

No. 734,190.

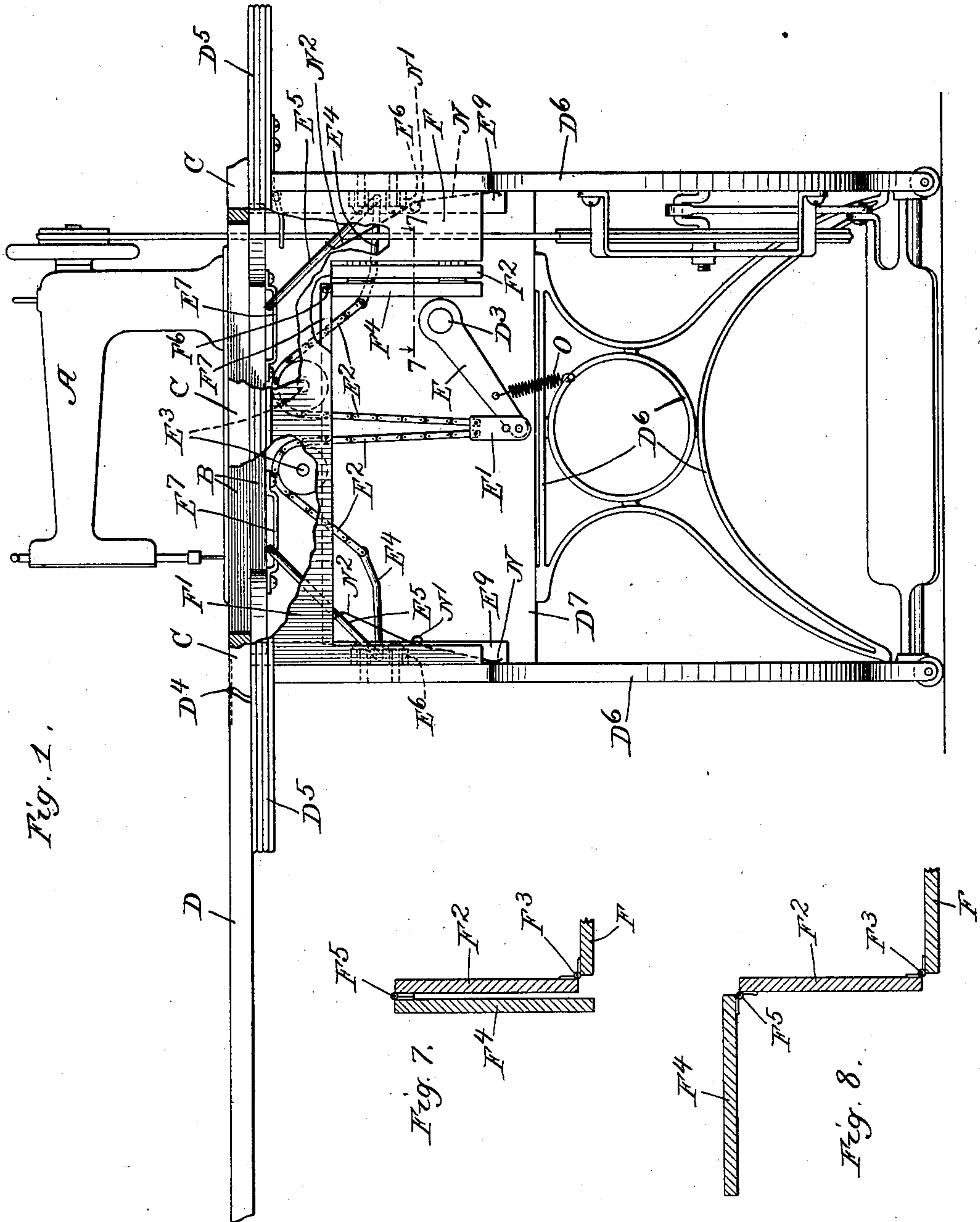
PATENTED JULY 21, 1903.

A. MORLEY.  
FOLDING SEWING MACHINE TABLE.

APPLICATION FILED JUNE 7, 1901.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses.

Edward T. Wray.

Howard L. Craft.

Inventor.

Albert Morley.

by Parker Porter  
his Atty's.

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3 SHEETS—SHEET 2.

Fig. 2.

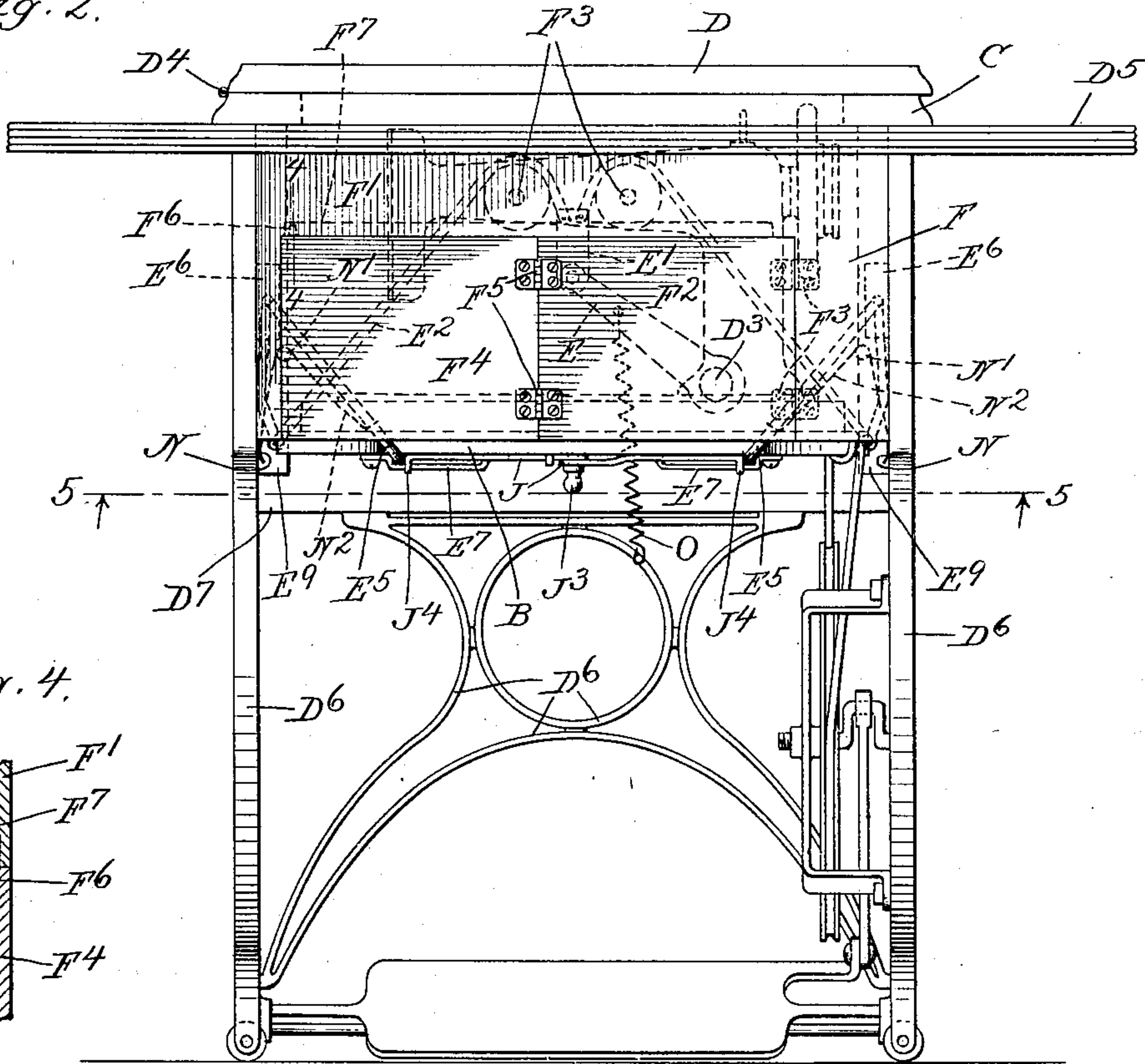


Fig. 4.

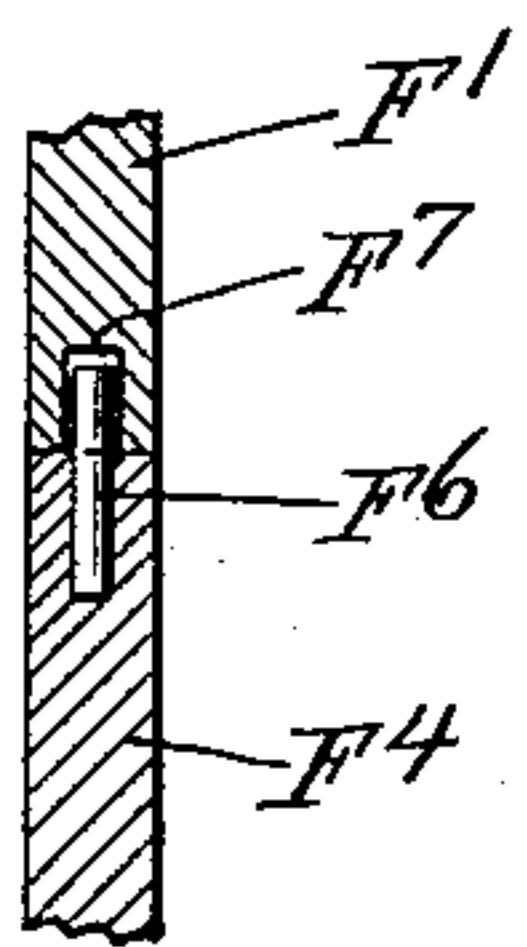
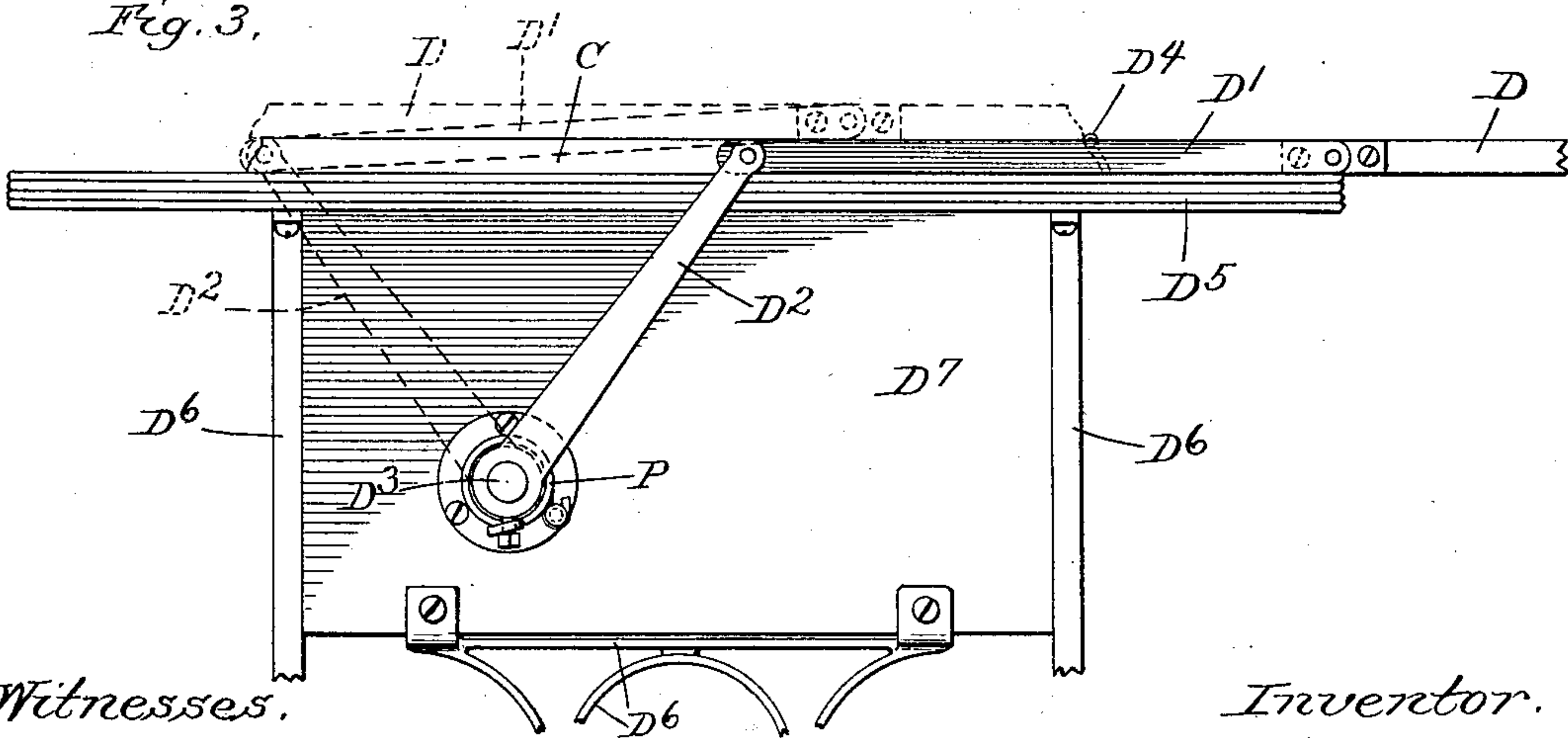


Fig. 3.



Witnesses.

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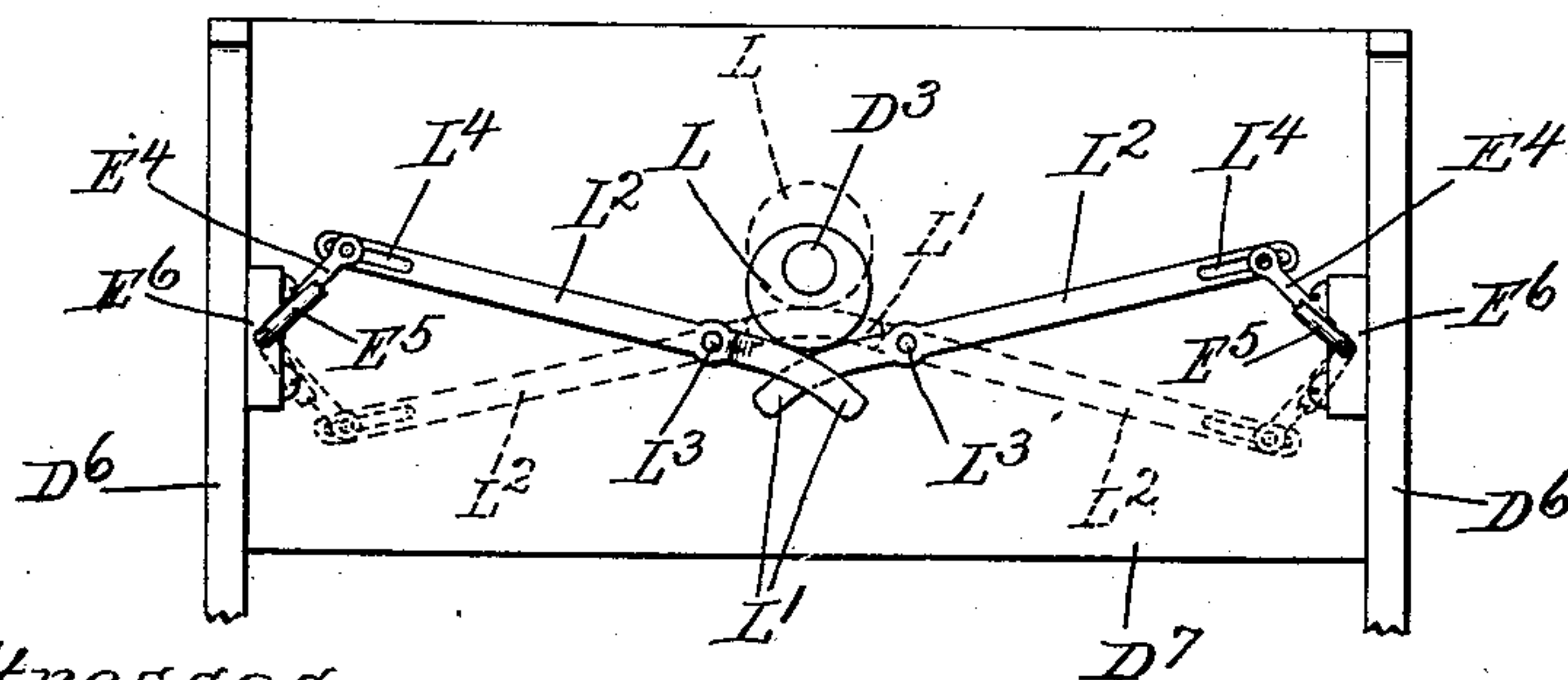
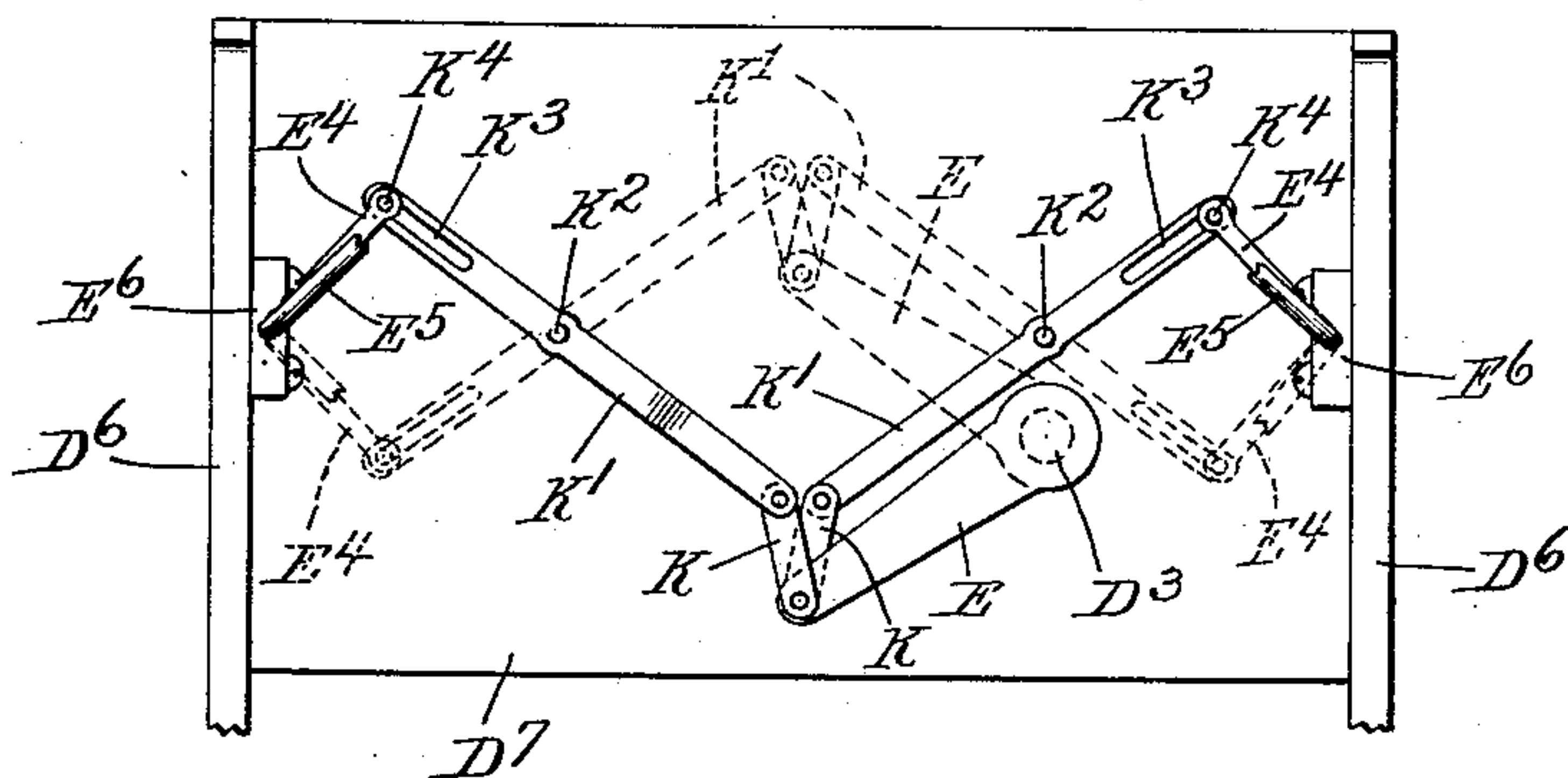
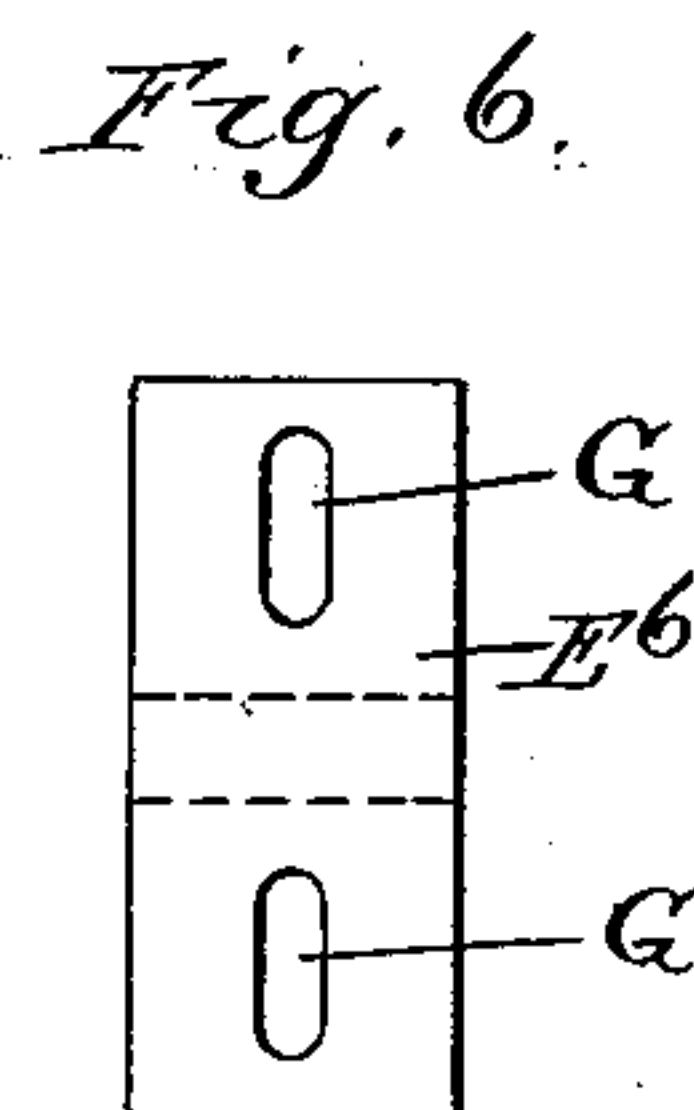
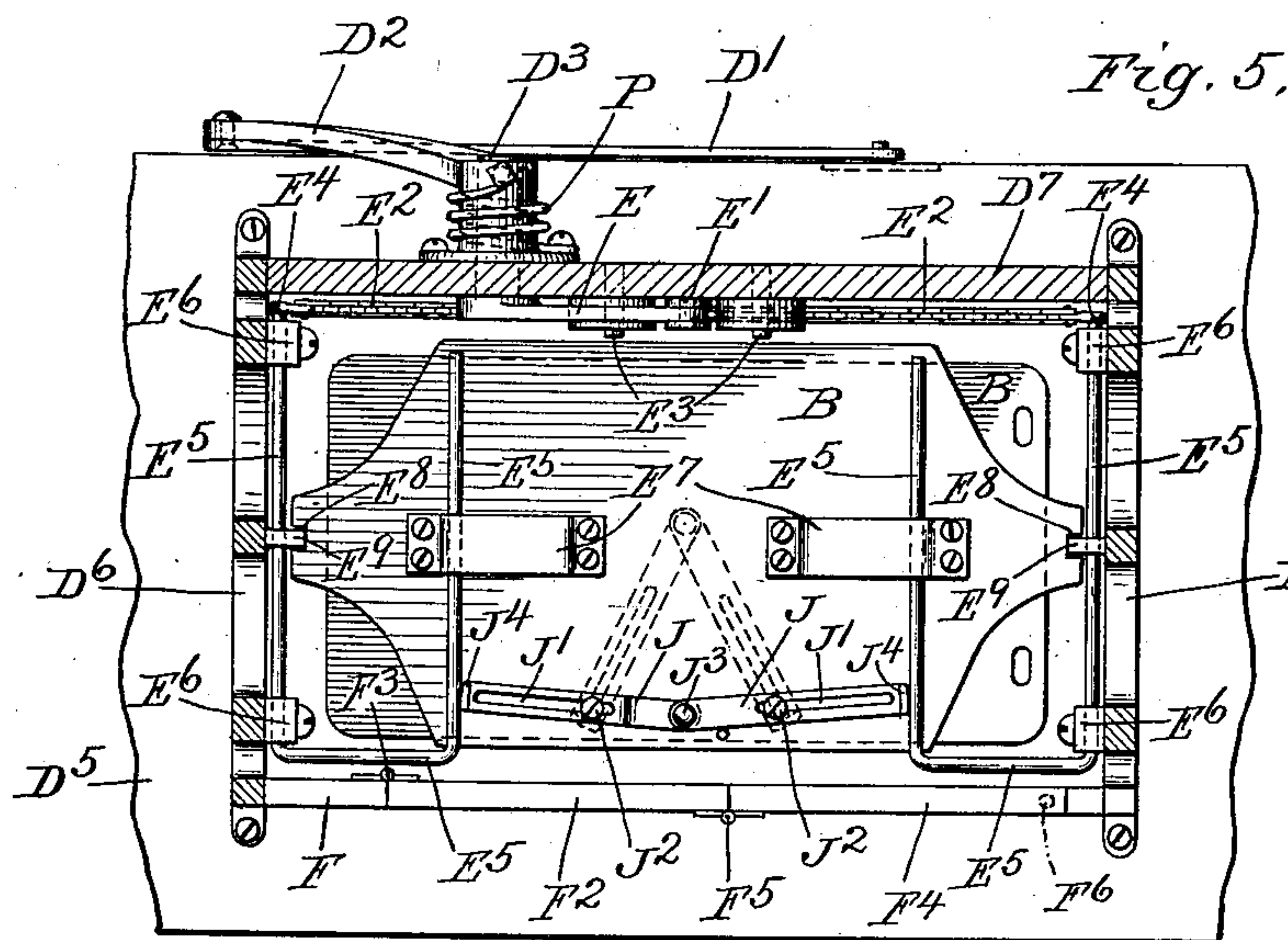
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APPLICATION FILED JUNE 7, 1901.

NO MODEL.

3 SHEETS—SHEET 3.



Witnesses,

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# UNITED STATES PATENT OFFICE.

ALBERT MORLEY, OF CHICAGO, ILLINOIS, ASSIGNOR TO STEPHEN M. SUTHERLAND, TRUSTEE, OF CHICAGO, ILLINOIS.

## FOLDING SEWING-MACHINE TABLE.

SPECIFICATION forming part of Letters Patent No. 734,190, dated July 21, 1903.

Application filed June 7, 1901. Serial No. 63,554. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT MORLEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Folding Sewing-Machine Tables, of which the following is a specification.

My invention relates to folding sewing-machine tables, and has for its object to provide certain improvements relating to such devices more specifically set out in the accompanying drawings, wherein—

Figure 1 is a front elevation with parts broken away of a folding sewing-machine stand, the sewing-machine head being elevated ready for use. Fig. 2 is a similar view with the sewing-machine head folded out of use, the doors closed, and parts shown in dotted lines. Fig. 3 is a detail rear view. Fig. 4 is a detail of the door connection. Fig. 5 is a bottom view of the movable head-stand in its upper position. Fig. 6 is a detail of a bearing. Figs. 7 and 8 are detail cross-sections of the folding front doors. Figs. 9 and 10 are modifications of the operating mechanism.

Like parts are indicated by the same letters in all the figures.

A is a sewing-machine head on the movable base composed of the two parts B B. C is the fixed table; D, the folding table, which folding table, as shown in Fig. 3, is connected by the link D' with the arm D<sup>2</sup> on the shaft D<sup>3</sup> and is hinged at D<sup>4</sup> to the fixed table C, which rests upon the top D<sup>5</sup> of the stand or frame D<sup>6</sup>. The shaft D<sup>3</sup> is mounted in the back-board D<sup>7</sup>, which forms part of the stand or frame, and on its inner end is provided with the arm E, which carries at its outer end a loosely-pivoted block E', whence upwardly pass the chains E<sup>2</sup> E<sup>2</sup>. Each of these chains passes over an idler E<sup>3</sup> and down to make connection with an arm E<sup>4</sup>, projecting from or forming part of a loop E<sup>5</sup>, pivoted at E<sup>6</sup> and passing under the base B, to which it is held, but so as to move therealong by the keeper E<sup>7</sup>. Some of these parts are shown more in detail in Fig. 5. The lower base portion B is slotted at its ends E<sup>8</sup> E<sup>8</sup>, so as to slide upon the vertical guides E<sup>9</sup> E<sup>9</sup>, which are cut out at a certain point to permit the longitudinal part of the loops E<sup>5</sup> to pass therethrough.

So much of the device as I have now described operates as follows: When the leaf or hinge table D is moved upon its hinge D<sup>4</sup>, it is evident that the shaft D<sup>3</sup> will be rotated and the arm E be forced upwardly or downwardly. If forced upwardly, starting from the position shown in Fig. 1, it is clear that the chains E<sup>2</sup> E<sup>2</sup> will be slackened and the weight of the sewing-machine head or of any pressure which may be applied to the base-plates B B will cause them to move downwardly. The loops E<sup>5</sup> E<sup>5</sup> moving upon their pivots E<sup>6</sup> and sliding in the keepers E<sup>7</sup> thus cause the sewing-machine head to be held in a level position, but permit it to descend until the parts are in the position indicated in Fig. 2.

It will of course be understood that these structures and devices shown may be greatly altered in form and shape and method of attaching one to another without departing from the spirit of my invention.

What I have called the "loop" E<sup>5</sup> is, in fact, simply a series of arms and parts whereby there is a fixed pivoted connection to the frame, a sliding operative connection with the movable machine-head base, and a controlling connection with the operative mechanism.

The door or doors at the front of the machine are intended to be closed when the machine-head is down and open when it is up.

F is a fixed portion at the side of the front of the machine, and F' a similar portion at the top of the front of the machine.

F<sup>2</sup> is a door-section hinged to the part F at F<sup>3</sup>, and F<sup>4</sup> is a like section hinged to the part F<sup>2</sup> at F<sup>5</sup>.

F<sup>6</sup> is a pin in the top and at the forward edge of the section F<sup>4</sup>, and this pin is adapted to travel in the groove F<sup>7</sup>, formed in the lower edge of the part F'. As illustrated in Fig. 4, this may or may not be used; but when used the folding doors can be easily brought into the position shown in Fig. 7, when the machine-head is raised. When the pin is not used, the parts can be brought into the position shown in Fig. 8.

The hinging of the loop E<sup>5</sup> should be adjustable. In Fig. 6 I have shown a detail of the means by which this can be accomplished.



The pivot part  $E^6$  is provided with the two slots  $G\ G$ , whereby the pivot part  $E^6$  can be adjusted and secured in any desired position, and it is bent outwardly, as indicated in the drawings, to receive and form the bearing for the loop.

It is sometimes desirable to lock the machine-head in position either when lowered or when raised, and this I may accomplish by means of the devices illustrated in Figs. 5 and 2.  $J\ J$  are bars each provided with the slot  $J'\ J'$ , through which projects the shank of a fixed screw  $J^2\ J^2$ , the bar in each case being held in position by the head of the screw, while free to slide thereon from one end to the other of the slot. These two bars are pivoted together and secured to a handle  $J^3$  and are provided each with an upturned end  $J^4$ , adapted each to bear against one portion of one loop  $E^5$ . When the lock is out of operative position, as indicated by the dotted lines in Fig. 5, the parts are free to move up or down; but when they have reached the limit of their excursion in either direction by means of the handle  $J^3$  the bars may be manipulated so as to take the position indicated in full lines in Fig. 5, whereupon the parts are securely locked from movement, and thus the sewing-machine head may be locked at either extremity of its vertical excursion. In doing this of course it will be evident that the parts must be properly proportioned, so that the motion which locks at one end will lock at the other if the precise formal construction shown by me is retained; but it is obvious that very material changes in this construction can be made without departing from the spirit of my invention. The operative parts of my invention are likewise capable of great variation. It is, in fact, only necessary that the movement of the short shaft be communicated to the loops, and this may be done, as indicated fully, by the chains, idlers, and suitable connecting parts or by a system of levers, from which the chains may be excluded, as indicated in Fig. 9, or by a cam and levers, as indicated in Fig. 10.

Referring to Fig. 9, in lieu of the link  $E'$ , I employ two links  $K\ K$ , each connected with a lever  $K'$ , pivoted at  $K^2$  to the backboard  $D^7$  and provided at its farther end with a long slot  $K^3$ , in which moves the pivoted pin  $K^4$  or a portion formed on the loop  $E^5$ , and the operation, of course, is substantially the same as with the other operating mechanism. The two positions as shown by the full and the dotted lines, Fig. 10, present a further modification in which the shaft  $D^3$  is placed centrally in the board  $D^7$  and provided with the cam  $L$ , which engages the upper arc-shaped ends  $L'\ L'$  of the lever  $L^2\ L^2$ , which are pivoted to the backboard  $D^7$  at  $L^3\ L^3$  and which are slotted at  $L^4$  to receive the pivot-pins on the loops  $E^5$ , as before. These two modifications of the operative mechanism are illustrated simply to show that the result can

be accomplished in a different way from that illustrated before.

The table as it descends should be resisted by some counteracting spring, weight, or the like, and I have shown counteracting springs.

$N\ N$  are springs attached to the sides of the frame and coiled at  $N'$  and adapted to engage the loop portion at  $N^2$ . These springs are so formed that they tend to force the machine head and base upwardly.  $O$  is a spiral spring attached at one end to the arm  $E$  and at the other to the framework  $D^6$ . It tends to pull such arm down, and thus to resist the descending action of the head.  $P$  is a further spring acting against the arm  $D^2$  and coiled about the shaft  $D^3$ , which tends to move these parts in the same direction. These several springs may be, some or all of them, dispensed with and other devices may be substituted that tend to resist the downward movement of the head, to keep it from falling when released, and to assist in raising it.

I claim—

1. In a folding sewing-machine table, the combination of a fixed frame with a movable table, two supports which have each a pivoted connection with the fixed sewing-machine frame and a movable connection with the movable table, and means for operating said supports on their pivots to cause them to raise the movable table, said means including a folding leaf, a shaft connected with said leaf and a connection from the shaft to the supports.

2. In a folding sewing-machine table, the combination of a movable table with a sewing-machine frame, two supports which have a pivoted connection with the fixed sewing-machine frame and a movable connection with the movable table, and means for operating said supports on their pivots to cause them to raise the movable table, said means including a folding leaf, a shaft connected with said leaf and a connection from the shaft to the supports and idler-pulleys, said connection including chains which travel over such idler-pulleys.

3. In a folding sewing-machine table, the combination of a movable table with a fixed frame or stand, two supports pivoted upon the fixed frame and having movable connections with the movable table, a rotatable part and connections from said supports to same, and means for rotating such part to raise and lower the movable table.

4. In a folding sewing-machine table, the combination of a movable table with a fixed frame or stand, supports pivoted upon the fixed frame and having movable connections with the movable table, a rotatable part and connections from said supports to same, and means for rotating such part to raise and lower the movable table and idler-pulleys, said connections including chains which travel over idler-pulleys.

5. In a folding sewing-machine table, the



combination of a movable table with a fixed frame or stand, supports pivoted upon the fixed frame and having movable connections with the movable table, a rotatable part and  
5 connections from said supports to same, and means for rotating such part to raise and lower the movable table and idler-pulleys, said connections including chains which travel over idler-pulleys and an arm which  
10 makes the connection from the chains to the rotatable part.

6. In a folding sewing-machine table, the combination of a movable table with a fixed frame or stand, two supports pivoted upon  
15 the fixed frame and having movable connections with the movable table, a rotatable part and connections from said supports to same, and means for rotating such part to raise and lower the movable table, said means  
20 including a folding table-leaf and connections therefrom to the rotatable part.

7. In a folding sewing-machine table, the combination of a movable table with a fixed stand, and loop-like supports, having each a  
25 long sliding bearing on the movable table toward one end and pivoted each on the stand.

8. In a folding sewing-machine table, the combination of a movable table with a fixed

stand, and loop-like supports, having each a long sliding bearing on the movable table  
30 toward one end and pivoted each on the stand, said loops having projecting arms, and means for moving said arms to raise and lower the movable table.

9. In a folding sewing-machine table, the  
35 combination of a movable table with a fixed stand, and loop-like supports, having each a long sliding bearing on the movable table toward one end and pivoted each on the stand, and vertical guides for the movable table to  
40 keep it from moving horizontally.

10. In a folding sewing-machine table, the combination of a movable table with a fixed stand, and loop-like supports, having each a long sliding bearing on the movable table  
45 toward one end and pivoted each on the stand, said loops having projecting arms, and means for moving said arms to raise and lower the movable table, said means including chains and pulleys over which they pass and which  
50 are drawn upon or released to operate the loop-like supports.

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Witnesses:

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