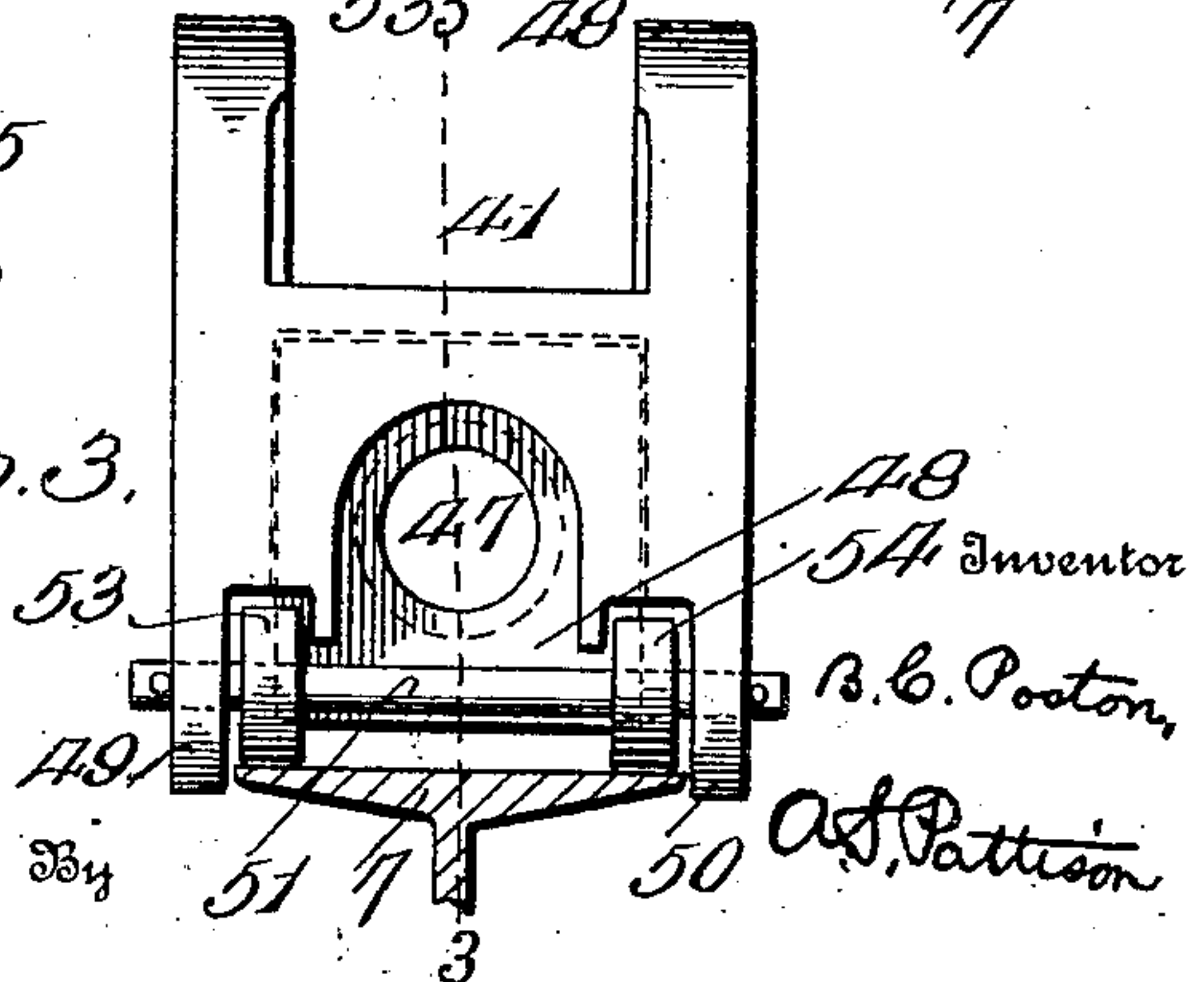
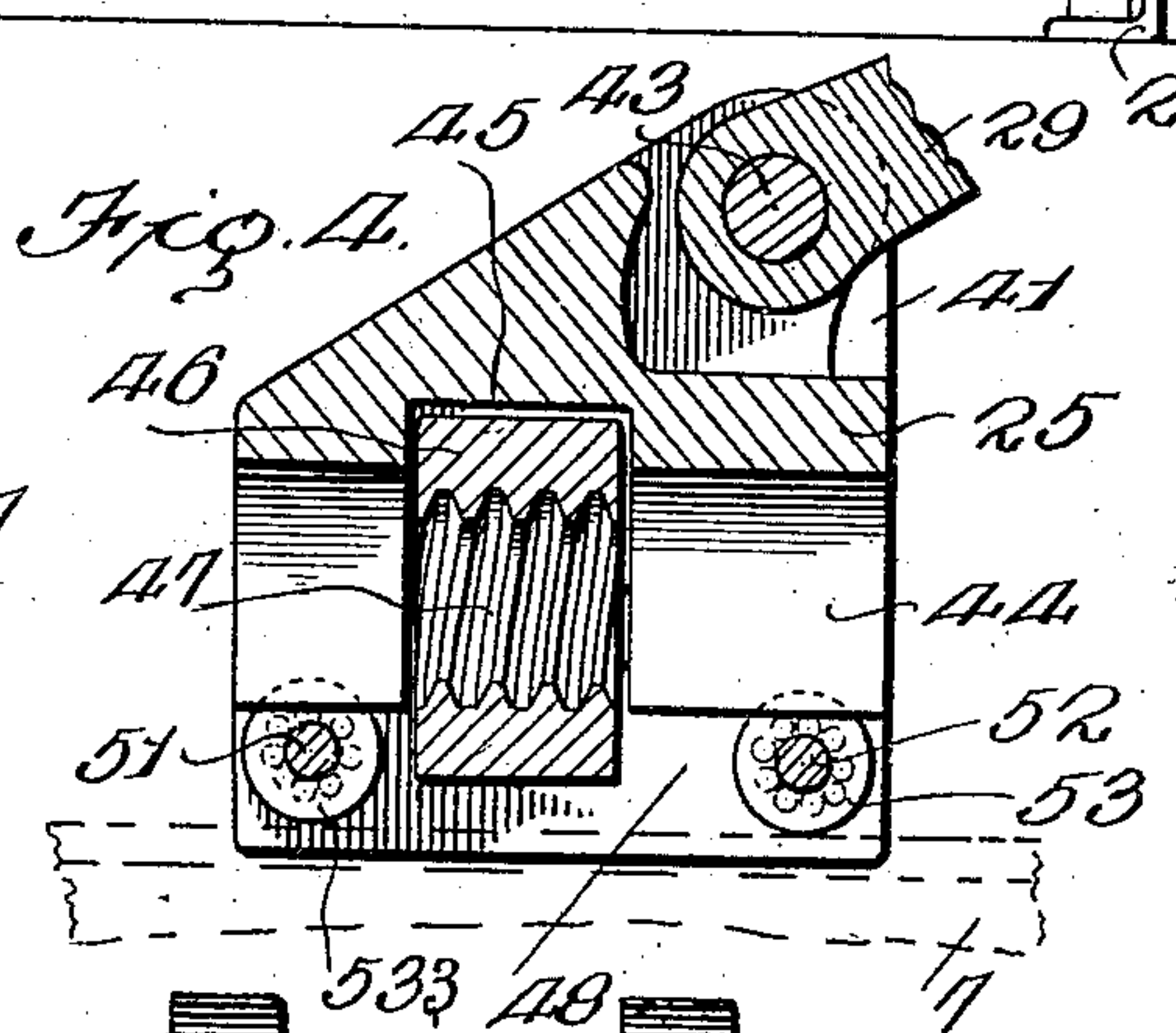
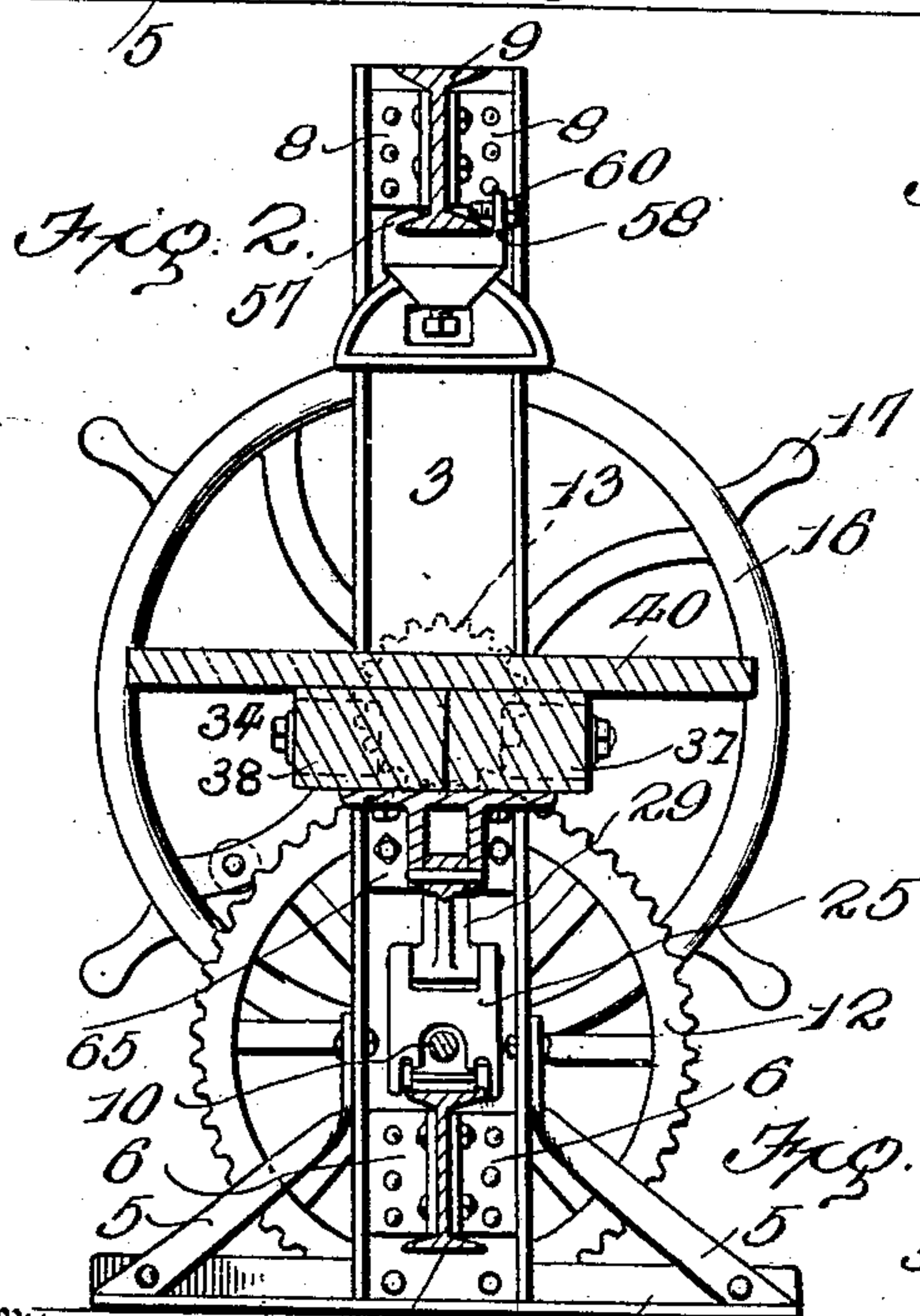
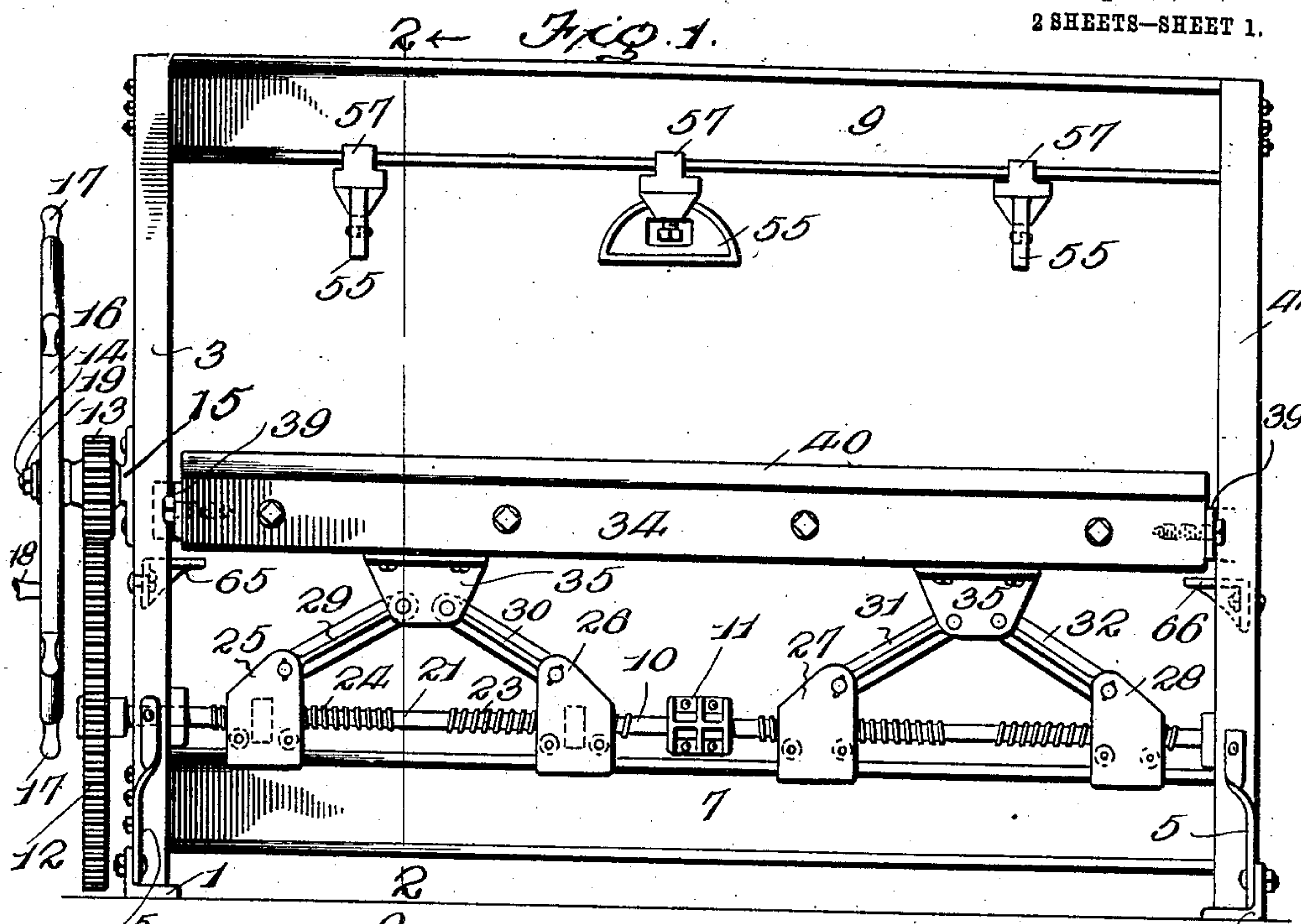


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APPLICATION FILED JUNE 2, 1908.

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2 SHEETS—SHEET 1.



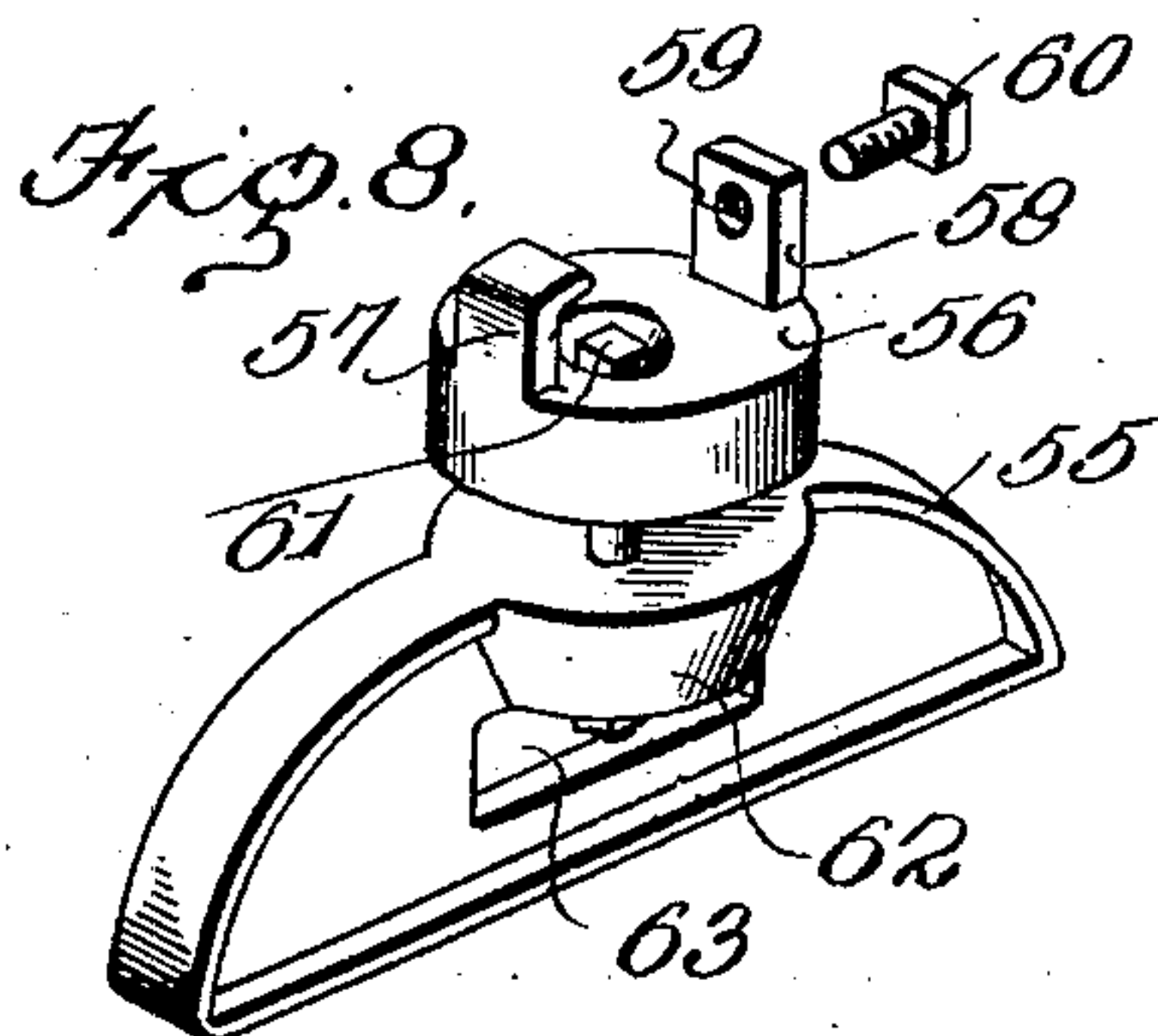
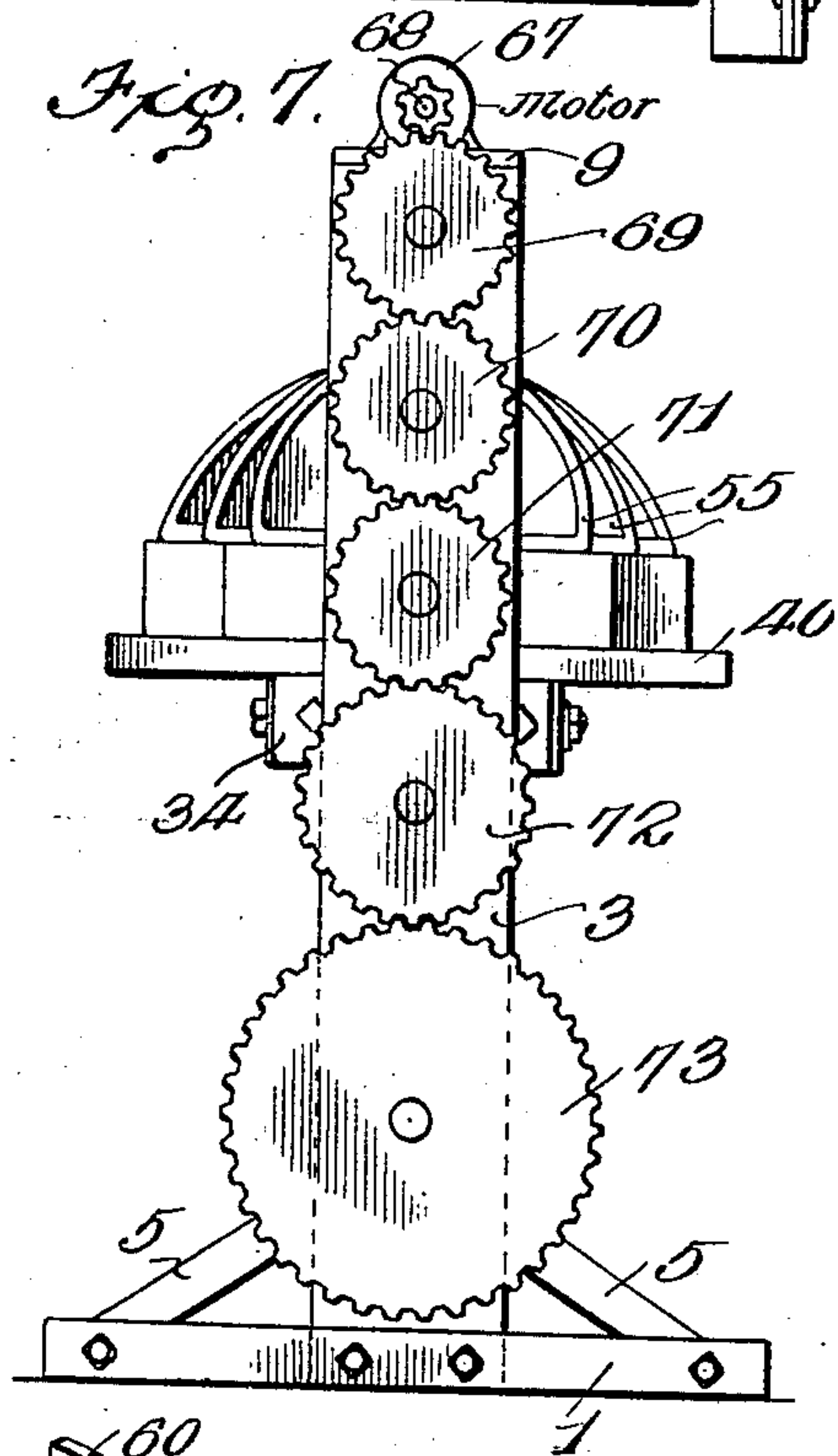
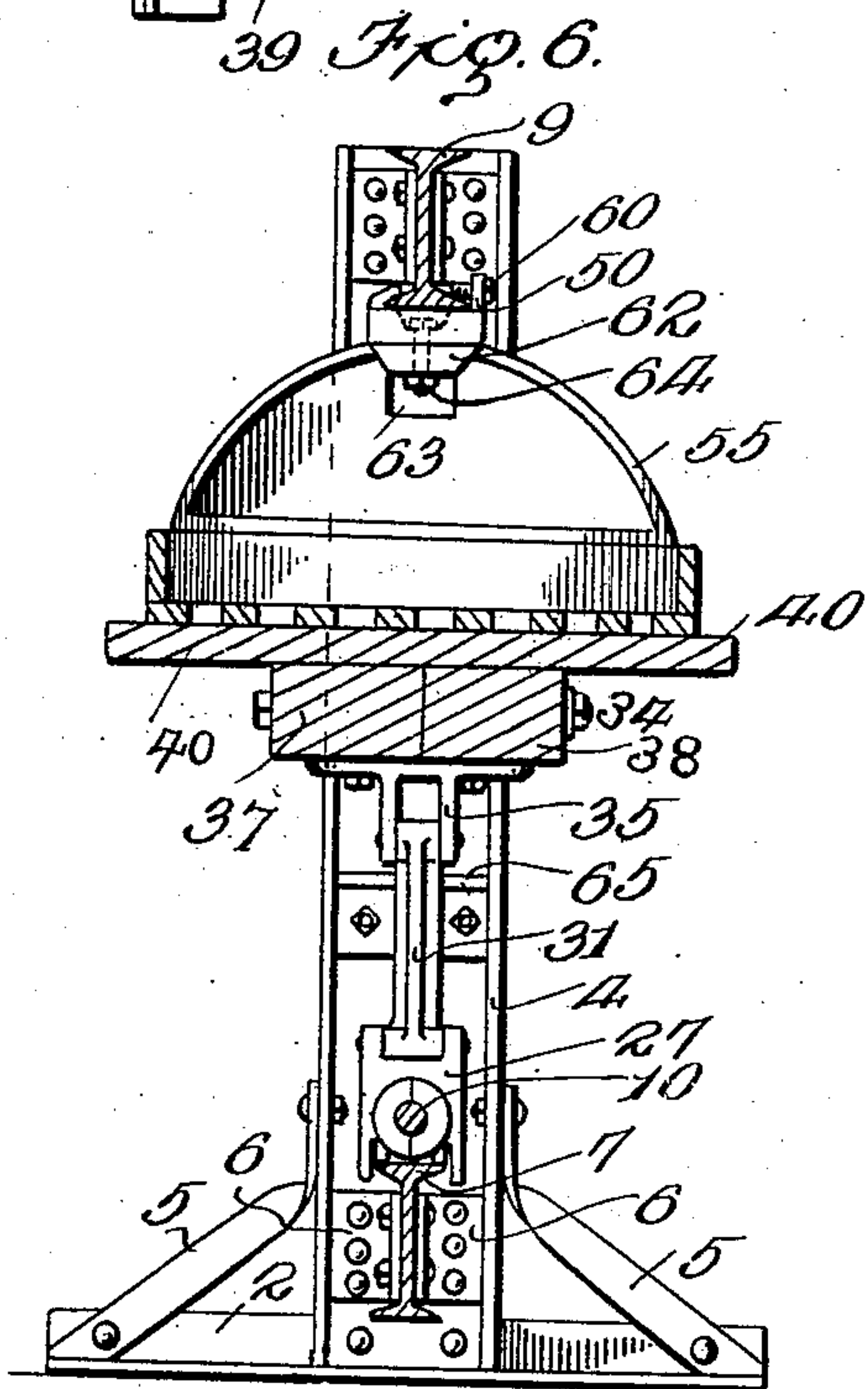
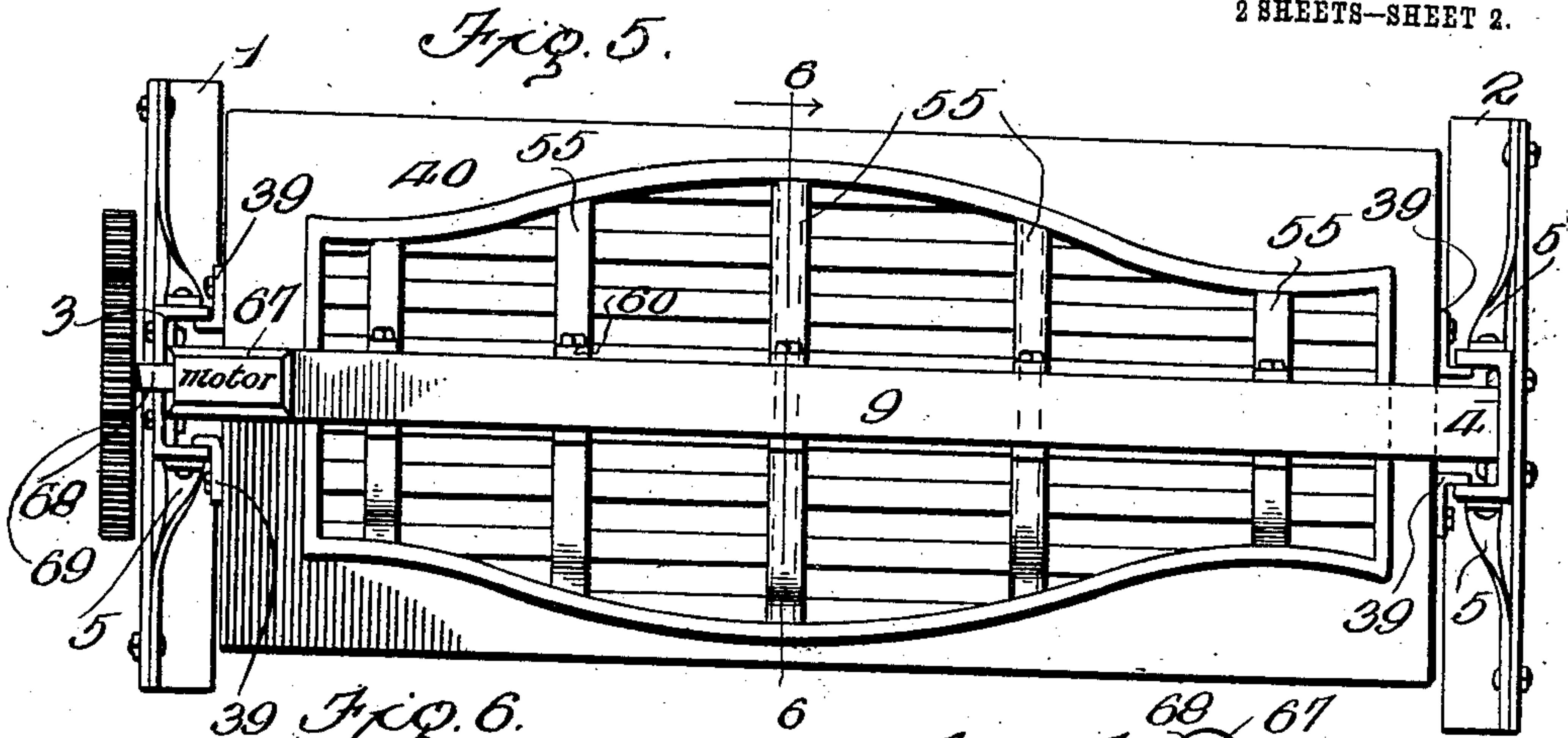
Witnesses  
C. R. Wright, Jr.  
A. H. E. Hurling

Inventor  
B. C. Poston,  
Attorney

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Inventor  
B. C. Poston.  
A. S. Pattison  
Attorney



# UNITED STATES PATENT OFFICE.

BURTON C. POSTON, OF CHILLICOTHE, OHIO.

## PRESS FOR TUFTING-MACHINES.

No. 917,657.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed June 2, 1908. Serial No. 436,302.

*To all whom it may concern:*

Be it known that I, BURTON C. POSTON, a citizen of the United States, residing at Chillicothe, in the county of Ross and State of Ohio, have invented certain new and useful Improvements in Presses for Tufting-Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in presses for tufting machines.

The object of my invention is to provide a press of this character, in which couches of considerable length and breadth can be evenly pressed throughout their entire surface and rigidly held in the desired position while the prongs of the buttons are being clenched, and will remain in said position when the pressure of the operating means is released.

A still further object of my invention is to provide a more simple, cheap and effective device having certain details of structure to accomplish the desired result.

In the accompanying drawings, Figure 1, is a side elevation of my improved press. Fig. 2, is a vertical sectional view taken on the line 2—2, Fig. 1. Fig. 3, is an enlarged end view of one of the carriages moving upon the track. Fig. 4, is a vertical sectional view of the shoe taken on line 3—3 of Fig. 3. Fig. 5, is a top plan view of a modified form of driving mechanism and also mold. Fig. 6, is a vertical transverse sectional view taken on the line 6—6 of Fig. 5. Fig. 7, is an end view of Fig. 5. Fig. 8, is an enlarged perspective view of the pressure brackets and showing the means by which it is horizontally adjusted upon the upper I-beam, and by means of which it may be detachably secured.

Referring now to the drawings, 1 and 2 represent two horizontal beams forming the base, and by means of which the device is supported. Secured to the center of the beams 1 and 2 are the end standards 3 and 4, made of U-shaped beams and braced to the outer ends of the beams 1 and 2 by braces 5, thus preventing any twisting of the standards on the base beams. Between the lower ends of the standards and connected thereto by the bracket plates 6 is an I-beam 7 which braces the standards, and also forms a track for the movable carriages, as will be hereinafter more fully described. Between the extreme upper end of

the standards 3 and 4, and secured thereto, by means of bracket plates 8, is an I-beam 9 which braces the standards and combined therewith and with the elongated strong horizontal frame is adapted to withstand a great amount of strain, as devices of this character are subjected to considerable strain.

Extending horizontally across the entire frame, and through the standards 3 and 4, is a shaft 10 which is made in sections, and coupled together by the coupling 11, all of which will be hereinafter more fully described. The shaft, as shown, is journaled in the standards, and has one end beyond the standard 3. This extended end of the shaft is provided with a gear-wheel 12 keyed thereon, and meshing with a pinion 13 carried by the shaft 14. The shaft 14, as shown, is provided with a base 15, by means of which it is secured to the standard 3. The gear-wheel 13 is loosely mounted upon the shaft 15 and secured to said gear-wheel, and loosely mounted upon the shaft 15 is a pilot-wheel 16 which is provided on its outer periphery with the handles 17. These handles allow the operator to stand in front of the machine and operate it, although I have shown a handle 18 by means of which the wheel is operated, all of which will be hereinafter more fully described. On the end of the shaft 15 is a nut 19 by means of which the pilot wheel is held thereon. While I have shown the same operated by hand, it will be understood that the shaft 10 could be operated by any power by placing a pulley on the shaft 15. The shaft 10, as before described, extends all the way across the frame, and is made in two sections properly coupled together for adjusting either section, as will be hereinafter more fully described. Each section 21 and 22 of the shaft 10 is provided with two screw-threaded portions 23 and 24, the threads of which are oppositely arranged.

Slidably mounted upon the I-beam 7 are the carriages 25, 26, 27 and 28, which work in conjunction with the threaded portions 23 and 24 of the shaft sections, whereby the rotation of the shaft moves each pair of the carriages carried by the shaft sections to or from each other. The upper end of the carriages have pivotally connected thereto the links 29, 30, 31 and 32. The links 29 and 30 connected to the carriages 25 and 26, have their upper ends inclined toward



each other, and are pivotally connected to the block 35 carried by the lower face of the vertically-movable plunger or pressing frame 34. The carriages 27 and 28 have  
 5 their links 31 and 32 pivotally connected thereto, and extend upwardly and are pivotally connected to the block 35 carried by the lower face of the plunger 34.

The plunger 34 is composed of beams 37 and 38 bolted together and having at their  
 10 ends the guide plates 39 which are turned inwardly within the U-shaped standards, being two brackets or guide-plates 39 at each end of the frame, and it will be seen that  
 15 there cannot be any twisting of the plunger. The plunger has secured thereon transverse boards 40 forming a broad flat platform of sufficient width and length to receive the largest pieces of furniture, etc., that are to  
 20 be lifted.

The tufting frame is placed upon the plunger and is worked in the manner well known by those skilled in the art, and by  
 25 operating the wheel 16 the plunger will be forced upwardly, as will be hereinafter more fully described.

The upper ends of the carriages are provided with recesses 41 in which extends the links 29, and are pivoted therein by means of  
 30 the pin 43. The said links extend upwardly and are pivotally connected to the blocks 30 of the follower. As shown, the links of the carriages 25 and 26 are connected to one block and the links of the carriages 27 and  
 35 28 are connected to the other block. Thus it will be seen that the rotation of the shaft 10 moves the carriages longitudinally of the frame, and thus forces the blocks 35 upwardly, and raises the plunger. The shaft  
 40 coupling 11 is so constructed that either section can be moved longitudinally, independent of the other section, whereby should the carriage of one section of the shaft be so positioned that the plunger is not evenly  
 45 forced upwardly—that is, one end being higher or lower than the other—the shaft section may be adjusted to cause the plunger to be in a horizontal plane. The carriages, as shown, have a horizontal passage 44 there-  
 50 through for the passage of the shaft, and also have a vertical recess 45 extending from its lower face, and in which loosely fits the blocks 46 which have a vertical movement in the recess, and also a twisting movement  
 55 when the occasion requires it. The blocks 46 are provided with screw-threaded openings 47 through which the screw-threaded portions 23 and 24 of the shaft pass, and said blocks 46 and the recess 45 being of rectangular form, it will be seen that the blocks are  
 60 held against rotation, and the carriages caused to travel on the beam 7.

The lower faces of the carriages are provided with longitudinal cut-away portions 48  
 65 in their lower faces, which form the down-

wardly-extending flanges 49 and 50, which extend down below the beam 7 and prevent the carriages from leaving said beam. Extending transversely through the flanges 49 and 50 of each carriage at the ends, are the  
 70 shafts 51 and 52 which are removably held therein, yet held against rotation. Mounted on each shaft adjacent the flanges are two ball-bearing wheels 53 and 54 which roll upon the upper face of the beam 7, and cause  
 75 the carriage to freely move thereon. The wheels 53 and 54 have a ball-bearing connection with the shafts 51 and 52.

The beam 9 has secured to its lower face the pressing bracket. This bracket is made  
 80 to adjust itself to any angle as shown in the drawings. This bracket is intended to bear upon the cross-piece of the follower-board, so as to add strength to the cross-piece of the follower-board and give the operator more  
 85 room between the follower-board and the long iron beam of the press, whereby the buttons may be more readily clenched over the washers after the pad is pressed down. The bracket consists of a circular portion 56  
 90 having the hook 57 adapted to pass over the lower flanges of the I-beam 9. The opposite side of the portion 56 is provided with an upwardly-extending lug 58 provided with a screw-threaded opening 59 through which  
 95 the screw-bolt 60 passes, and which extends over the lower flange of the I-beam 9 and by means of which the blocks are removably secured to the beam. The member 56 is provided with an opening through which the  
 100 bolt 61 passes, said bolt extending through the circular member 62 of the bracket proper. The bracket has its vertical wall cut away, as indicated at 63, whereby a space is left for the nut 64. By this arrangement it will  
 105 be seen that the bracket may be set at any angle when desired. These brackets may be of different forms, and lengths, as shown in Fig. 5, which is necessary when different forms of mold boards are used. 110

The vertical ends or standards 3 and 4 are provided with brackets 65 and 66 upon which the mold board support 34 rests, and is supported, while the mold boards are being set. These brackets also limit the downward  
 115 movement of the member 34.

In Figs. 5, 6 and 7, instead of having the form of operating means for rotating the shaft 10 shown in Figs. 1 and 2, I have  
 120 shown a motor 67 mounted upon the beam 9 adjacent one end and said motor having a pinion 68 meshing with a gear 69. Through the medium of this and the train of gearing 70, 71, and 72 the gear 73 is driven which is carried by the shaft 10, and whereby the  
 125 same is rotated. In these figures the brackets are shown of different lengths, and the same being removable it will be understood that any length bracket can be used to suit the form of mold board being used. 130



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

1. A press of the character described, comprising a frame, a vertically-movable plunger within the frame, a shaft extending longitudinally of the frame and having oppositely screw-threaded portions, carriages carried by the frame, blocks within the carriages and loosely arranged, and through which the threaded portions of the shaft pass, links connecting the carriages with the plunger, and means whereby the shaft may be rotated.

2. A press of the character described, comprising a frame, a vertically-movable plunger within the frame, carriages carried by the lower end of the frame, blocks loosely mounted in the carriages and held against rotation therein, a shaft extending longitudinally of the frame and having oppositely screw-threaded portions screwed into the blocks in the carriages, links connecting the carriages and the plunger, and means for rotating said shaft.

3. A press of the character described, comprising a longitudinal frame, having an I-beam forming its lower end, four carriages carried by said I-beam, a shaft made in two sections and each section having oppositely screw-threaded portions passing through two of said carriages, means for adjustably connecting said shaft sections, a plunger vertically movable within the frame, links connecting said carriages and plunger, and means for rotating the shaft, substantially as described.

4. A press of the character described, comprising a longitudinal frame, composed of upper and lower horizontal I-beams connected by vertical U-shaped end beams, a plunger between said end beams and having brackets carried thereby and extending into said U-shaped beam to allow of a vertical movement thereof, means for vertically moving said plunger, and swiveled pressing brackets horizontally movable upon the lower face of the upper I-beam.

5. A press of the character described, comprising a longitudinal frame composed of an upper and a lower horizontal I-beam, U-shaped vertical beams connecting the ends of the I-beams, a plunger vertically movable between the said end beams, brackets carried by the plunger and extending into said U-shaped beam to allow of a vertical movement thereof but preventing any twisting, carriages carried by the lower I-beam, a shaft having screw-threaded connections with the carriages for moving them longitudinally on the beam, links connecting the carriages, and the plunger, a gear-wheel carried by the shaft on the outside of the frame, a small pinion meshing with said gear-wheel, and means for rotating the pinion substantially as described.

6. A press of the character described, comprising a frame, a plunger vertically movable therein, carriages horizontally movable across the frame and arranged in pairs, a shaft made in two sections and adjustably connected together, each section having two screw-threaded portions oppositely screw-threaded, and operatively connected to one pair of carriages, links connecting the carriages and the plunger, and means for rotating said shaft.

7. A press of the character described comprising a frame, a plunger vertically movable therein, carriages horizontally movable in the frame, a block within each carriage and vertically and horizontally movable, and a shaft passing through the carriages and screw-threaded with the blocks, and links connecting the carriages and the plungers.

8. A press of the character described comprising a frame, a plunger vertically movable therein, carriages horizontally movable and having downwardly-extending flanges extending over the lower horizontal bar of the frame, transverse shafts carried by the carriages, rollers mounted upon said shafts and rolling upon the lower horizontal beam of the frame, and said carriages having horizontal openings therethrough, each carriage having recesses extending upwardly from its lower faces and intersecting the horizontal opening, an angular block loosely fitting within said recess and having a horizontal screw-threaded opening registering with the opening in the carriage, a rotatable shaft passing through the opening in the carriage and having a screw-threaded portion meshing with the threads of the opening in the block, the upper end of the carriages having a recess, a link pivoted within said recess and having its upper end pivotally connected to the plunger, and means for rotating said shaft.

9. A press of the character described comprising a frame, a vertically movable plunger, means for moving said plunger vertically and holding it in its adjusted position, pressing brackets horizontally adjustably secured to the frame above the plunger and having a swiveled portion working in conjunction with the plunger.

10. A press of the character described, comprising a frame, a vertically movable plunger, means for operating said plunger, a horizontal I-beam above the plunger and forming a part of the frame, pressing brackets composed of a body portion slidably and movably supported to the lower face of the I-beam by a set screw, and a swiveled portion working in conjunction with the plunger.

11. A press of the character described comprising a frame, a vertically-movable plunger, means for operating said plunger, a horizontal I-beam above the plunger and



forming a part of the frame, pressing brackets composed of a body portion having a hook passing over the flange on one side of the I-beam, a lug extending upwardly on the other side of the beam, a horizontal screw passing through the lug and engaging the upper face of the flange of the I-beam, and a swiveled portion carried by the body portion and adapted to engage the mold board carried by the plunger.

12. A press of the character described, comprising a frame, a vertically-movable plunger, means for operating said plunger, a horizontal I-beam above the plunger and forming a part of the frame, pressing brackets carried by the frame and composed of a body portion having a hook passing over the flange on one side of the I-beam, a lug extending upwardly on the other side of the beam, a horizontal screw passing through the lug and engaging the upper face of the flange of the I-beam, and a swiveled portion carried by the body portion and adapted to

engage the mold board carried by the plunger, and means whereby the swiveled portions may be readily removed.

13. A press of the character described comprising a frame, a vertically movable plunger within the frame, a shaft extending longitudinally of the frame and formed in two sections oppositely threaded, means for adjustably connecting the two sections, carriages horizontally movable in the lower end of the frame, blocks loosely mounted in the carriages and held against rotation therein and through which the threaded portions of the shaft sections pass, links connecting the carriages and plunger, and means for rotating said shaft, substantially as described.

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

BURTON C. POSTON.

Witnesses:

ETHEL M. DIXON,  
JOHN W. GOLDSBERRY.