

No. 674,876.

Patented May 28, 1901.

G. PURVIS.  
PANORAMIC SCENERY.

(No Model.)

(Application filed Jan. 18, 1901.)

4 Sheets—Sheet 1.

Fig. 1.

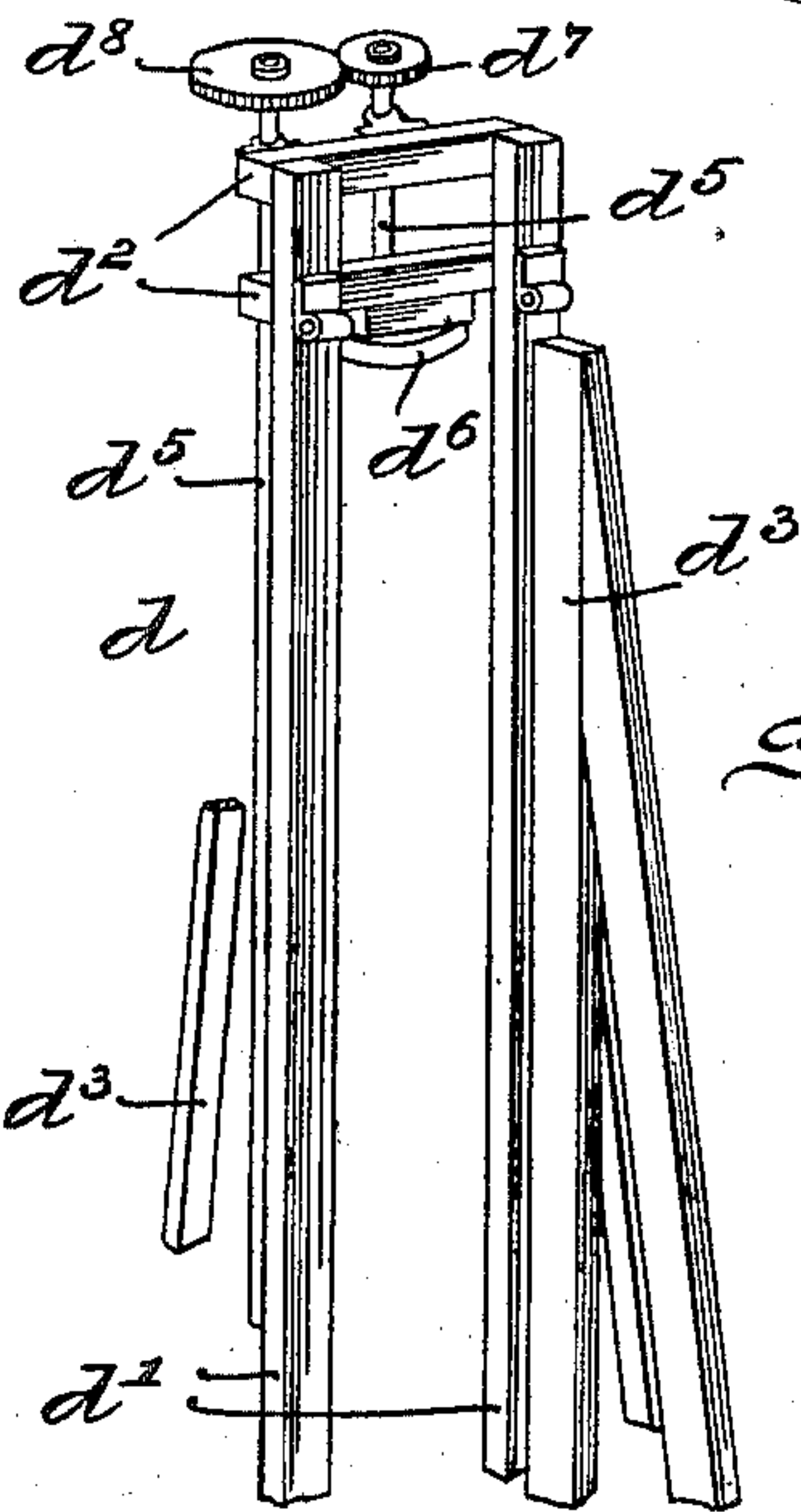
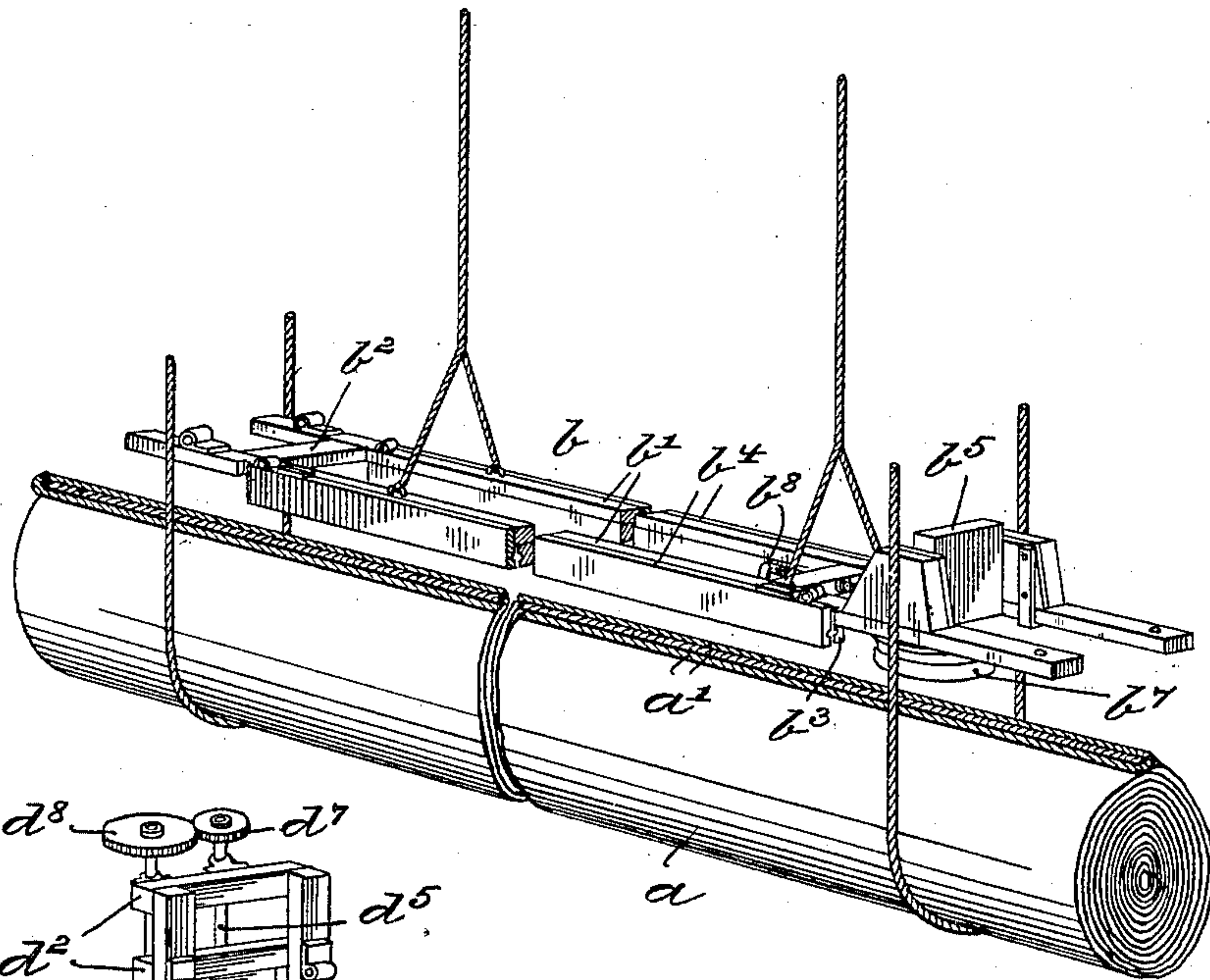


Fig. 2.

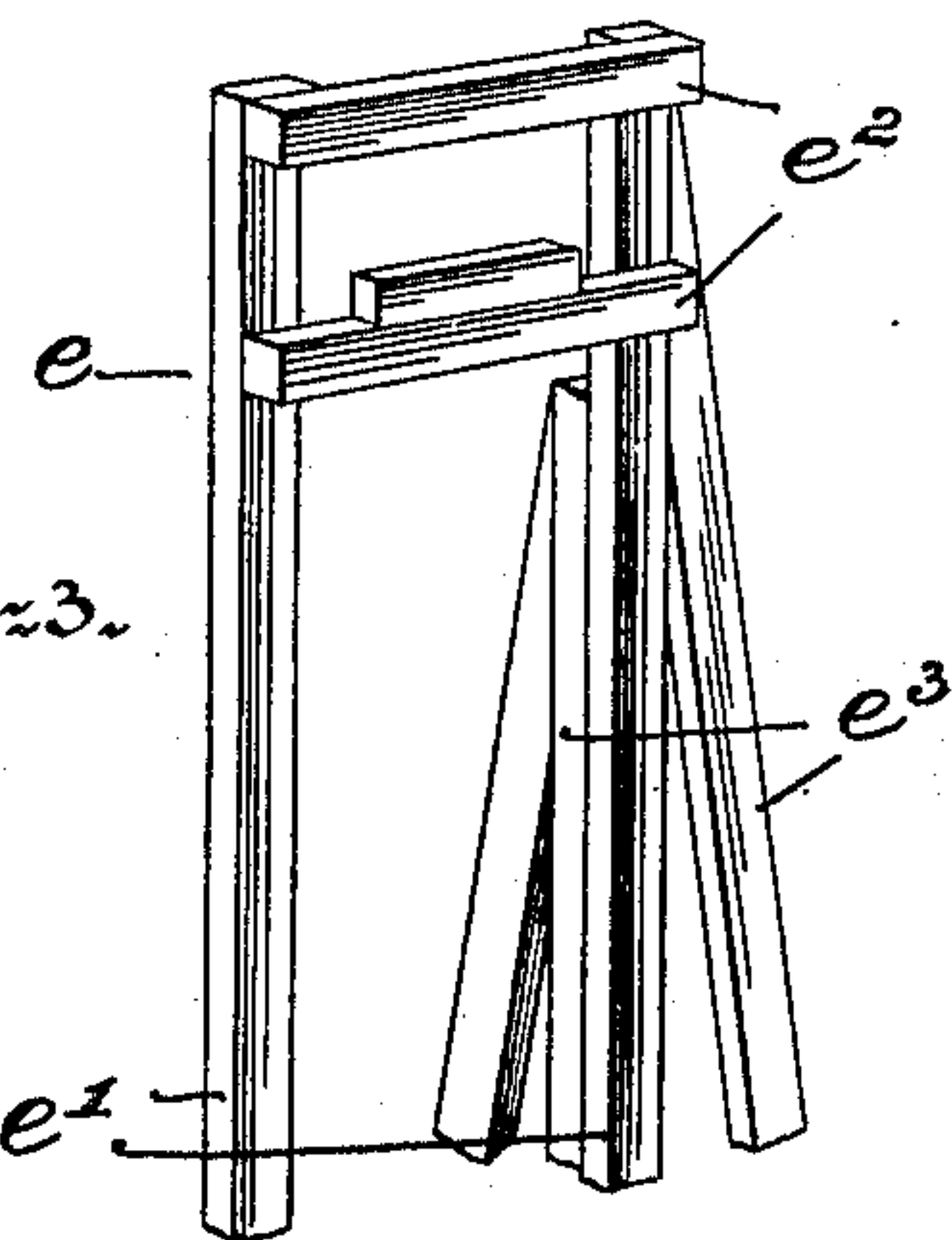


Fig. 3.

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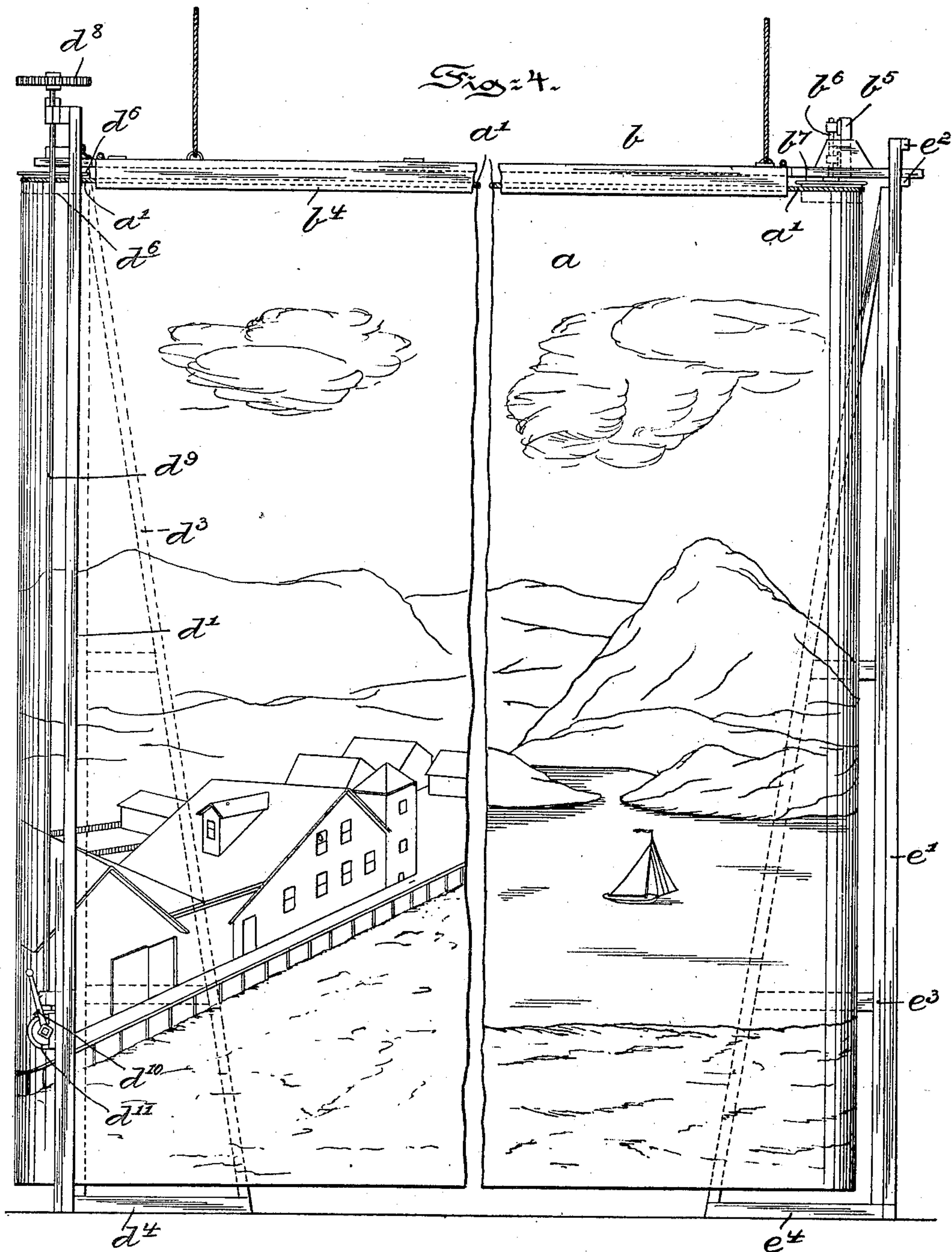
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G. PURVIS.  
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(No Model.)

4 Sheets—Sheet 2.



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No. 674,876.

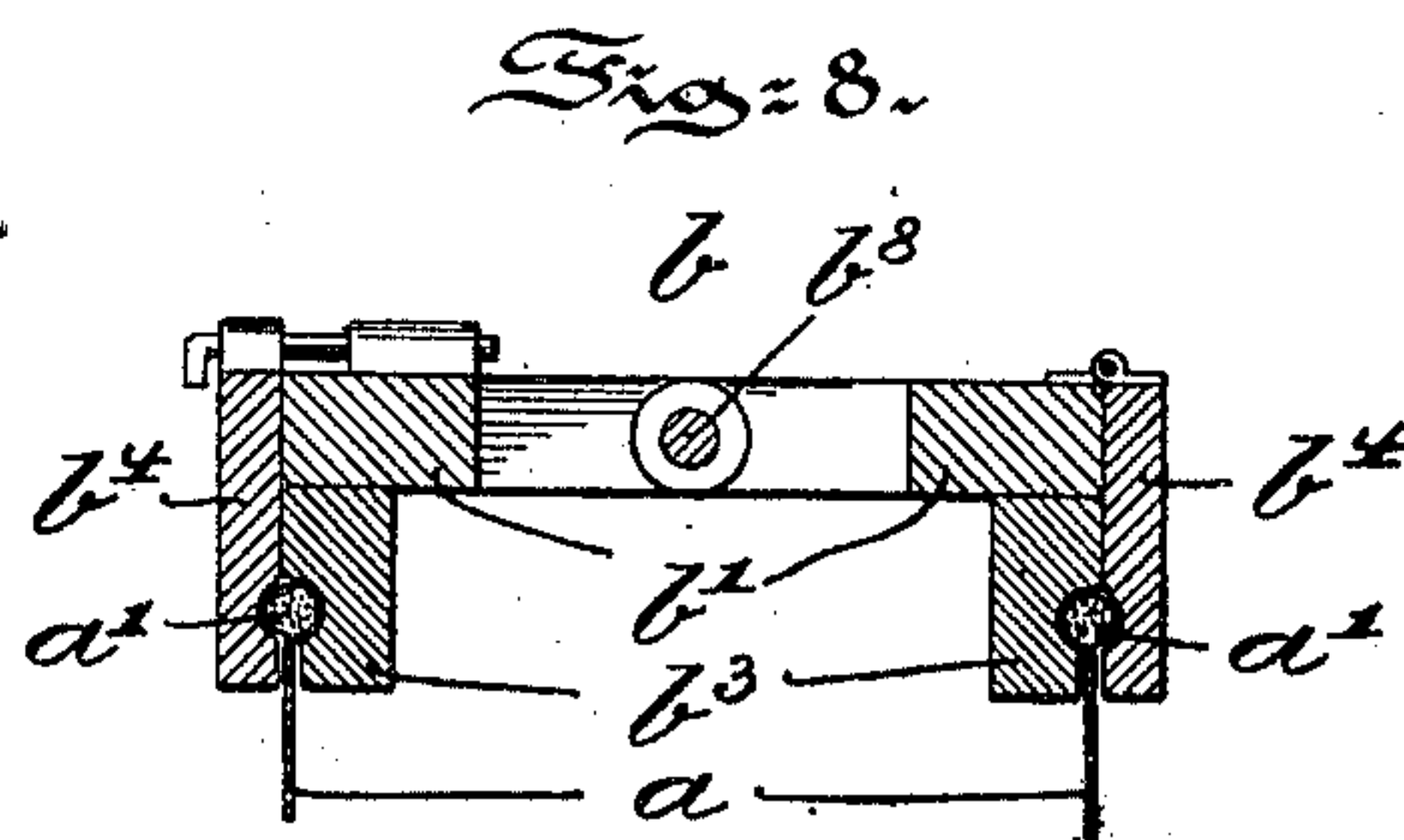
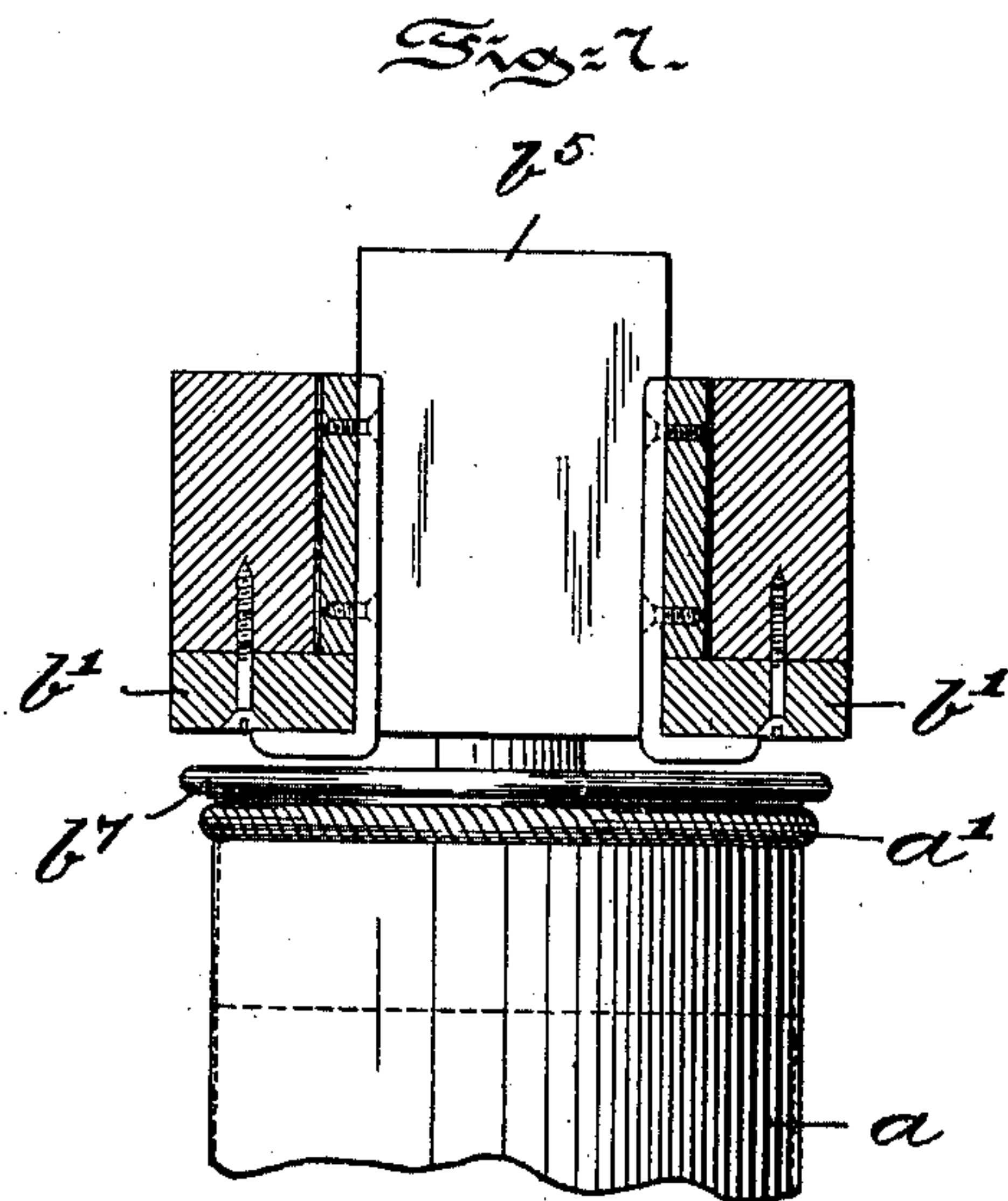
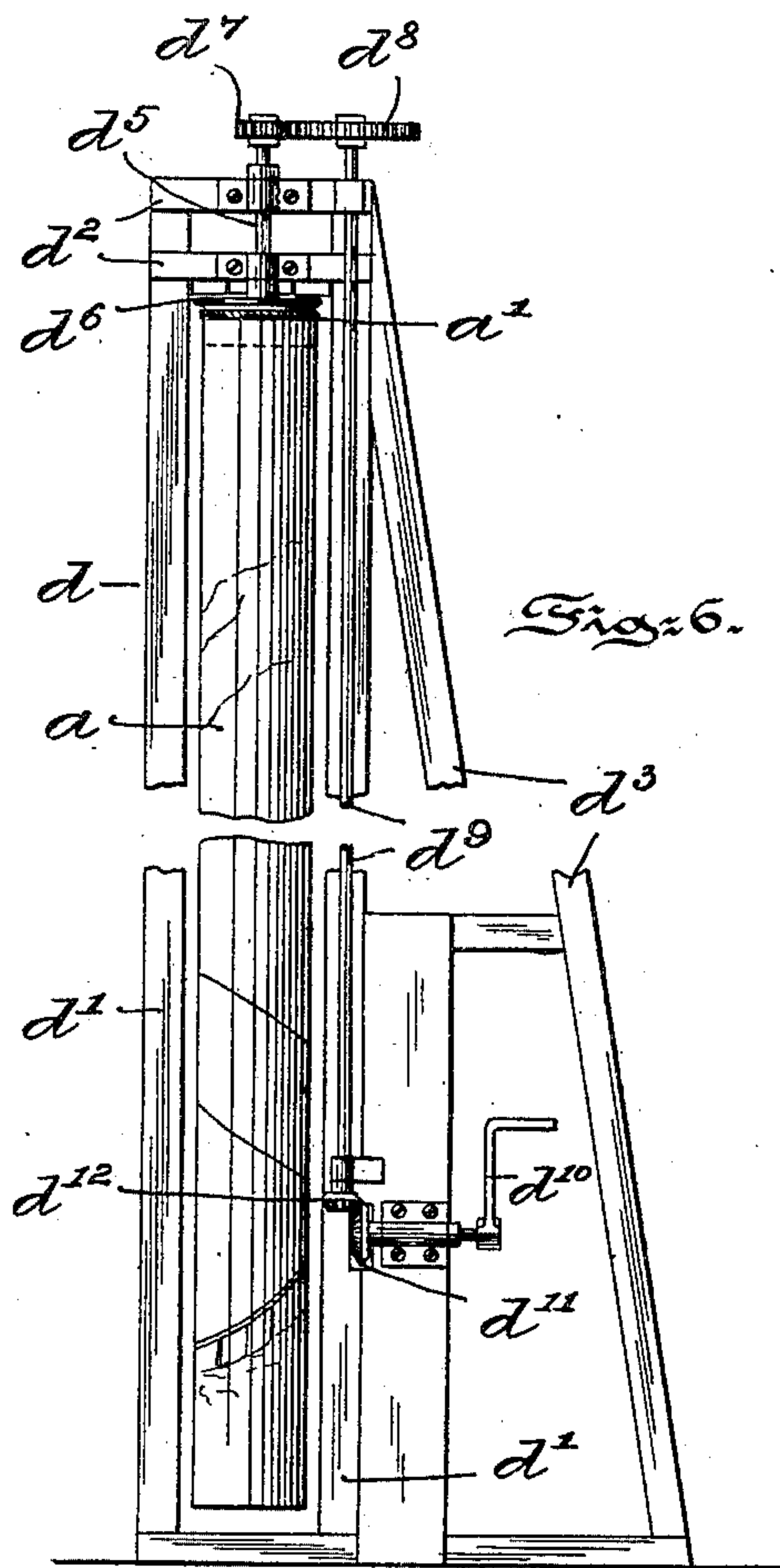
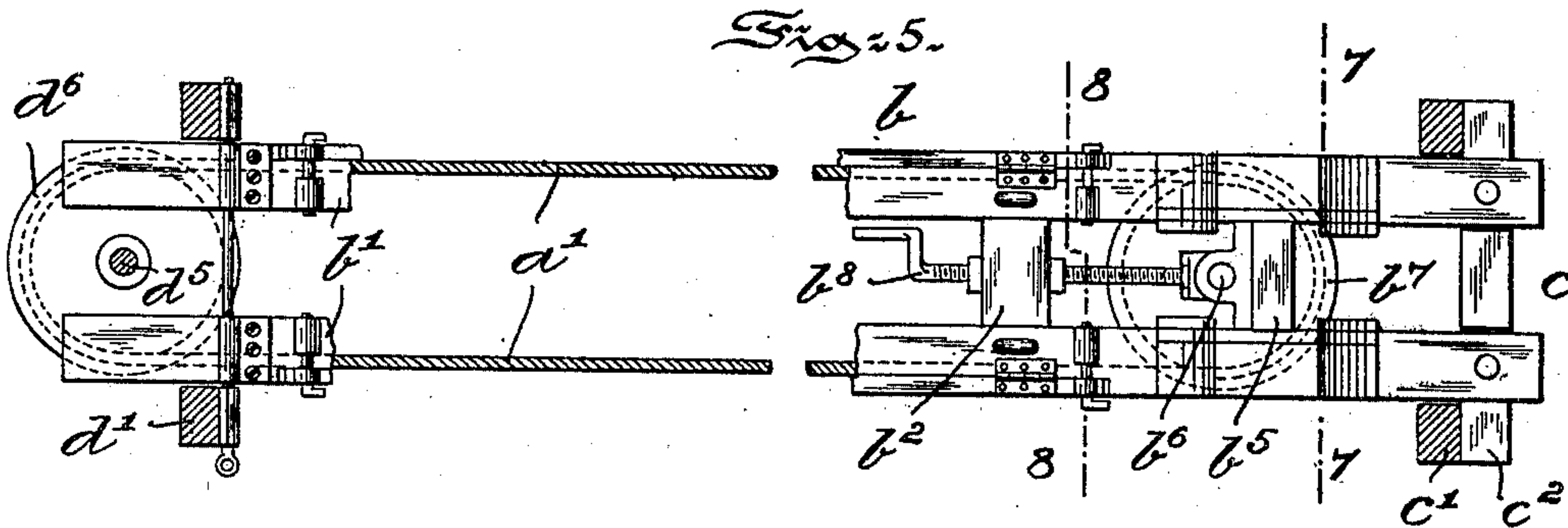
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G. PURVIS.  
PANORAMIC SCENERY.

(Application filed Jan. 16, 1901.)

(No Model.)

4 Sheets—Sheet 3.



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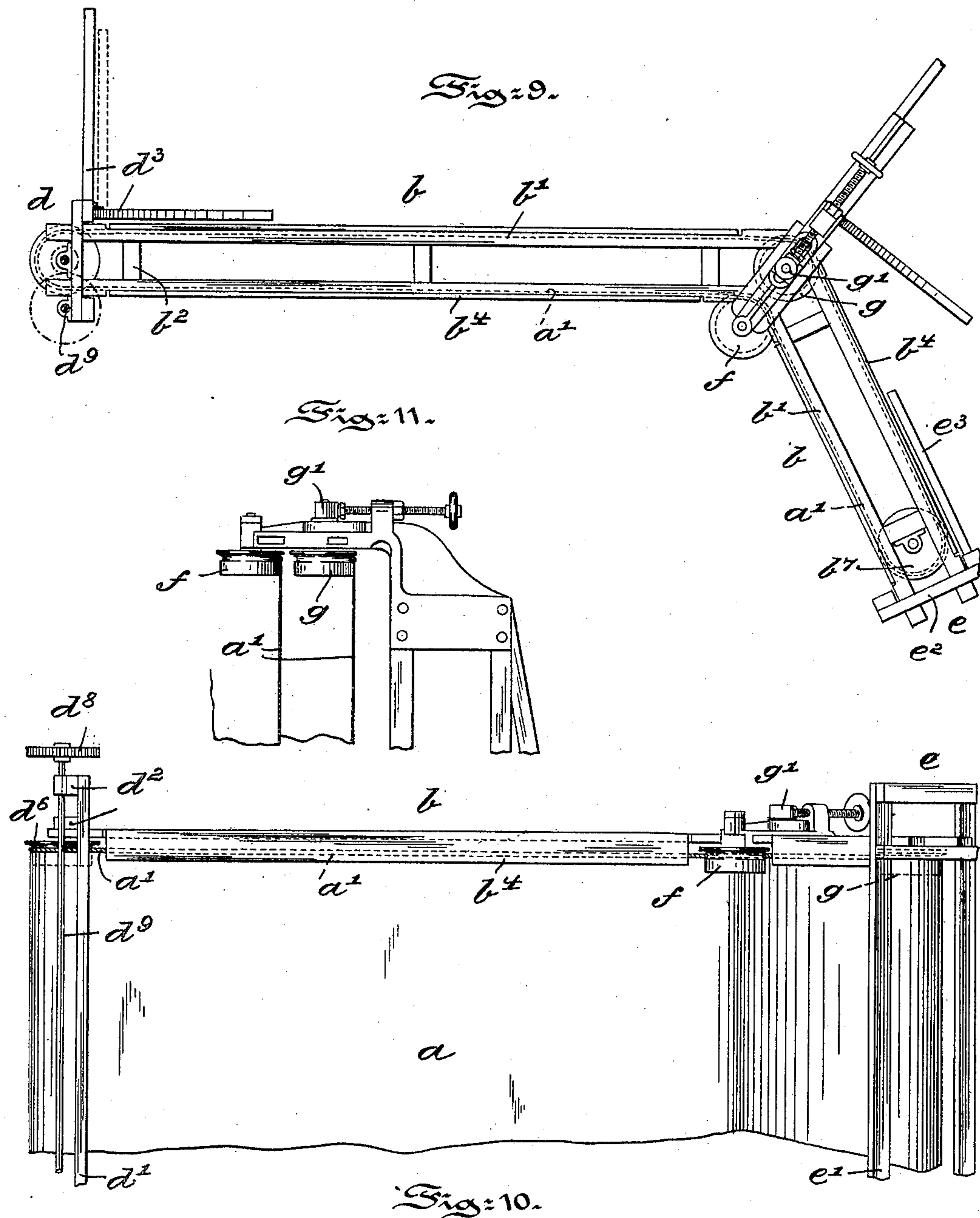
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4 Sheets—Sheet 4.



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# UNITED STATES PATENT OFFICE.

GEORGE PURVIS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO FRED. G. NIXON NIRDLINGER, OF SAME PLACE.

## PANORAMIC SCENERY.

SPECIFICATION forming part of Letters Patent No. 674,876, dated May 28, 1901.

Application filed January 16, 1901. Serial No. 43,450. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE PURVIS, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Panoramic Scenery, of which the following is a specification.

My invention has relation to panoramic scenery especially adapted for use in theatrical representations or stage effects; and in such connection it relates to the arrangement and construction of the panoramic parts and of the parts for supporting and operating the same.

Heretofore in theatrical or stage representations when panoramic effects were used the panorama was painted upon a long and wide strip of canvas or sheeting and then wound around two widely-separated rollers and laced up into an endless band or strip, with the rollers inclosed within the band and forming the bearings around which the band could turn. These rollers were of necessity of large diameter to properly support the band or strip and were usually of wood and of considerable weight. One or both of these rollers had to be turned to cause the panoramic strip to revolve, and the turning of the roller or rollers required the exercise of considerably more power than a man could exert. The rollers were sustained in vertical position by bulky, cumbersome, and heavy props or supports, and the whole apparatus was so expensive and occupied so much room that its use in small representations and upon small stages was precluded. The props or supports for the rollers had of necessity to be clamped or bolted to the stage, and in the assembling of the parts supporting the panorama, as well as in their separation for dismantling the panoramic apparatus, much labor was required.

The principal object of my present invention is to so construct and arrange the panoramic band and its auxiliaries that the grave defects heretofore existing, as hereinbefore pointed out, are obviated and a panorama produced which is sufficiently cheap and simple to permit of its use on the smaller stages and in less expensive theatrical productions.

My invention consists, primarily, in so constructing a panorama that the endless pano-

ramic band or strip is suspended and supported solely from its upper edge, the remaining portions of the band or strip depending freely from the supported edge and provided with means for driving the supported edge to cause the band or strip to turn.

My invention further consists of a panoramic apparatus when constructed and arranged in substantially the manner hereinafter described and claimed.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figures 1, 2, and 3 are perspective views of the various parts of a panoramic apparatus embodying main features of my invention, the panoramic band or curtain being illustrated as rolled up and the frame and band elevated above and out of engagement with the end supports. Fig. 4 is a front elevational view of the panoramic apparatus assembled in operative position. Fig. 5 is a top or plan view, enlarged, of Fig. 4, certain parts being removed or broken away to more clearly illustrate the invention. Fig. 6 is an end elevational view of the panoramic apparatus, illustrating the mechanism for revolving the panoramic band or curtain. Fig. 7 is a cross-sectional view, enlarged, on the line 7 7 of Fig. 5, illustrating in detail the means for stretching the band or curtain into flat condition. Fig. 8 is an enlarged cross-sectional view on the line 8 8 of Fig. 5, and Figs. 9, 10, and 11 are detail views illustrating a modified form of the apparatus.

Referring to the drawings, *a* represents the panoramic sheet or strip formed into an endless band and having at its upper edge an enlarged substantially round selvage *a'*, preferably formed of rope. The support for this band *a* consists, essentially, of three parts—viz., an upper framework or frame *b* and two uprights or end supports *d* and *e*, adapted to maintain the frame *b* in substantially horizontal position. The upper frame *b* consists, essentially, of two parallel longitudinal bars *b'*, united by suitable cross-pieces *b<sup>2</sup>*. From each bar *b'* depends a vertical strip *b<sup>3</sup>*, in the outer face of which is formed a groove or channel for the reception and guiding of the



enlarged selvage or edge  $a'$  of the band or curtain  $a$ , as clearly illustrated in Fig. 8. Preferably hinged to the edges of the bars  $b'$  are the strips  $b^4$ , adapted to confine the selvage  $a'$  in the channels of the strips  $b^3$ . The end support or upright  $d$  consists by preference of two vertical posts  $d'$ , united at their upper ends by blocks  $d^2$  and maintained in an upright position by the angular braces  $d^3$ , secured at their upper ends to the upper ends of the posts  $d'$  and at their lower ends to horizontal pieces or braces  $d^4$ , secured to the lower ends of the posts  $d'$  and adapted to rest upon the flooring of the stage. The upright  $d$  is therefore constructed somewhat like a pyramid to secure the necessary rigidity as well as strength and uprightness. The upright  $e$  is constructed in a manner similar to the upright  $d$ . The blocks  $d^2$  of the upright  $d$  constitute a bearing for a vertical shaft  $d^5$ , having at its lower end a pulley  $d^6$ , preferably grooved on its periphery to receive the rounded edge  $a'$  of the band  $a$ . The upper end of the shaft  $d^5$  is provided with a pinion  $d^7$ , meshing with a cog-wheel  $d^8$ , secured to the long shaft  $d^9$ . This long shaft  $d^9$  is adapted to be rotated by the crank  $d^{10}$  and gears  $d^{11}$  and  $d^{12}$  or in any other suitable manner, and when so rotated its cog-wheel  $d^8$  causes, through the pinion  $d^7$  and shaft  $d^5$ , a suitable rotation of the grooved pulley  $d^6$ . Between the parallel bars  $b'$  of the upper frame  $b$  a block  $b^5$  is arranged at that end adjacent to the support  $e$ . This block  $b^5$  constitutes the bearing for a vertical shaft  $b^6$ , to which is secured a pulley  $b^7$ , grooved to receive the corded edge of the band  $a$ . The block  $b^5$  is adapted to be slid back and forth longitudinally in the bars  $b'$  by means of a threaded shaft  $b^8$ , working in one of the cross-pieces  $b^2$  of the frame.

By arranging the bearing-block  $b^5$  so that it may slide longitudinally in the frame  $b$  the upper corded edge  $a'$  of the band  $a$  may be tightened when the band is in position, and hence its face may be flattened or smoothed and all slack taken up. The frame  $b$  may be bolted or otherwise secured at one end to the upright  $d$  and similarly secured at its other end to the upright  $e$ . When so mounted in position, the corded or rope edge  $a'$  of the band  $a$  is slipped around the grooved pulleys  $d^6$  and  $b^7$  and the bearing of the pulley  $b^7$  adjusted longitudinally until the band  $a$  is properly supported. The corded edge  $a'$  may then be confined in the channeled or grooved side strips  $b^3$  and  $b^4$ , in which it may travel as the pulley  $d^6$  is rotated. The lower edge and the sides of the panoramic band  $a$  are not fastened or fixed, but depend with sufficient rigidity from the frame  $b$  to permit the face of the band to lie flat and smooth like a curtain. If desired, the angular and horizontal braces of the supports  $d$  and  $e$  may be hinged to the supports in any suitable manner, (not shown,) so that when not in use the supports may be folded into small compass.

In Figs. 9, 10, and 11 a modification of my invention is shown, wherein the band  $a$  may be caused to travel in an angular or curved path instead of straight across the stage. In this modification the end pulleys  $b^7$  and  $d^6$  are supplemented by the intermediate pulleys  $f$  and  $g$ , which are not in the plane passing through the end pulleys. One of the intermediate pulleys  $f$  guides the front corded edge  $a'$  of the band, whereas the other pulley  $g$  guides the rear edge, so as to cause the band to travel in an angular or curved path. One of the pulleys  $f$  or  $g$ , by preference  $g$ , is provided with a sliding bearing  $g'$  and means for adjusting said bearing to take up the slack in the band.

It will be readily understood that various changes in the arrangement and construction above described may be made without departing from the spirit of my invention, provided the endless panoramic band be supported by its upper edge in the manner of a curtain and when so supported be capable of revolution or rotation. Moreover, when the panoramic band is not in use it may be caused to assume a rolled-up condition and the supporting-frame for the same with the band elevated, as illustrated in Fig. 1, and with the standards or supports for the frame and band caused to assume a condition, for example, as illustrated in Figs. 2 and 3 of the drawings.

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

1. In a panoramic apparatus, an endless panoramic band suspended and supported solely from its upper edge, the remaining portions of the band depending freely from the supported edge and means for driving the supported edge to cause the band to turn, substantially as and for the purposes described.

2. In a device of the character described, an endless cord, a frame having channeled sides to receive and guide the cord, wheels connected with said frame and around which the cord is passed, an endless panoramic band united at its upper edge to said cord, said cord constituting the sole support for the band and means for driving said cord to cause the band to be driven, substantially as and for the purposes described.

3. In a device of the character described, an endless panoramic band, means for supporting the band solely by its upper edge and means for driving the upper edge of the band to cause the band to be driven, substantially as and for the purposes described.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

GEORGE PURVIS.

Witnesses:

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