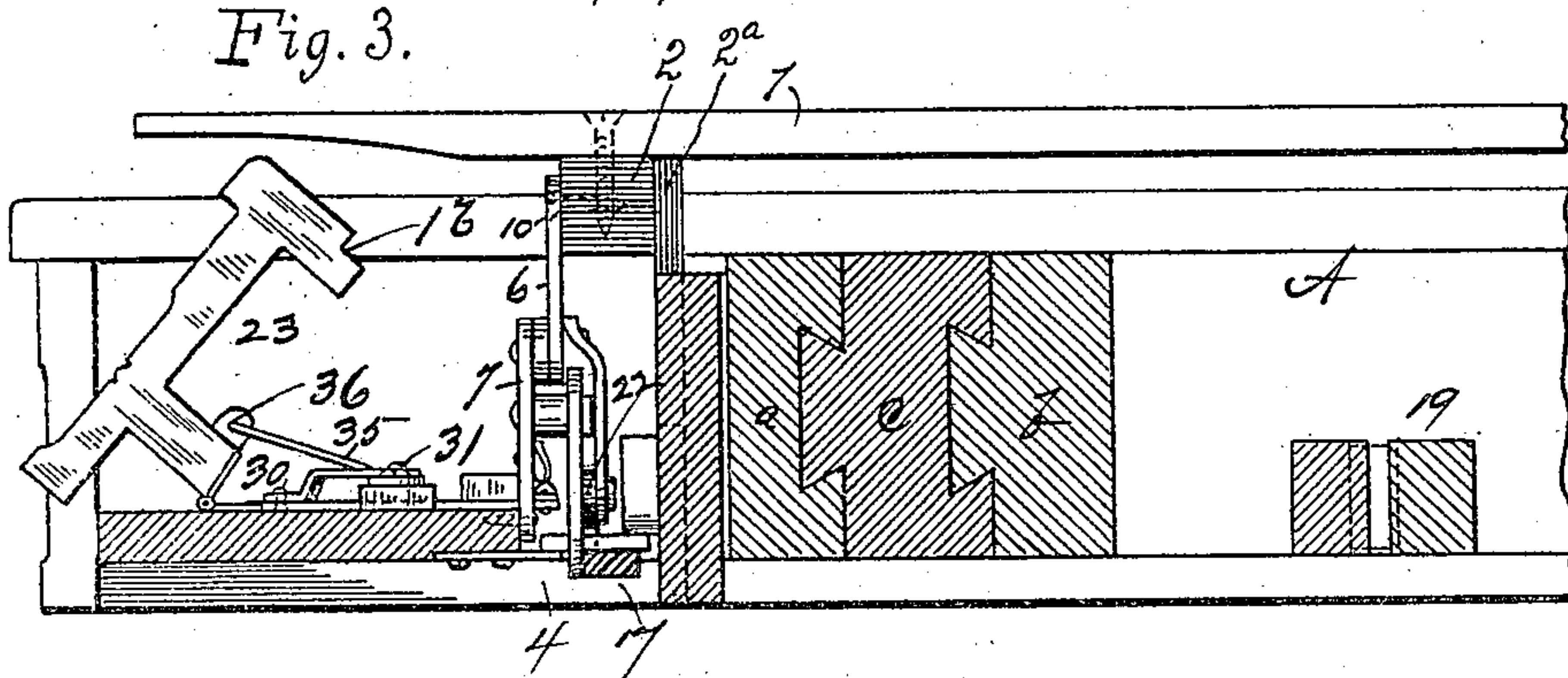
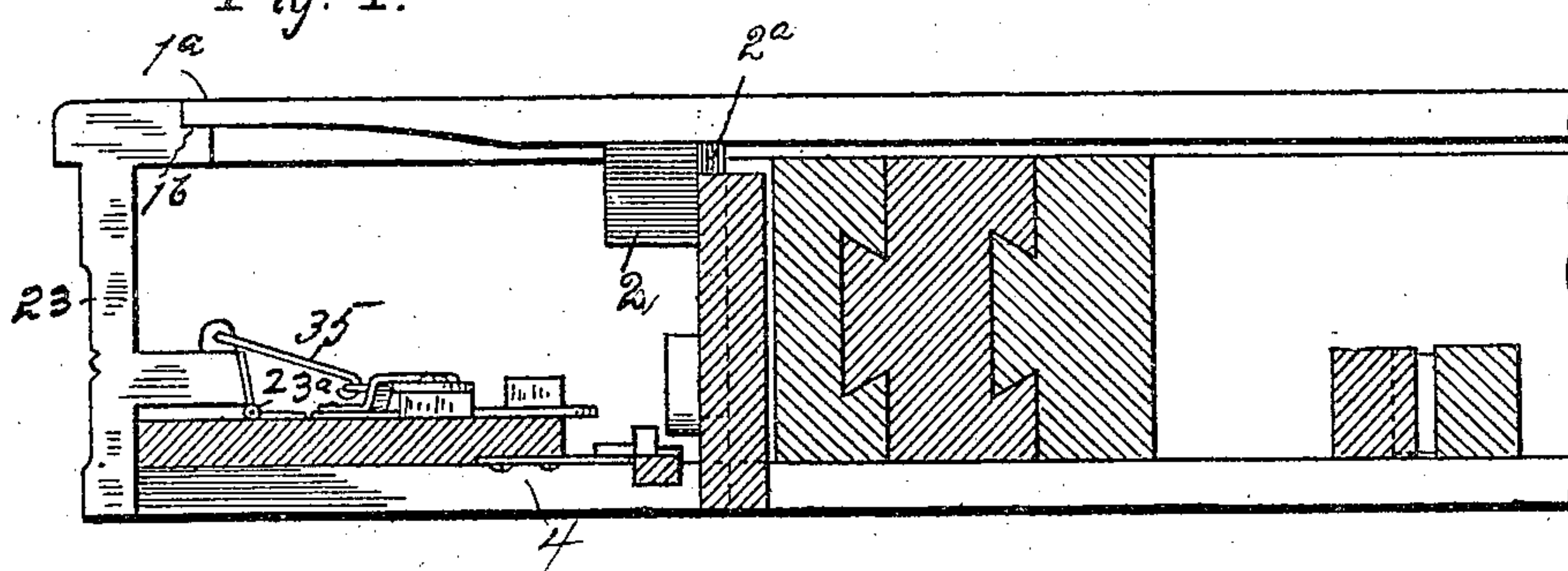


Fig. 4.



WITNESSES:

David C. Walter  
M. L. Marks.

INVENTOR.

Chas. H. Goller  
By Howard Hall His Atty



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Fig.5.

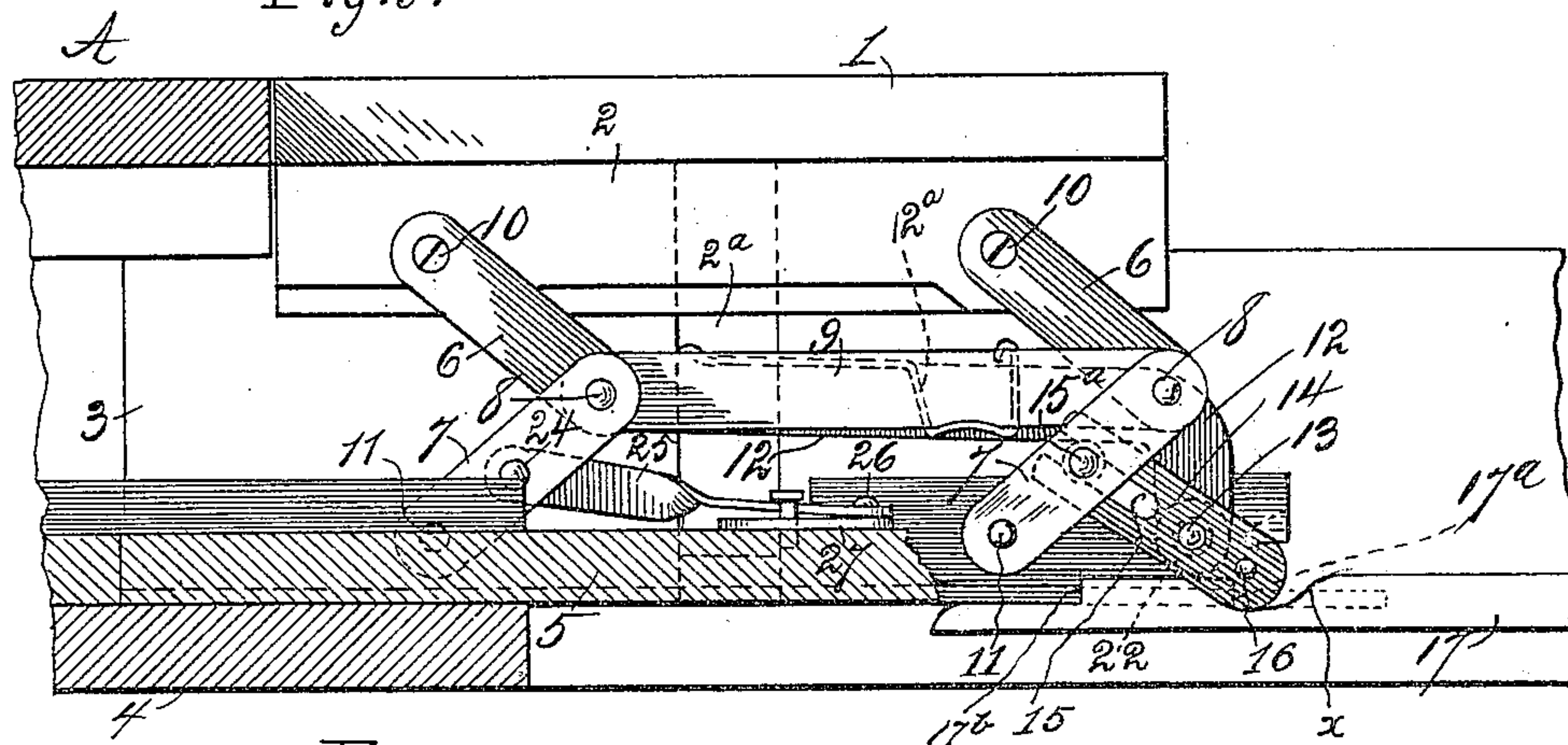


Fig. 6.

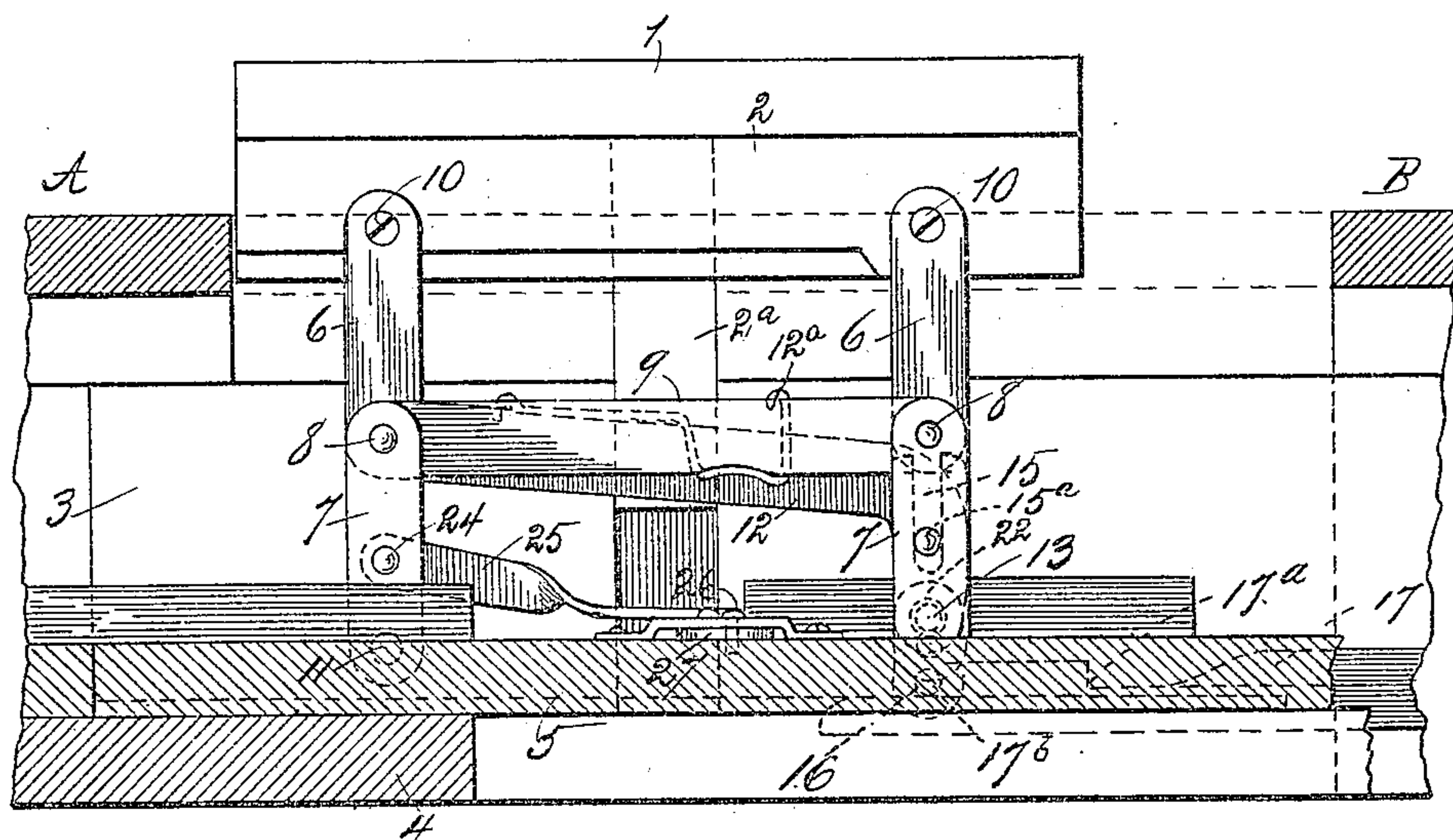
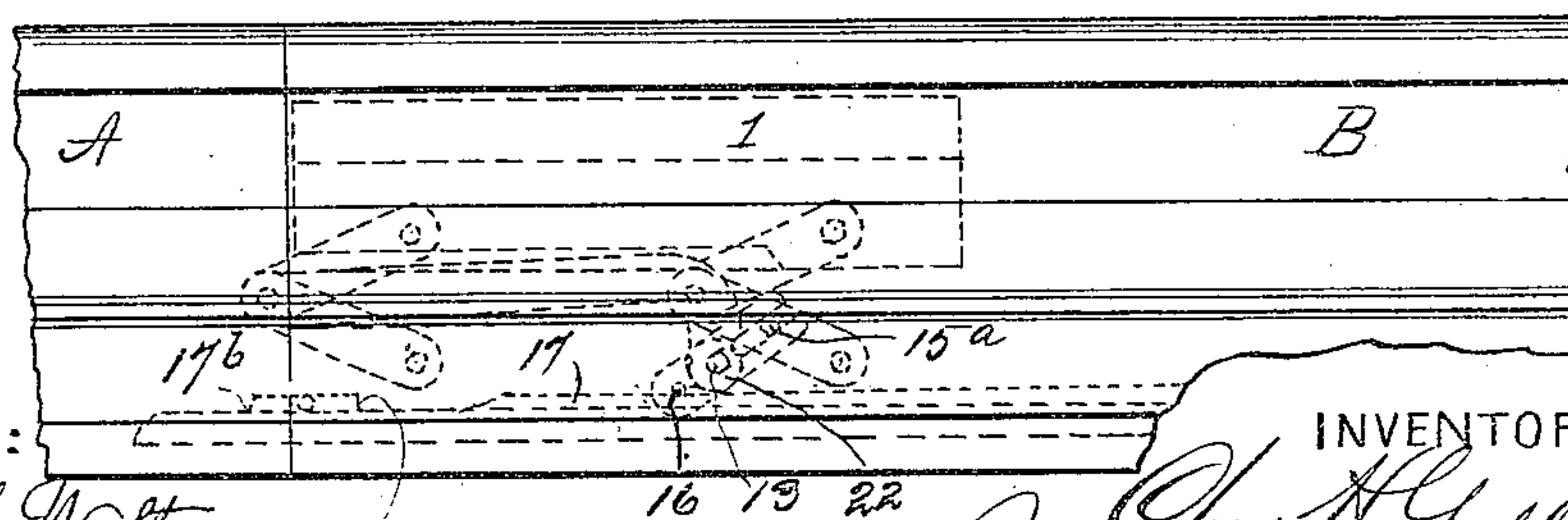


Fig. 7.



WITNESSES:

David C. Walter  
M. L. Marks.

INVENTOR:

INVENTOR.  
By Chas. H. Goller,  
J. Brown Hall,  
His Attys.



# UNITED STATES PATENT OFFICE

CHARLES H. GOLLER, OF HICKSVILLE, OHIO.

## EXTENSION-TABLE.

No. 816,791.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed July 11, 1904. Serial No. 216,070.

*To all whom it may concern:*

Be it known that I, CHARLES H. GOLLER, a citizen of the United States, residing at Hicksville, in the county of Defiance and State of Ohio, have invented certain new and useful Improvements in Extension-Tables; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of extension-tables in which the extension-leaves are contained within the table.

The object of my invention is to furnish a table of this character which shall always present a symmetrical and complete appearance and in which the unsightly absence of side rails for the extended portion of the table shall be done away with.

More particularly, the object of my invention is to furnish an extension-table in which when the two halves of the table proper are drawn asunder the leaves will be supplied automatically to fill the space between the separated parts and in which with each extension-leaf sections of side rails will be automatically supplied, so that the said rail will appear to be continuous and the table complete.

I attain these objects by means of the devices and arrangement of parts hereinafter described and shown, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the top of an extension-table embodying my invention, with parts broken away to show the internal mechanism at the top. This view shows one of the removable table-leaves and its connected parts in position for lowering the leaf and for folding the side-rail sections into the table; Fig. 2, a cross-sectional elevation taken on line *x x*, Fig. 1, showing the extension-leaf dropped and the side-rail section tilted into the table; Fig. 3, the same, showing the extension-leaf raised to its highest position with a section of side rail partly tilted outwardly; Fig. 4, the same, with the extension-leaf and side-rail section in extended position; Fig. 5, a side elevation of one of my toggle mechanisms for raising and lowering an extension-leaf into and out of extended position, showing the leaf and its control-

ling parts in extended position and in position to be retracted. Fig. 6, the same, showing the leaf lifted to its highest position preparatory to its withdrawal into the table; and Fig. 7; a side elevation of the upper part of the table with the table-halves closed together, the dotted lines indicating the position of the retracted leaf and one of the toggle mechanisms by which the leaf is actuated.

Like letters and numerals of reference indicate like parts throughout the drawings.

In the drawings, A B represent the two table-halves which are supplied with separate supporting-legs of the usual or any preferred form, which legs are not shown in the drawings. The two halves of the table are adapted and arranged to be separated and closed together by the usual or any preferred arrangement of sliding bars.

In the example shown in the drawings, *a* is a bar, one end of which is secured to the table-half A.

*b* is a bar, one end of which is secured to the table-half B.

*c* is a bar interposed longitudinally between the bars *a b* and connected with them by sliding dovetailed joints, as illustrated in Figs. 2, 3, and 4. The bar *c* is not secured to either table-half, and it will be seen that the two table-halves may be drawn apart or pushed together, as may be desired.

There are two sets of the bars *a b c*, disposed near opposite sides of the table and arranged longitudinally thereof. Between the under side of the parts A B and the tops of the bars *a b c* is a space a trifle thicker vertically than the thickness of the extension-leaf 1, so that an extension-leaf may be interposed between the top of the bars and the under side of the table-top A B.

The extension-leaf 1 is shorter than the parts A B, and at its ends is beveled on its under side, as appears in Fig. 1. The extension-leaf near each end is secured to the top of a T-shaped block 2, the stem of which, 2<sup>a</sup>, slides vertically in a guide-groove, dovetailed in cross-section, formed in upright piece 3, which is supported by cross-pieces 4, which are secured to the under side of the independently-sliding coupling-bars *c*. The cross-pieces 4 also carry pieces 5, disposed flatwise on the parts 4, part 5 forming a base for the toggle mechanism for raising and lowering the extension-leaves and for actuating the side-rail sections hereinafter referred to.

Two pairs of toggle-bars 6 7 are pivoted to-



gether at their meeting ends, as at 8, to a horizontal connecting-bar 9. The toggle-bars 6 at their upper ends are pivotally connected, as at 10, to the cross-arm of the sliding block 2. The lower ends of the toggle-arms 7 are pivotally connected, as at 11, to the base-piece 5. It will be seen that the four toggle-arms and their connecting-bar 9 move substantially in the same vertical plane and that the horizontal movement of the bar 9 will raise and lower the block 2, carrying the extension-leaf 1. The movement of the connecting-bar 9 is effected as follows: 12 is a bar disposed in a plane parallel with the toggle-arms and pivotally connected at one end to one of the pivot-pins 8, the opposite end being curved downwardly and being pivotally connected, as at 13, to arm 14, having in one end a slot 15 and at its other end a transversely-projecting pin 16. A wire spring 12<sup>a</sup> engages bar 9 and bar 12 and presses the curved end of bar 12 downwardly, but not interfering with the movement of the bar 12 upon its pivot. A pin 15<sup>a</sup>, passing through the toggle-arm 7, (seen at the right in Figs. 5, 6, and 7,) engages the slot 15 in the end of the bar 14. 17 is an operating-bar having one end secured to the table-half B. When the bar 17 is moved to and fro with its table-half, its travel is in alinement with pin 16. At its free end the bar 17 is provided with two oppositely-disposed notches 17<sup>a</sup> 17<sup>b</sup>. It will be seen that if the parts are closed, as indicated in Fig. 7, and if the two table-halves be drawn asunder the transverse pin 16 will drop into the notch 17<sup>a</sup>. Now the pivot 15<sup>a</sup> serves as a fulcrum for the lever 14, and the swing of the slotted lever presses the bar 12 upwardly and longitudinally, carrying with it the two pairs of toggle-bars 6 7 until they are in alinement, occupying in this table-opening movement the same positions as illustrated in Fig. 6, with the block 2 and its leaf 1 raised above the level of the table. The further movement of the bar 17, pulling upon the pin 16, permits the toggle-supports to assume the position illustrated in Fig. 5, allowing the extension-leaf 1 to drop into position in the same plane with the top of the table. By this operation the two table-halves have been pulled farther apart than the width of the added leaf. Now the table-halves are pushed toward each other and are closed up to snugly join against the margins of the added leaf. This operation is permitted by the inclined bottom *x* of the notch 17<sup>a</sup>, which permits the pin 16 to slide upon the bar 17 without interference. When the leaf 1 is thus in place, a catch 18 on the end of spring-bar 19, secured to and sliding with the table-half B, engages a notch 20 in bar 21, secured to the table-half A. Now the two table-halves with the leaf interposed are closely connected and held against separation. Upon the pivot-pin 13, between the

bar 12 and 14, is mounted a lifting-roller 22, which lies in the plane of the bar 17 and in the path of the notches 17<sup>a</sup> 17<sup>b</sup>. When the leaf 1 has been lifted into elevated position and there secured, as just described, the toggles lie in a position similar to that indicated in Fig. 5 and opposite to the position indicated by the dotted lines in Fig. 7. The roller 22 is now next to the outer edge of the notch 17<sup>a</sup>. To drop the leaf 1 to its lower concealed position, that end of spring-bar 19 which lies under the table-half B near its margin is pressed to throw the hook 18 at the opposite end of the spring-bar out of engagement with the notch 20. The table-halves being now disconnected, they are drawn a short distance asunder. The roller 22, traveling in notch 17<sup>a</sup>, rides up out of the notch onto the top of bar 17, lifting the bar 14 and raising the pin 16 clear of the notch 17<sup>a</sup>. When the bar 17 has been moved far enough, the pin 16 drops into notch 17<sup>b</sup>, as indicated in Fig. 1. Now if the two table-halves be pushed toward each other the notch 17<sup>b</sup>, pushing on pin 16, will swing the bar 14 on its pivot 13. This raises and moves longitudinally the pivoted bar 12, throwing the toggle members 6, 7, and 9 back into the position indicated in Fig. 6 and mentioned before in connection with the opening movement of the bars 17. The leaf 1 is now raised above the level of the table, as shown. The further movement of the table-halves toward each other throws the toggle members into their original folded position, as indicated in dotted lines in Fig. 7, the leaf 1 being now lowered below the level of the table-top and the margins of the table-halves now abutting against each other.

From the foregoing description it will be understood that when the table-halves are closed and the extension-leaf lowered, all parts of the leaf raising and lowering mechanism normally occupy the positions shown in Fig. 7 of the drawings. In this position the parts with the operating-bar 17 moved inward to its full extent, the engaging pin 16 and also the lifting-roller 22 adjacent thereto, lie on the upper edge of the said operating-bar. Hence, in the opening movement of the table-halves to provide for raising the extension-leaf, the operating-bar 17 as it moves outward carries the shoulder or notch 17<sup>a</sup> into the vertical plane of the engaging pin 16, which immediately drops (under influence of the spring 12<sup>a</sup>) into engagement with the said shoulder or notch 17<sup>a</sup>. With the pin 16 engaged with the shoulder or notch 17<sup>a</sup> the continued movement of the bar 17 first straightens the toggles 6 7 into the position shown in Fig. 6 and then breaks or folds the toggles into the position shown in Fig. 5, which latter position is the reverse from that shown in Fig. 7. When the parts reach the position shown in Fig. 5 of the drawings, the table-



half carrying the operating-bar 17 is moved to a position slightly beyond the extension-leaf 1. Then upon moving the said table-half with the operating-bar 17 inward the pin 16 and the lifting-roller 22 freely move backward over the notch-bottom  $x$ , thereby permitting the table-halves to close against the leaf. When it is desired to shorten the table and withdraw the extension-leaf 1 to its housed position, the table-half carrying the operating-bar 17 is moved outward sufficiently far to permit the pin 16 to pass the shoulder or notch 17<sup>a</sup> and drop behind the shoulder or notch 17<sup>b</sup>, so as to bring the parts in the relation shown in Fig. 1 of the drawings. In this outward movement of each operating-bar 17 it will be observed that the lifting-roller 22 of the bar 12, as it comes into engagement with the shoulder or notch 17<sup>a</sup>, rides out of and above said shoulder or notch and carries with it the pin 16, so that the latter can freely pass over to the shoulder or notch 17<sup>b</sup>. Then by moving the table-half with the operating-bar 17 inward each of said latter bars first straightens the toggles out to the position shown in Fig. 6 and then drops them over to the position shown in Fig. 7. The full inward movement of the table-half carrying the bar 17 causes the shoulder or notch 17<sup>b</sup> of each of said bars (when the toggles are fully thrown over to the position shown in Fig. 7) to move against the lifting-roller 22, whereby such roller will ride out of the shoulder or notch 17<sup>b</sup> and carry with it the pin 16, so that the parts can resume the positions shown in Fig. 7 of the drawings.

23 is a section of side rail corresponding in finish and form with the side rails of the table, pivotally secured or hinged to the member 5, as at 23<sup>a</sup>. The section 23 is adapted and arranged to fold inwardly on its hinge, so that when the two table-halves are brought together the part 23 will lie under the table-top and within the line of the side rails. The pivoted side-rail section is pivotally connected with one of the toggle members 7, as at 24, by means of bar 25, pivoted, as at 26, to one end of lever 27, fulcrumed on the part 5, as at 28, the other end of the lever carrying a finger 29, one end of which is pivoted, as at 30, to the lever 27, the other end of the finger being pivoted, as at 31, to the lever 32. This lever is fulcrumed at one end, as at 33, upon the member 5 and at its other end is loosely connected, as at 34, with one end of a rod 35, the other end of this rod being swiveled, as at 36, to the hinged side-rail section 33. Assuming that the table-halves are in closed relation and that the table is to be opened or extended, the two table-halves are pulled apart, throwing the toggle-arms 6 7 9, as above described. This movement of the toggles, through bar 25, lever 27, lever 32, and swivel-rod 35, swings the hinged

side-rail section outwardly into alinement with the side rails of the table-halves. It will be observed that the leaf 1, at the instant the rail-section is swung outwardly, is raised, as in Fig. 6, so that it does not interfere with the movement of the side-rail section. It will also be seen that when the leaf 1 is lowered into position as part of the table-top its beveled end 1<sup>a</sup> rests in a notch 1<sup>b</sup> in the upper inner corner of the folding side-rail section, and that the top of the leaf and of the side-rail section together present a smooth upper surface. When the table is to be closed, the opposite movement of the toggle members 6 7 9 causes a reverse movement of the parts intermediate the toggle and the folding side-rail section, so that when the leaf is raised and then lowered to its lowest position the side-rail section is folded inwardly under the leaf, as indicated in Fig. 2.

In the description thus far given I have described but a single mechanism for raising and lowering into and out of place a table-leaf and for moving the hinged side-rail section into and out of position; but it will of course be understood that the leaf 1 is provided at both ends at opposite sides of the table with the mechanisms here described arranged to simultaneously raise and lower both ends of the leaf and to actuate both side-rail sections in harmony.

While I have shown and described a table having but a single extension-leaf, it will be understood that by duplication other leaves and their accompanying side-rail sections and their actuating mechanisms may be added, and that these added leaves and side-rail sections will be operated in their order as the table-halves are drawn apart or pushed together, so that the table may be extended or shortened, as may be desired.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an extension-table, a movable extension portion, an extension-leaf, mechanism for raising and lowering said leaf carried by said extension portion, swinging side-rail sections mounted on said extension portion, and engaging beneath the ends of said leaf when in operative position, said side-rail sections being foldable inwardly beneath the leaf ends when the latter is in lowered position, and means connected to said leaf-operating mechanism for simultaneously actuating the side-rail sections.

2. In an extension-table, a movable extension portion, an extension-leaf, a pair of toggle mechanisms carried by said extension portion and having operative connections with the leaf for raising and lowering the same, swinging side-rail sections mounted on said extension portion, and engaging beneath the ends of said leaf when in operative position, said side-rail sections being foldable inwardly beneath the leaf ends when the latter



is in lowered position, and means connected to said toggle mechanisms for simultaneously actuating the side-rail sections.

3. In an extension-table, opposite table-  
5 halves, a rising and falling extension-leaf, two pairs of toggle-links connected respectively with the leaf and with a sliding member of the table, a coupling-bar connection  
10 between the opposite toggle-links, a bar connected with one pair of toggle-links and carrying a lifting-roller, an oscillating member pivoted on the shaft of said roller and carrying an engaging pin, said oscillating member  
15 having a sliding fulcrum connection with one of the toggle-links and a reciprocating operating-bar having a plurality of shoulders or notches cooperating with the said engaging pin of the oscillating member.

4. In an extension-table, two separable  
20 table-halves, a leaf adapted to be interposed between the separated table-halves, two pairs

of toggle-links connected at top with the under side of the leaf and at bottom with a sliding member of the table, a bar which pivotally connects said two pairs of toggle-links, a  
25 bar which at one end is pivotally connected with the toggle-links the other end being turned downwardly and carrying a roller at its lower end, a bar pivoted between its ends on the shaft of said roller and having a longitudinal slot at top and carrying a transverse  
30 pin at bottom, a stud on one of said toggle-links engaged with said slot, and a sliding bar 17 having two notches each adapted to engage said transverse pin.

35 In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. GOLLER.

Witnesses:

WILLIAM PURDY,

JOHN L. BENINGTON.