

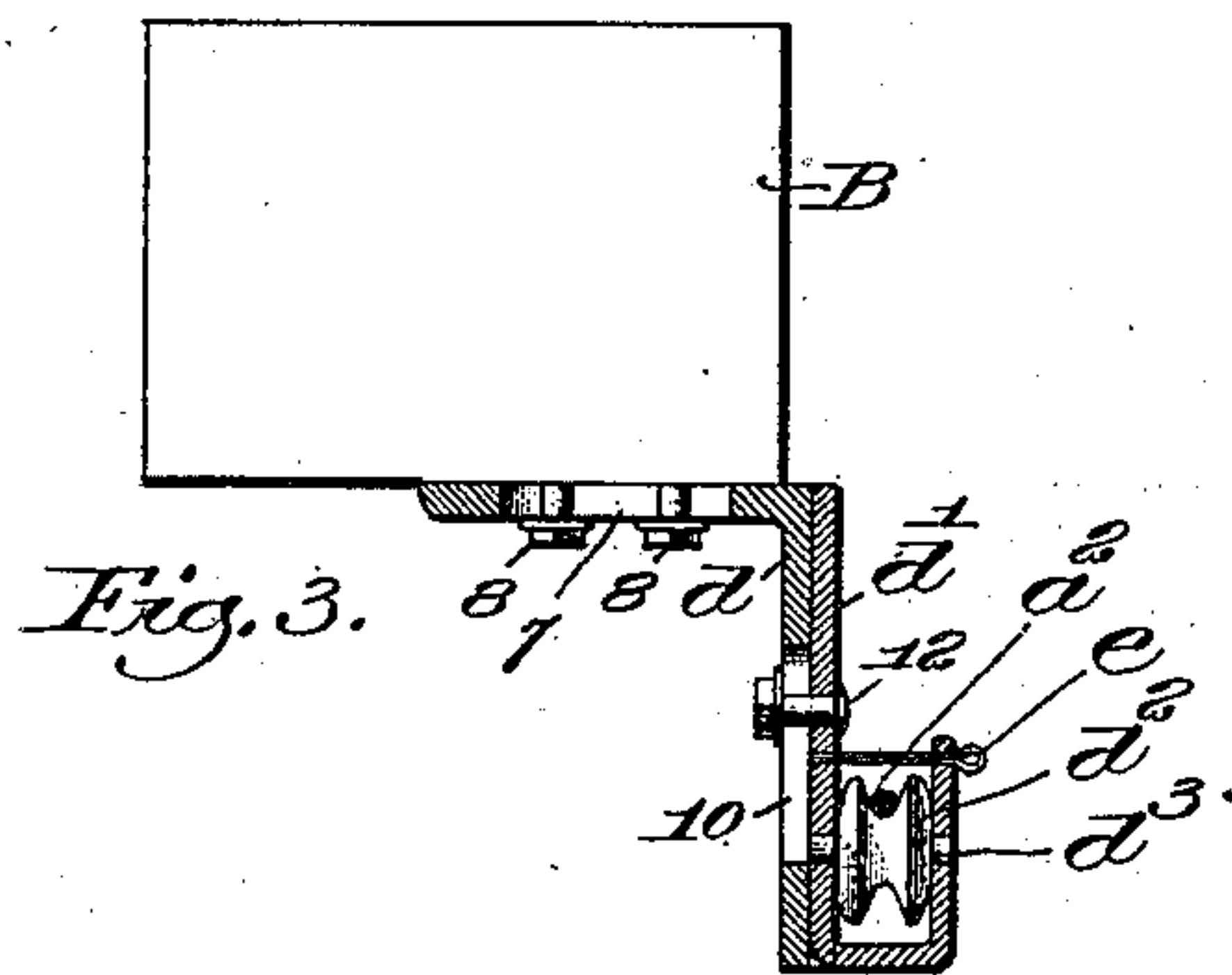
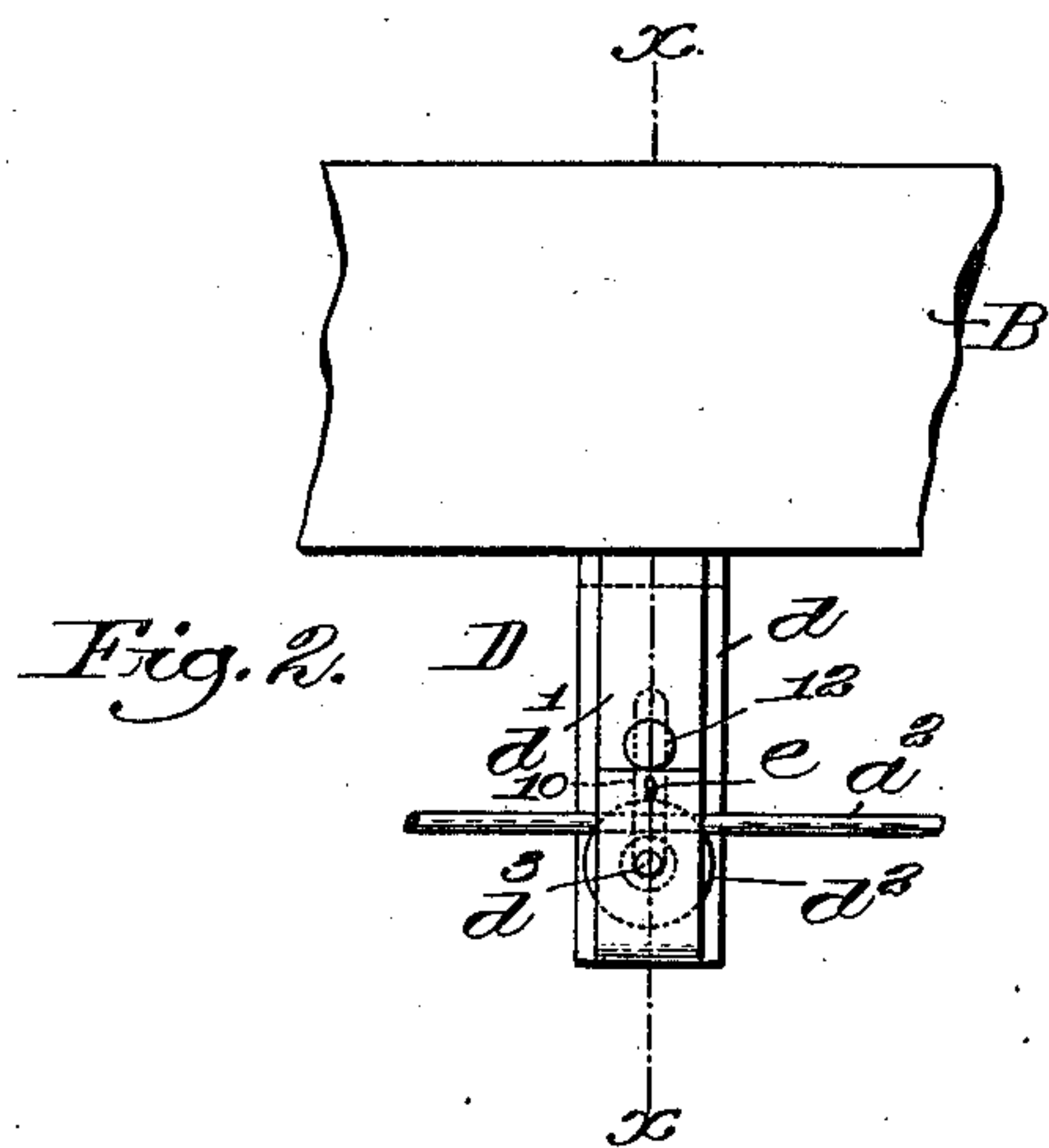
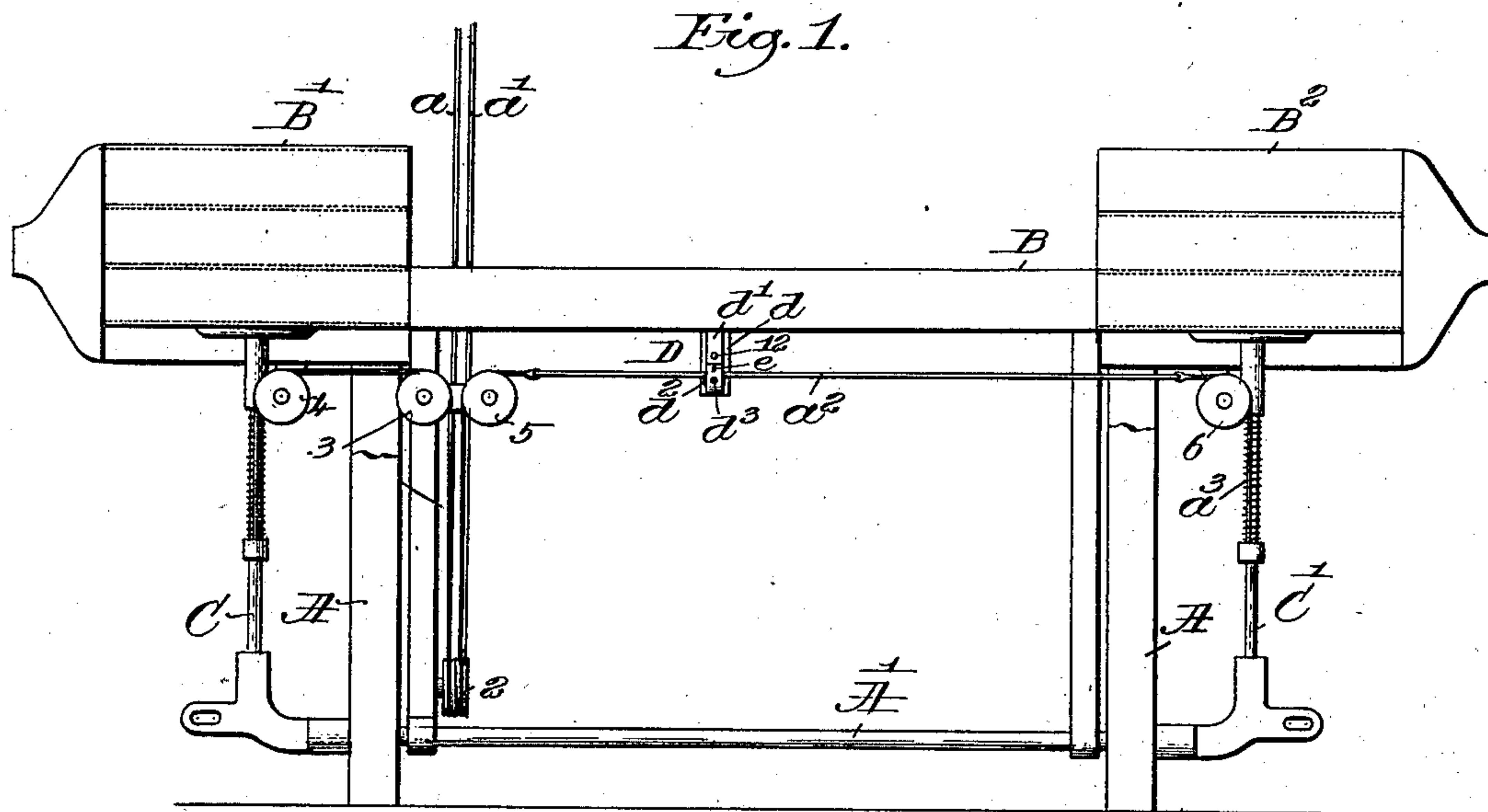
No. 723,903.

PATENTED MAR. 31, 1903.

D. C. NORCROSS.  
ROD GUIDE FOR LOOMS.

APPLICATION FILED AUG. 26, 1902.

NO MODEL.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

DANIEL C. NORCROSS, OF NORTH BILLERICA, MASSACHUSETTS.

## ROD-GUIDE FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 723,903, dated March 31, 1903.

Application filed August 26, 1902. Serial No. 121,079. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL C. NORCROSS, a citizen of the United States, residing at North Billerica, county of Middlesex, State of Massachusetts, have invented an Improvement in Rod-Guides for Looms, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object to provide a loom having a connecting-rod substantially parallel with the race of the lay and connecting opposite shifting shuttle-boxes with a guide for said connecting-rod, whereby accuracy in the position of the rod may be better secured. The more accurate the position of the connecting-rod the more accurate its movements and the greater the accuracy in placing the shuttle-boxes in exact position  
20 with relation to the race of the lay, and consequently the more perfect the weaving. Further, by guiding the connecting-rod as herein provided for the durability of the loom is increased and the wear on the operating parts is reduced.

Figure 1, in front elevation, shows a sufficient portion of a loom with my improvements added to enable my invention to be understood. Fig. 2 is an enlarged detail showing  
30 part of the lay with my novel box-rod guide applied; and Fig. 3 is a detail in the dotted line  $x$ , Fig. 2.

The loom-frame A, the rocking shaft A', carrying the lay B, the shifting shuttle-boxes  
35 B' B<sup>2</sup>, carried by shuttle-box rods C C', the pulleys 2, 3, 4, and 5, sustaining the flexible cords or connections  $a a'$ , the connecting-rod  $a^2$ , joined at one end with the cord  $a'$  and at its other end with cord  $a^3$ , extended over pulley 6 and connected with shuttle-box rod C', are and may be all as common in the so-called "Knowles" loom, and in practice the cords  $a a'$  are pulled in the proper time and order through the requirements of a pattern-  
45 surface of usual construction, as one or another cell of one or the other shuttle-box is to be put in position opposite the run of the lay.

In accordance with my invention I have provided a novel guide for the rod  $a^2$ , whereby its exact position with relation to the lay and the sheaves 5 6 may be gained. I have provided the under side of the lay with a

guide D, shown as comprising a main stand  $d$  and an adjustable portion  $d'$ , having a roller  $d^2$ . The main stand is slotted at 7 for  
55 the reception of screws 8, by which to attach it to the under side of the lay in adjusted position. Said main stand is also slotted at 10, a bolt 12, connected with the adjustable portion  $d'$ , sliding in said slot as the portion  $d'$   
60 is adjusted vertically on the main stand. The lower end of the portion  $d'$  sustains a pin  $d^3$ , on which rotates freely the roller  $d^2$ . The roller as herein shown is represented as grooved at its periphery to receive, sustain,  
65 and guide the connecting-rod  $a^2$ . A cotter-pin  $e$  is shown as crossing the rod  $a^2$  above the roller.

It will be understood that the main stand may be adjusted on the lay to place the rod  $a^2$   
70 exactly in line with the grooved peripheries of the rollers 5 and 6, and by adjusting the portion  $d'$  vertically on the main stand the roller may be so positioned as to sustain the weight of the rod  $a^2$  and secure for it the best  
75 possible position to insure accuracy of movement of the box B<sup>2</sup>. The roller prevents wear on the rod  $a^2$ , and by grooving the roller to receive the rod forward and backward swaying of the rod is obviated.

As stated, a loom provided with the guide shown will weave more perfect cloth than would a loom in which the guide was of but one piece and non-adjustable.

I am not aware that a loom having a connecting-rod such as  $a^2$  has ever been sustained or guided by a roller.

My invention is applicable to any loom having a cross connecting-rod, and when so applied any lateral vibration of the rod, due to  
90 the rapid reciprocations of the lay in its movements of beat up, is entirely overcome.

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

1. In a loom, a lay, shuttle-boxes at opposite ends thereof, a connecting-rod occupying a position substantially parallel with the race of the lay, and a guide for said rod to prevent lateral or side vibrations due to movements  
100 of the lay, said guide comprising a stand connected with the lay and having a roller to guide said rod.

2. In a loom, a lay, a connecting-rod guide,



comprising a stand adapted to be secured to the lay, and a roller to guide said rod and prevent lateral or side vibrations thereof due to movements of the lay.

5 3. In a loom, a lay, a connecting-rod guide comprising a stand adapted to be secured to the lay, a roller to guide said rod and prevent lateral vibrations due to lay movement, and means to adjust said roller on said stand.

10 4. In a loom, a lay, a connecting-rod guide comprising a stand adapted to be secured to the lay, and a roller to sustain and guide said rod.

5. In a loom, a lay, a connecting-rod guide, comprising a main stand, an adjustable por- 15  
tion carried thereby and having a roller grooved at its exterior to receive, sustain and guide said rod.

In testimony whereof I have signed my name to this specification in the presence of 20  
two subscribing witnesses.

DANIEL C. NORCROSS.

Witnesses:

LOUIS C. SMITH,  
MARGARET A. DUNN.