

No. 704,845.

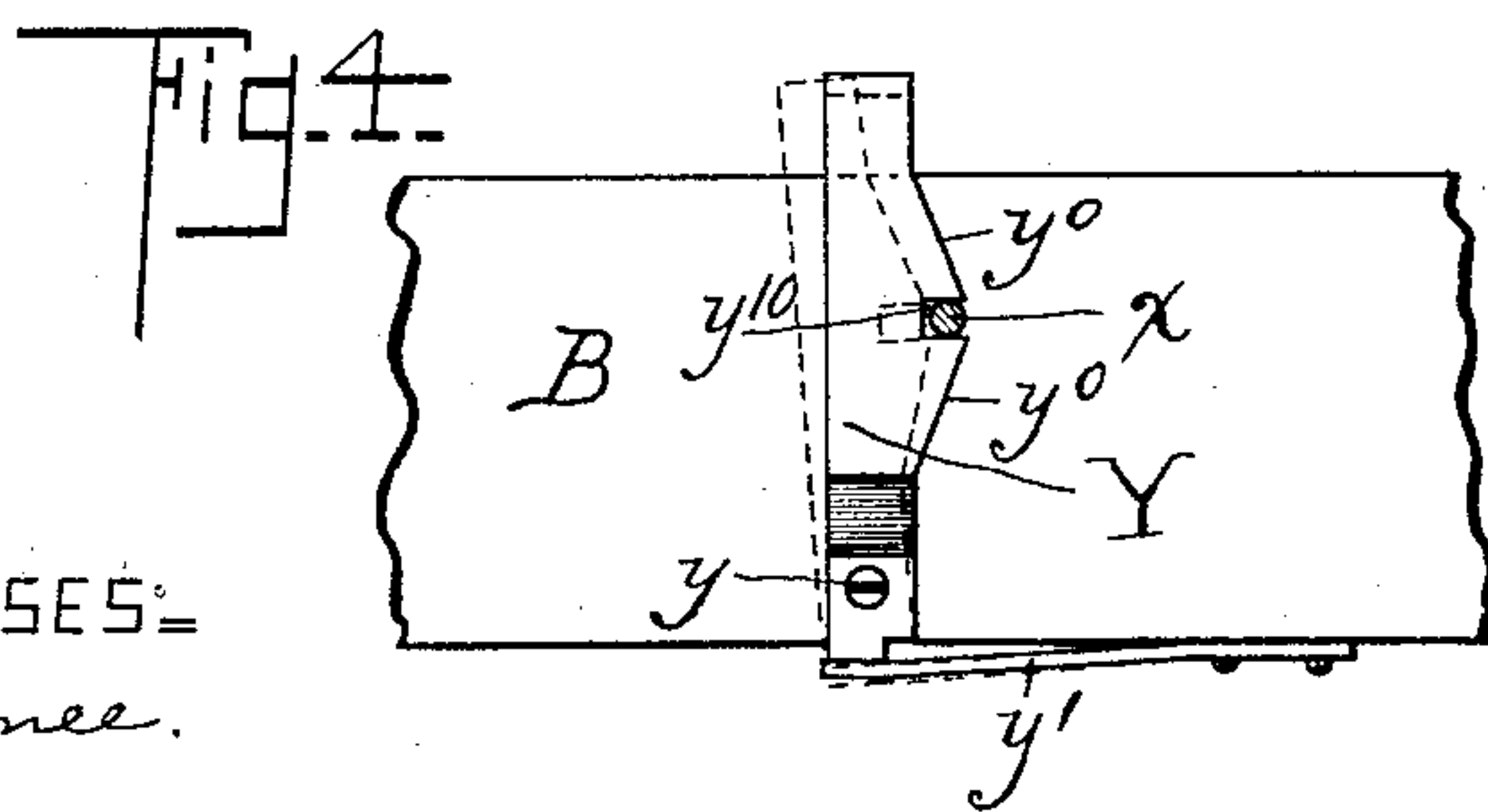
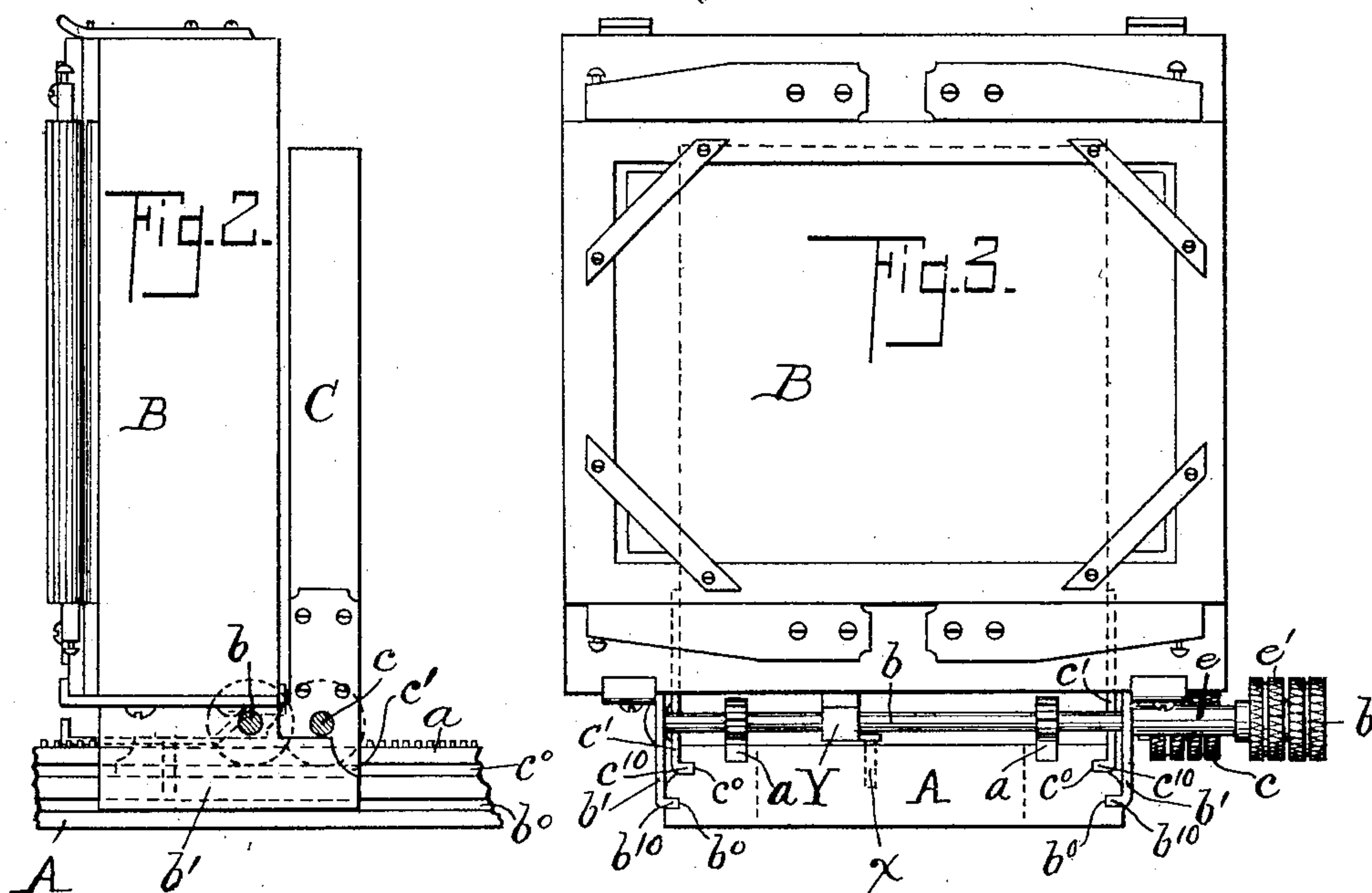
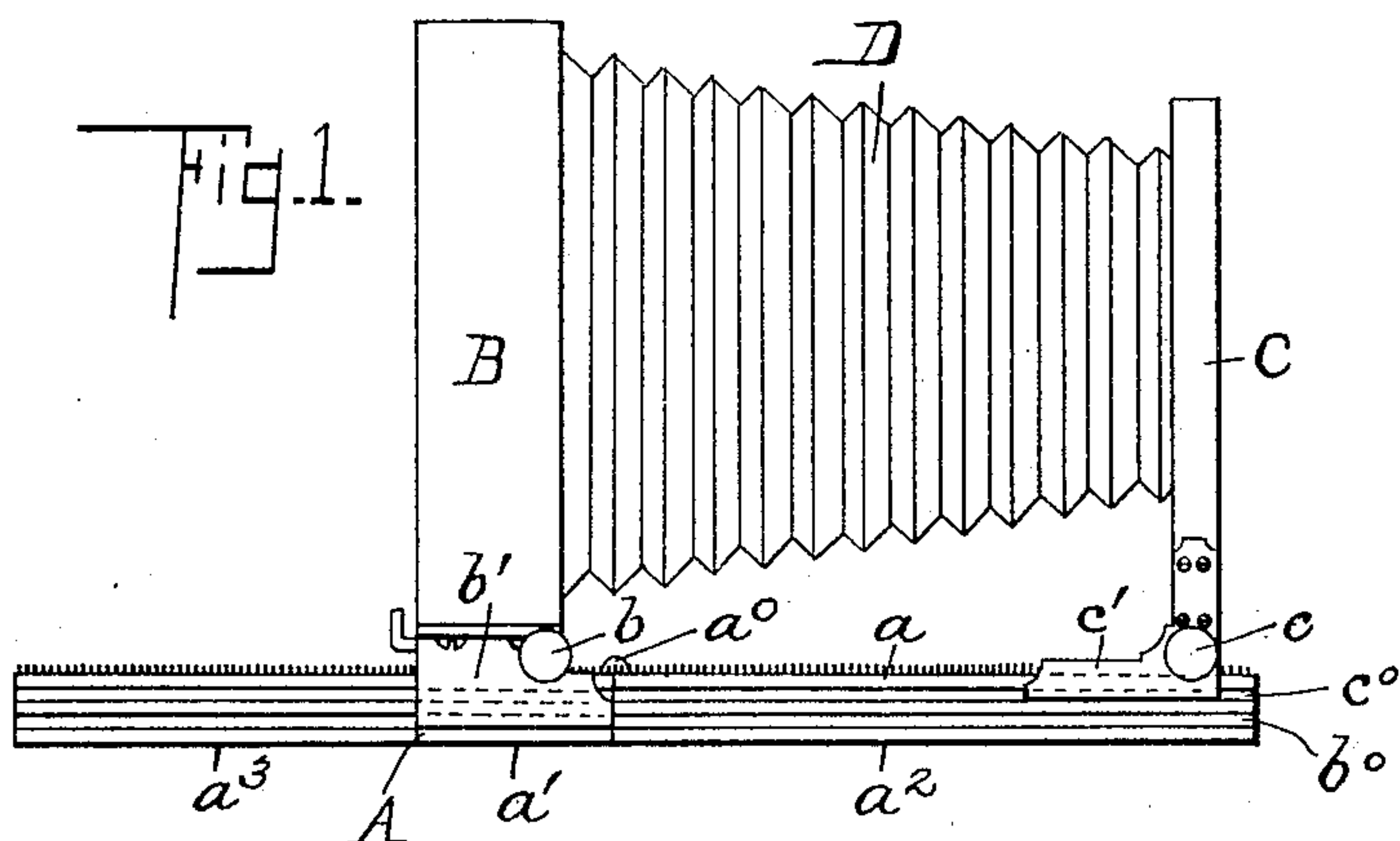
Patented July 15, 1902.

H. W. LOCKE.

CAMERA.

(Application filed May 24, 1902.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

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## CAMERA.

SPECIFICATION forming part of Letters Patent No. 704,845, dated July 15, 1902.

Application filed May 24, 1902. Serial No. 108,867. (No model.)

*To all whom it may concern:*

Be it known that I, HARVEY W. LOCKE, a citizen of the United States, and a resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Cameras, of which the following is a specification.

This invention relates to cameras; and it consists in the improvements hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of a camera provided with this invention. Fig. 2 is a side elevation, enlarged, showing the lens-frame and camera-box collapsed together. Fig. 3 is a rear view of the camera, and Fig. 4 is a bottom plan view of a detail.

This device is particularly applicable to folding extension-cameras and is for the purpose of producing a portable compact device having firm bearings for supporting the camera-box and the lens-frame, while at the same time permitting great extension and great compactness.

In the drawings, A is the camera-bed, having two camera elements, each of which is movable thereon. B is the camera-box, (one element,) C is the lens-frame, (another element,) and D is the bellows. The bed A carries a suitable rack device  $a$  for meshing with pinions on pinion-shafts  $bc$ , carried, respectively, by the camera-box and the lens-frame, so that either of these two parts may be moved longitudinally upon the bed A. The bed is preferably divided into three sections—a central section  $a'$ , a front section  $a^2$ , and a rear section  $a^3$ . These sections are connected together by suitable joints, such as the hinges  $a^0$ , and the front and back sections  $a^2$  and  $a^3$  may when the camera-box and lens-frame are in the proper positions be folded up against the outer faces of the camera-box and lens-frame in an obvious manner.

In the outer sides of the camera-bed A are slots or grooves which run continuously through all three sections of the bed. One groove  $c^0$  is for the support and guidance of the lens-frame C and the other groove is for the support and guidance of the camera-box B. On each side of the camera-box B is a flanged plate  $b'$ , which has an inwardly-turned

edge  $b'^0$ . (See Fig. 3.) These inturned edges or flanges rest in the pair of slots or grooves  $b^0$ .

On each side of the lens-frame is fastened a flanged plate  $c'$ , whose flange or lower edge is inturned, as shown at  $c'^0$ , Fig. 3, so as to rest in the groove  $c^0$ . The plate  $C'$  is of considerable length and preferably is much broader than the base of the lens-frame itself, and the widened portion of the plate (as compared with the thickness of the lens-frame) is adapted when the lens-frame is brought to its closest position to the camera-box B to extend within the side plates  $b'$  of said camera-box, so that the plates  $c' b'$  overlap each other. (See Fig. 2.) The plate  $b'$  preferably is wider than the thickness of the camera-box B in order to give a broad and therefore firm bearing upon the bed A for maintaining the camera-box B in its proper position thereon.

The plates  $b'$  and  $c'$  are so adjusted that one may slide inside the other, so that they overlap one over the other. This overlapping may be effected as follows: The upper part of each side edge of the bed A is rabbeted or set in deeper than the face of the lower portion of the bed, and one pair of slots  $c^0$  are in these rabbeted or depressed portions. It will be obvious now that the camera-box and lens-frame may be brought closely together, as shown in Fig. 2, and that then the front and rear sections  $a^2 a^3$  of the bed may be folded upwardly and against the front and rear faces, respectively, of the lens-frame and camera-box, thus making a compact package of the camera, even though the bed A may be of great length, and, further, that the lens-frame and camera-box are held steady on the bed in any position along the same.

The central section  $a'$  of the bed is made only wide enough to support the camera-box and lens-frame when they are brought close together, as shown in Fig. 2, so that the front and rear sections  $a^2 a^3$  of the bed may be folded up, as above described, without loss of compactness. In order, therefore, to increase the convenience of the device, I provide a catch that automatically determines the proper location of the camera-box B upon the central section  $a'$  of the bed, and this is shown in Fig. 4. In one of the parts, such as the



bed, a pin is set, and upon other of the parts, such as the camera-box, is attached a spring-catch Y—as, for instance, by the pivot-screw  $y$ . The spring  $y'$  tends to maintain the catch

- 5 Y in an engaging position for coöperation with the pin  $x$ . The catch  $y$  has two inclined faces  $y^0$  on each side of a slot  $y'^0$ , and whatever may be the direction of movement of the camera-box B upon the bed the pin  $x$  will come  
10 in contact with one of the inclined faces  $y^0$  and will snap into the slot  $y'^0$ , thus fastening the camera-box in its proper position upon the central section  $a'$  of the bed. Of course the pin  $x$  may with perfect equivalency be in  
15 the lens-frame. The lens-frame and the camera-box may then be brought close together, and the parts are in the proper positions for folding the bed.

Of course this device may be constructed  
20 and is likewise advantageous when either the rear section  $a^3$  or the front section  $a^2$  is omitted, whereby the bed consists of two sections only.

What I claim is—

- 25 1. In a camera, a bed having pairs of parallel slots on its side edges, two camera elements each movable on said bed and each having a pair of plates adapted to slide in one pair of said slots, the side plates on said two  
30 elements being adapted to overlap when the two elements are brought close together.
2. In a camera, a bed having pairs of parallel slots on its side edges, the upper slot in each edge being in a rabbeted portion of said  
35 edge, two camera elements each movable on said bed, one having a pair of plates adapted to slide in the pair of upper slots and the other element having a pair of plates adapted to slide in the pair of lower slots, the side  
40 plates on said two elements being adapted to overlap when the two elements are brought close together.
3. In a folding camera, a sectional bed composed of parts hinged together and having  
45 pairs of parallel continuous slots on its side edges, two camera elements each movable on said bed and each having a pair of plates adapted to slide in one pair of said slots, the side plates on one of said two elements being  
50 adapted to overlap when the two elements are brought close together, one of the parts of the bed being of suitable length to bear the camera-box and lens-frame and another part of said bed being adapted to fold up-  
55 ward against an outer face of one of said elements when the same are brought close together.
4. In a folding camera, a sectional bed composed of parts hinged together and having  
60 parallel continuous slots on its side edges, the upper slot in each edge being in a rabbeted portion of said edge, two camera elements having a pair of plates adapted to slide in the pair of upper slots, and the other element  
65 having a pair of plates adapted to slide in the pair of lower slots, the side plates of one of said elements being adapted to overlap

when the two elements are brought together, and one of the parts of the bed being of suitable length to bear the said two elements and  
70 another part of said bed being adapted to fold upward against an outer face of the said elements when the same are brought close together.

5. In a folding camera, a sectional bed com-  
75 posed of parts hinged together and having pairs of parallel continuous slots on its side edges, two camera elements each movable on said bed and each having a pair of plates adapted to slide in one pair of said slots, the  
80 side plates on one of said two elements being adapted to overlap when the two elements are brought close together, one of the parts of the bed being of suitable length to bear the camera-box and lens-frame, and another  
85 part of said bed being adapted to fold upward against an outer face of one of said elements when the same are brought close together, and an automatic catch on said bed for engaging one of said elements and hold-  
90 ing it in the position for folding the bed against said outer face.

6. In a folding camera, a sectional bed composed of parts hinged together and having  
95 parallel continuous slots on its side edges, the upper slot in each edge being in a rabbeted portion of said edge, two camera elements each movable on said bed and one element having a pair of plates adapted to slide in the pair of upper slots, and the other element  
100 having a pair of plates adapted to slide in the pair of lower slots, the side plates of one of said elements being adapted to overlap when the two elements are brought together and one of the parts of the bed being of suitable  
105 length to bear the said two elements and another part of said bed being adapted to fold upward against an outer face of the said elements when the same are brought close together, and an automatic catch on said bed  
110 for engaging one of said elements and holding it in the position for folding the bed against said outer face.

7. In a camera, a bed having pairs of parallel slots on its side edges, a camera-box hav-  
115 ing a plate on each side adapted to slide in one of said slots, a lens-frame having a plate on each side adapted to slide in the other of said slots, the side plates of the camera-box and of the lens-frame being adapted to over-  
120 lap one over the other when the camera-box and lens-frame are brought close together.

8. In a camera, a bed having pairs of parallel slots on its side edges, the upper slot of each pair being in a rabbeted portion of the  
125 edge of the bed, a camera-box having a plate on each side adapted to slide in one of said slots, a lens-frame having a plate on each side adapted to slide in the other of said slots, the side plates of the camera-box and of the lens-  
130 frame being adapted to overlap one over the other when the camera-box and lens-frame are brought close together.

9. In a camera, a sectional bed composed of



parts attached together and having pairs of parallel continuous slots on its side edges, a camera-box having a plate on each side adapted to slide in one of said slots, a lens-frame having a plate on each side adapted to slide in the other of said slots, the side plates of the camera-box and of the lens-frame being adapted to overlap one over the other when the camera-box and lens-frame are brought close together.

10. In a camera, a sectional bed composed of parts attached together and having pairs of parallel continuous slots on its side edges, the upper slot of each pair being in a rabbeted portion of the edge of the bed, a camera-box having a plate on each side adapted to slide in one of said slots, a lens-frame having a plate on each side adapted to slide in the other of said slots, the side plates of the camera-box and of the lens-frame being adapted to overlap one over the other when the camera-box and lens-frame are brought close together.

11. In a folding camera, a sectional folding bed composed of parts hinged together and having pairs of parallel continuous slots on its side edges, a camera-box having a plate on each side adapted to slide in one of said slots, a lens-frame having a plate on each side adapted to slide in the other of said slots, the side plates of the camera-box and of the lens-frame being adapted to overlap one over the other when the camera-box and lens-frame are brought close together, one of the parts of the bed being of suitable length to bear the camera-box and lens-frame and another part of said bed being adapted to fold upward against an outer face of the said parts when the same are brought close together.

12. In a folding camera, a sectional folding bed composed of parts hinged together and having pairs of continuous parallel slots on its side edges, the upper slot of each pair being in a rabbeted portion of the edge of the bed, a camera-box having a plate on each side adapted to slide in one of said slots, a lens-frame having a plate on each side adapted to slide in the other of said slots, the side plates of the camera-box and of the lens-frame being adapted to overlap one over the other when the camera-box and lens-frame are brought close together, one of the parts of the bed being of suitable length to bear the camera-box and lens-frame, and another part of said bed being adapted to fold upward against an outer face of the said parts when the same are brought close together.

13. In a camera, a sectional bed composed

of parts attached together and having pairs of parallel continuous slots on its side edges, the upper slot of each pair being in a rabbeted portion of the edge of the bed, a camera-box having a plate on each side adapted to slide in one of said slots, a lens-frame having a plate on each side adapted to slide in the other of said slots, the side plates of the camera-box and of the lens-frame being adapted to overlap one over the other when the camera-box and lens-frame are brought close together, and a catch on said bed for engaging the camera-box and holding it in the proper position for folding the camera.

14. In a folding camera, a sectional folding bed composed of parts hinged together and having pairs of parallel continuous slots on its side edges, a camera-box having a plate on each side adapted to slide in one of said slots, a lens-frame having a plate on each side adapted to slide in the other of said slots, the side plates of the camera-box and of the lens-frame being adapted to overlap one over the other when the camera-box and lens-frame are brought close together, one of the parts of the bed being of suitable length to bear the camera-box and lens-frame and another part of said bed being adapted to fold upward against an outer face of the said parts when the same are brought close together, and a catch on said bed for engaging the camera-box and holding it in the proper position for folding the camera.

15. In a folding camera, a sectional folding bed composed of parts hinged together and having pairs of continuous parallel slots on its side edges, the upper slot of each pair being in a rabbeted portion of the edge of the bed, a camera-box having a plate on each side adapted to slide in one of said slots, a lens-frame having a plate on each side adapted to slide in the other of said slots, the side plates of the camera-box and of the lens-frame being adapted to overlap one over the other when the camera-box and lens-frame are brought close together, one of the parts of the bed being of suitable length to bear the camera-box and lens-frame and another part of said bed being adapted to fold upward against an outer face of the said parts when the same are brought close together, and a catch on said bed for engaging the camera-box and holding it in the proper position for folding the camera.

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Witnesses:

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