

E. TYDEN.  
PEDESTAL EXTENSION TABLE LOCK.

APPLICATION FILED FEB. 19, 1902.

NO MODEL.

3 SHEETS—SHEET 1.

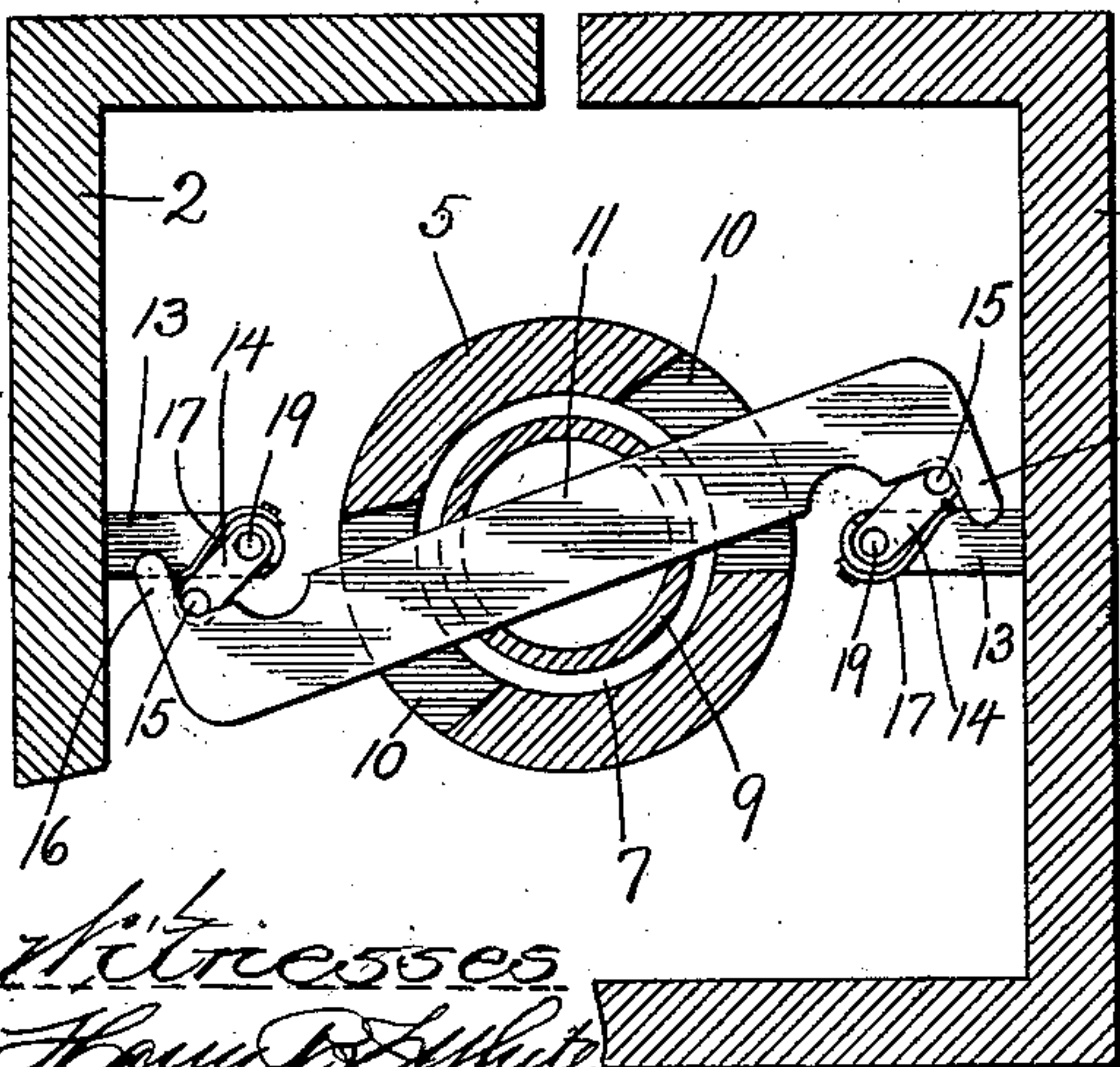
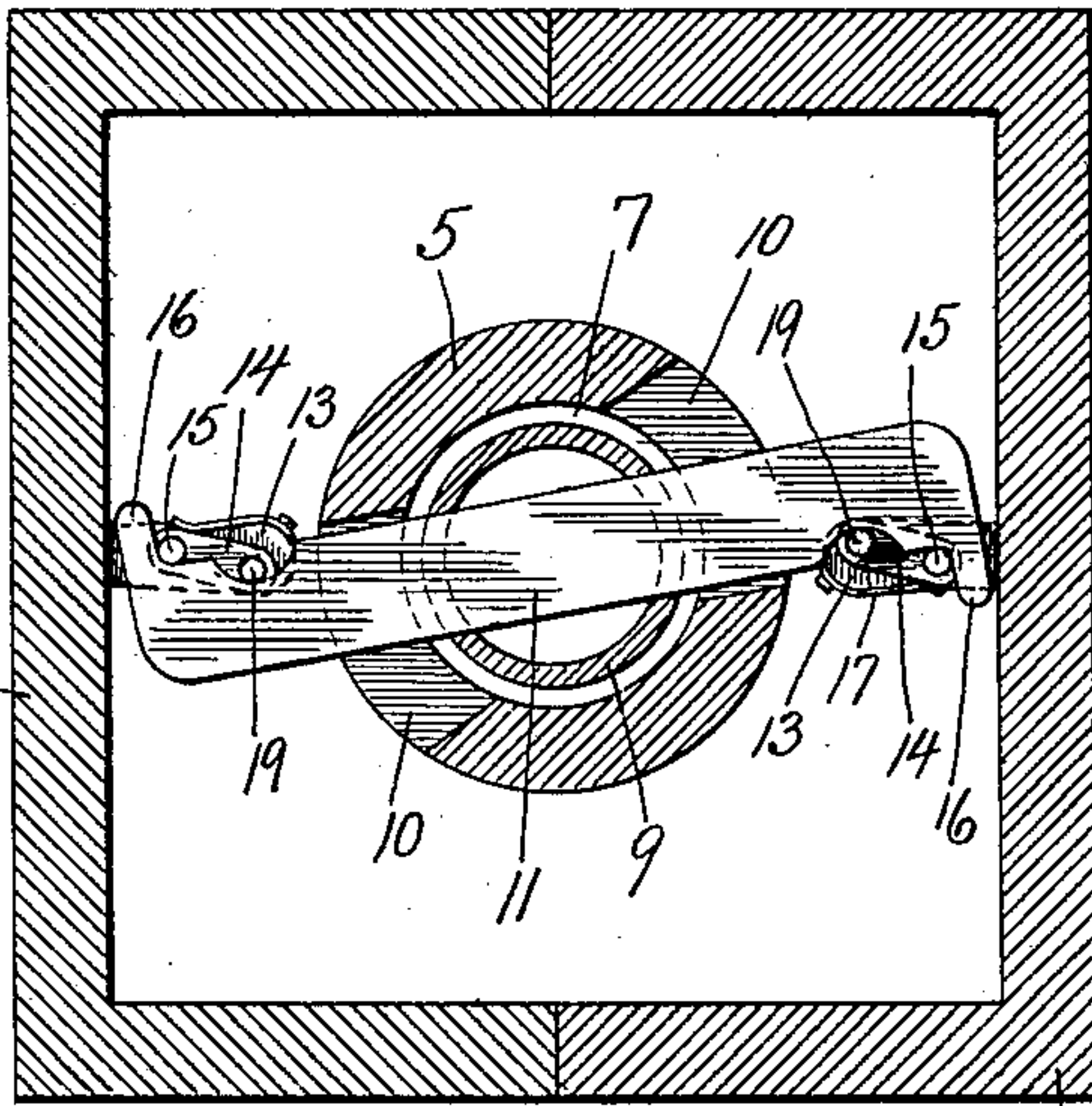
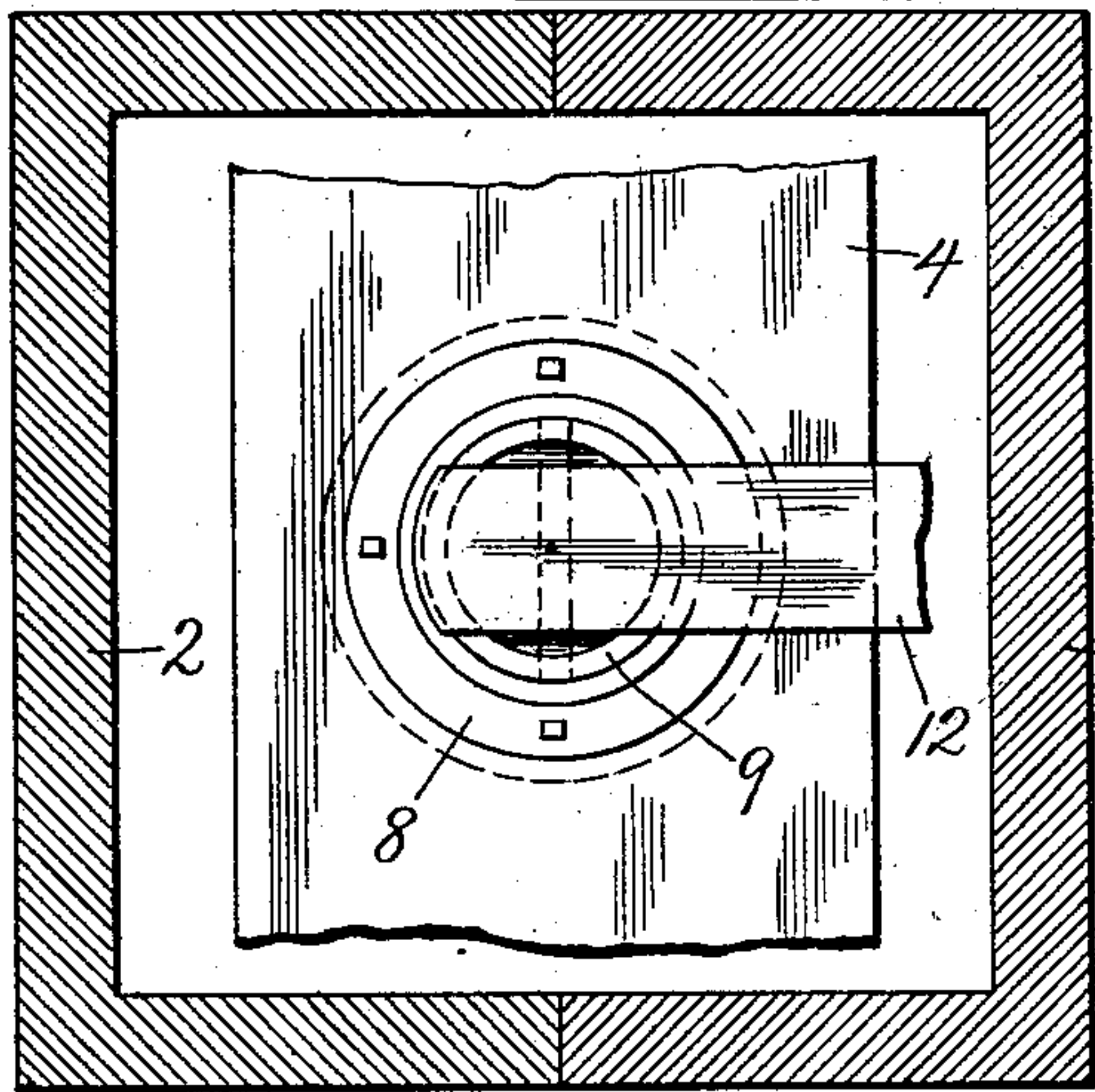
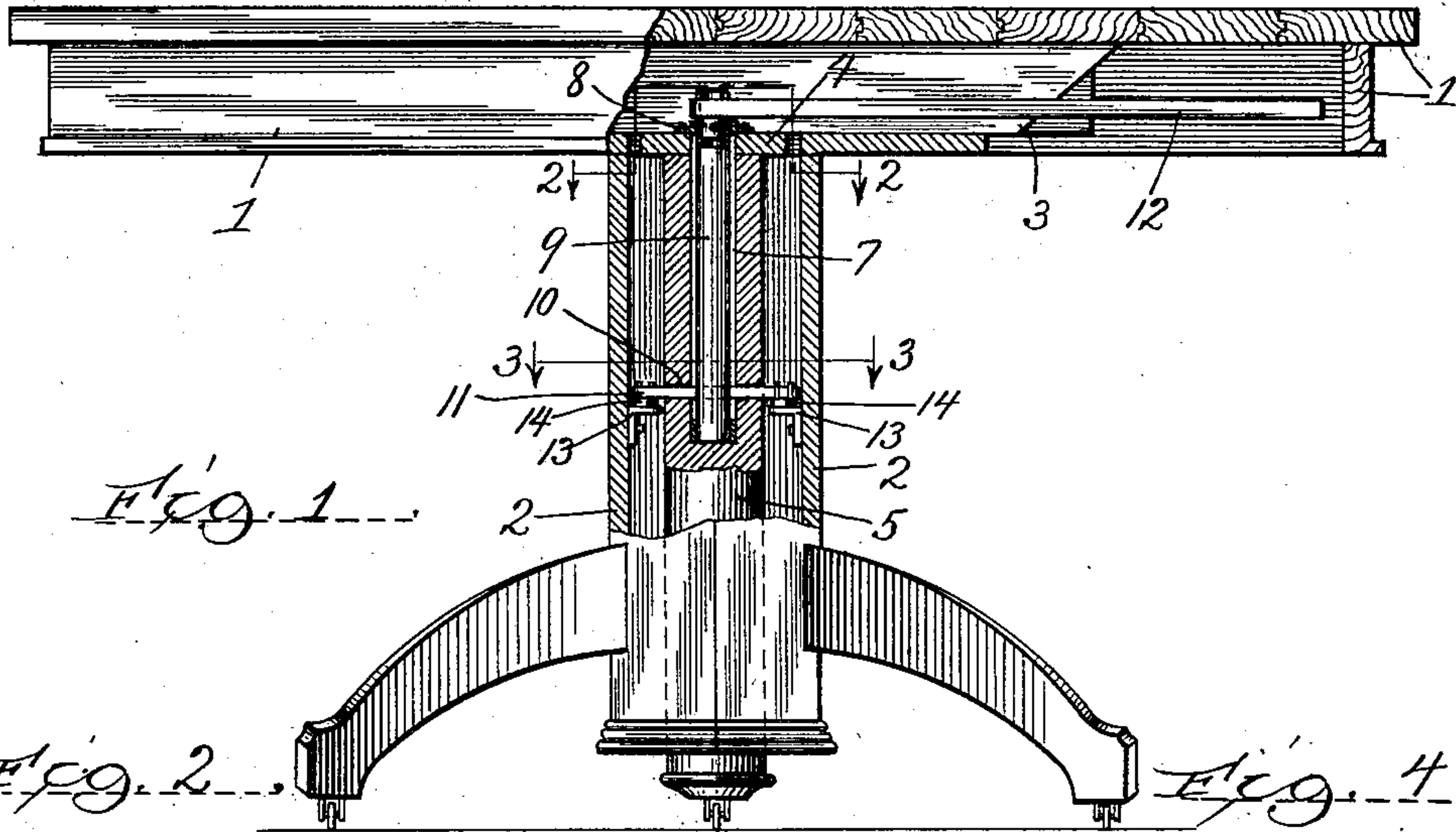
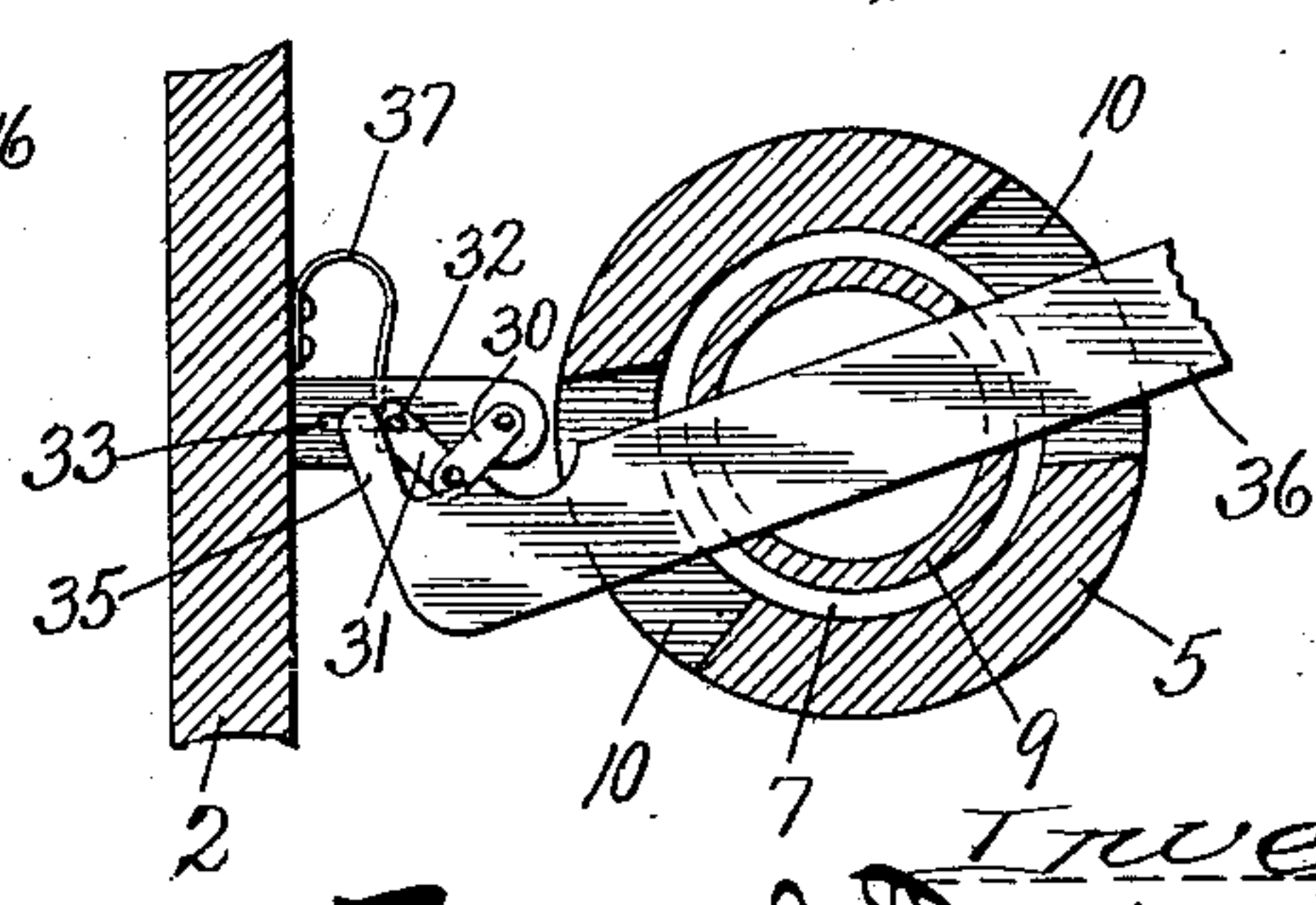


Fig. 3

Fig. 5



Witnesses  
Harry D. White  
Ray White

Inventor  
Emil Tyden  
By Burton Burton Attorneys



No. 734,203.

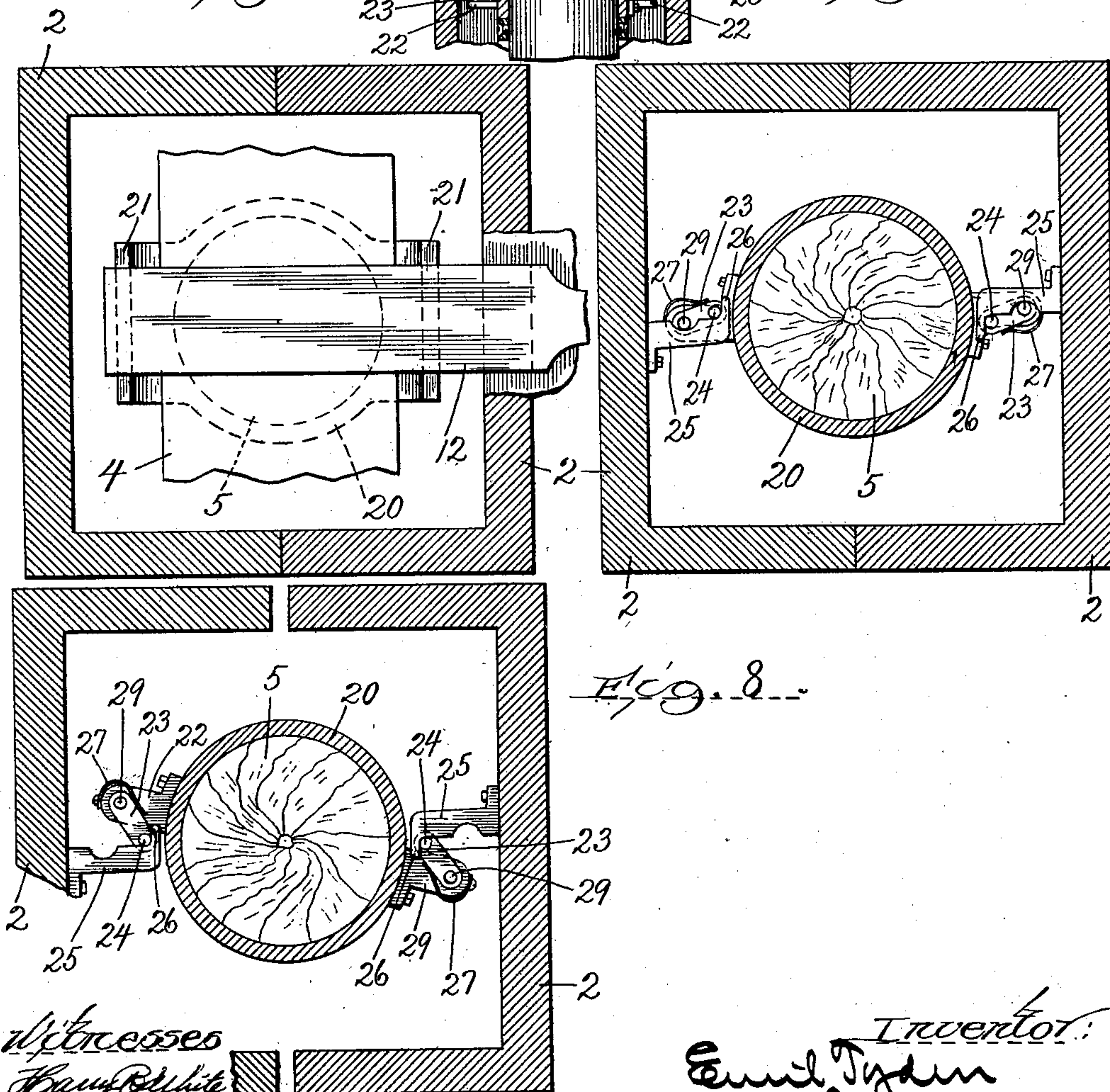
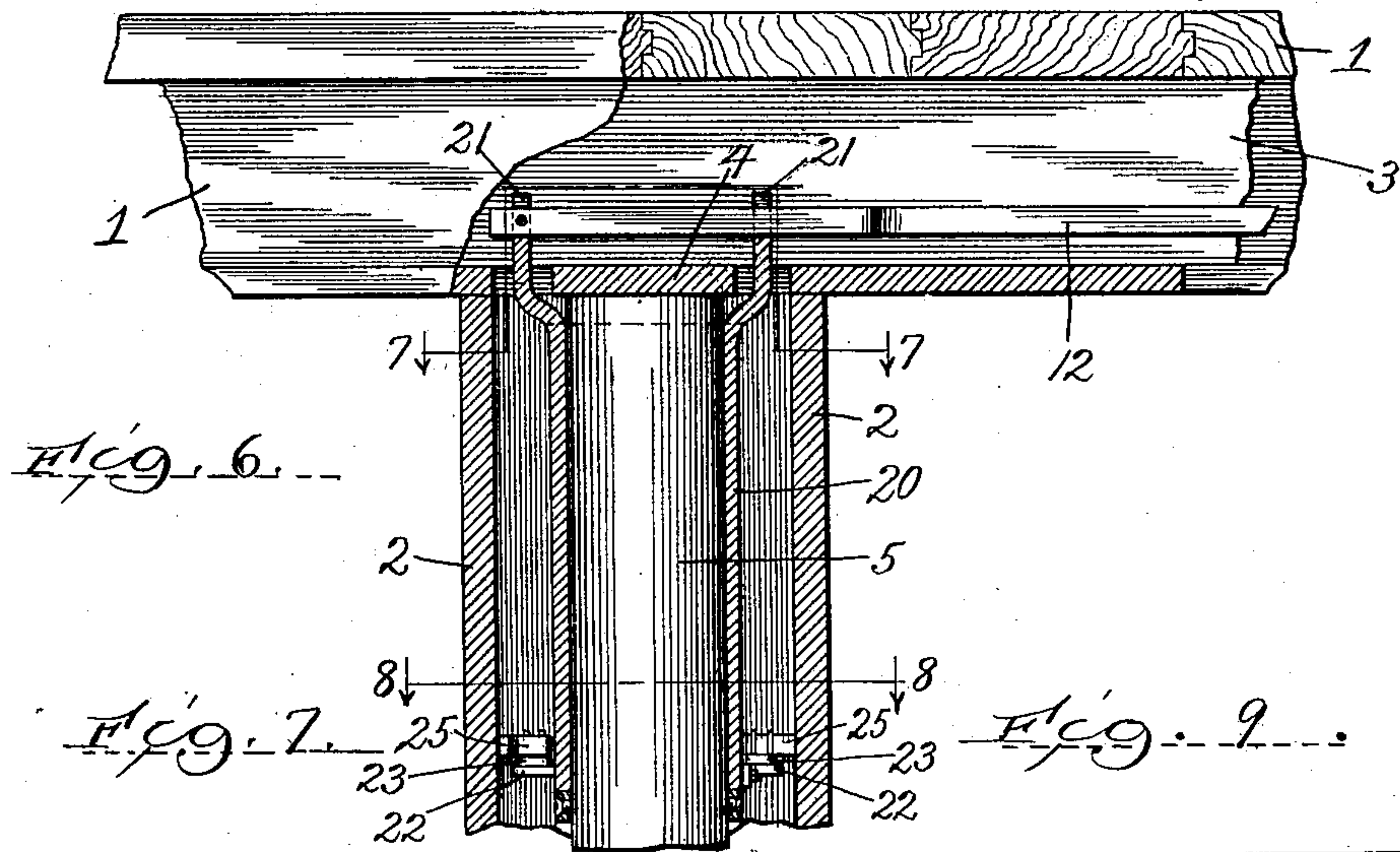
PATENTED JULY 21, 1903.

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PEDESTAL EXTENSION TABLE LOCK.

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3 SHEETS—SHEET 2.



Witnesses  
Camp White  
Ray White.

Inventor:  
Emil Tyden  
By Austin Austin Atty



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3 SHEETS—SHEET 3.

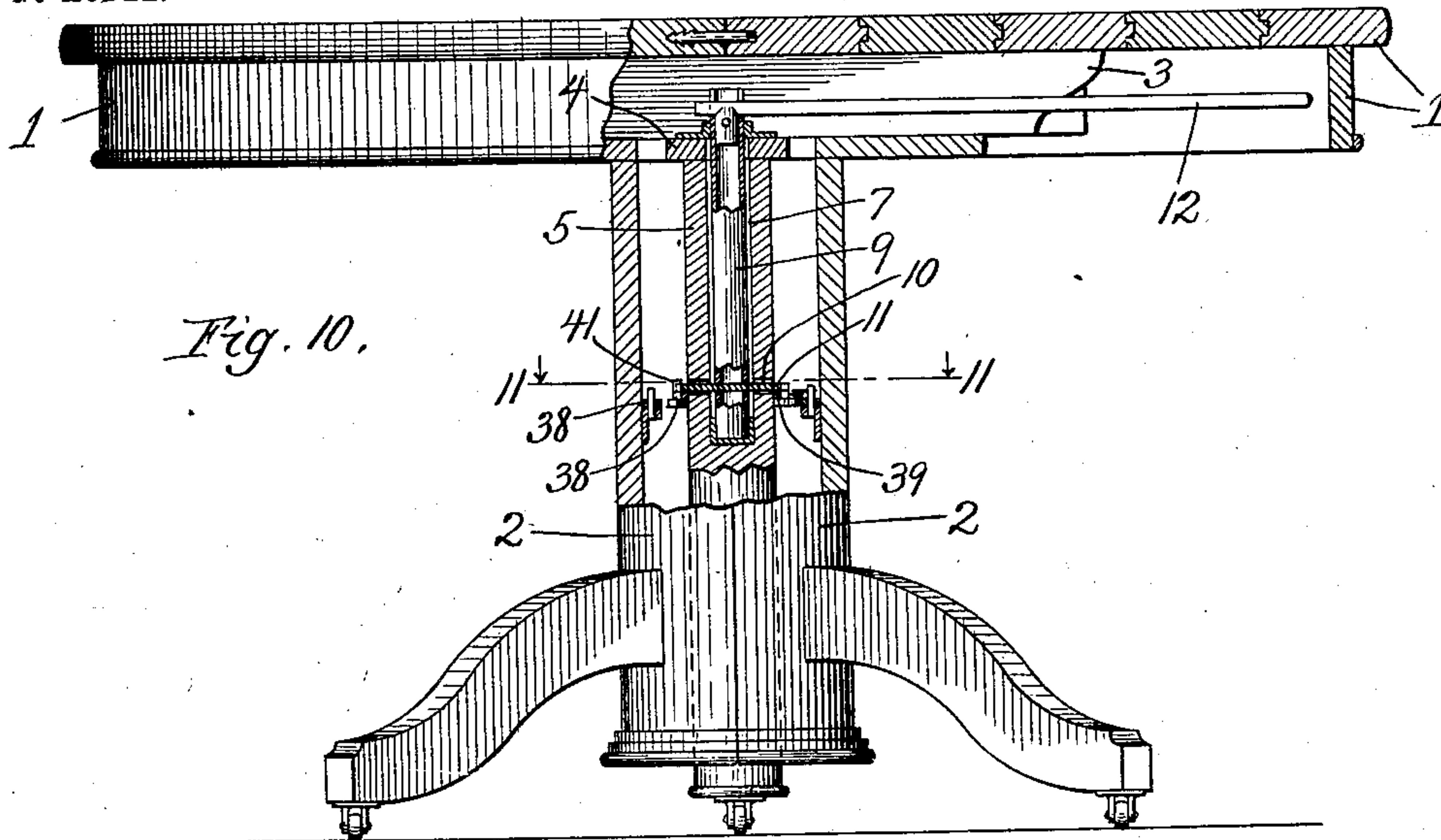
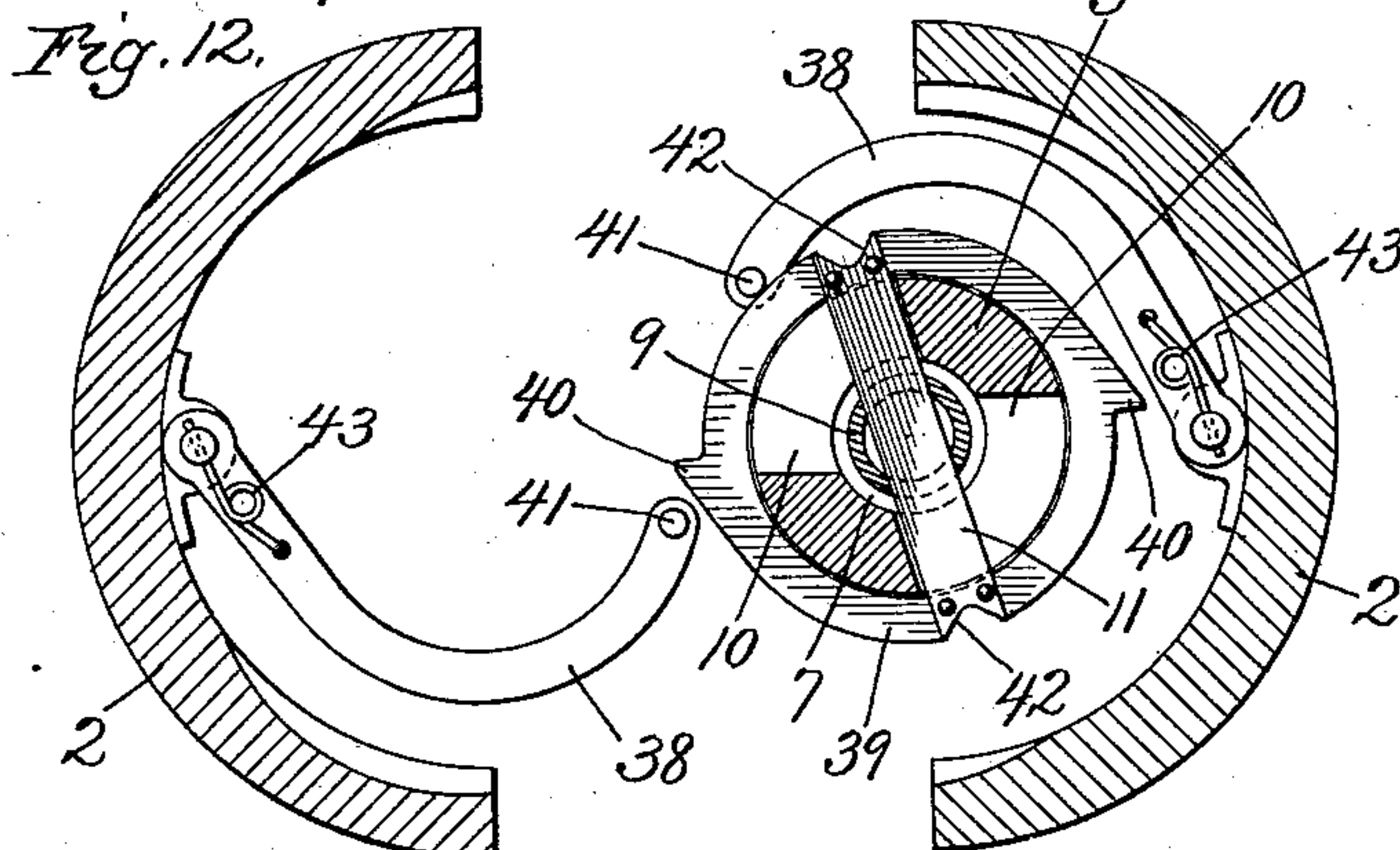
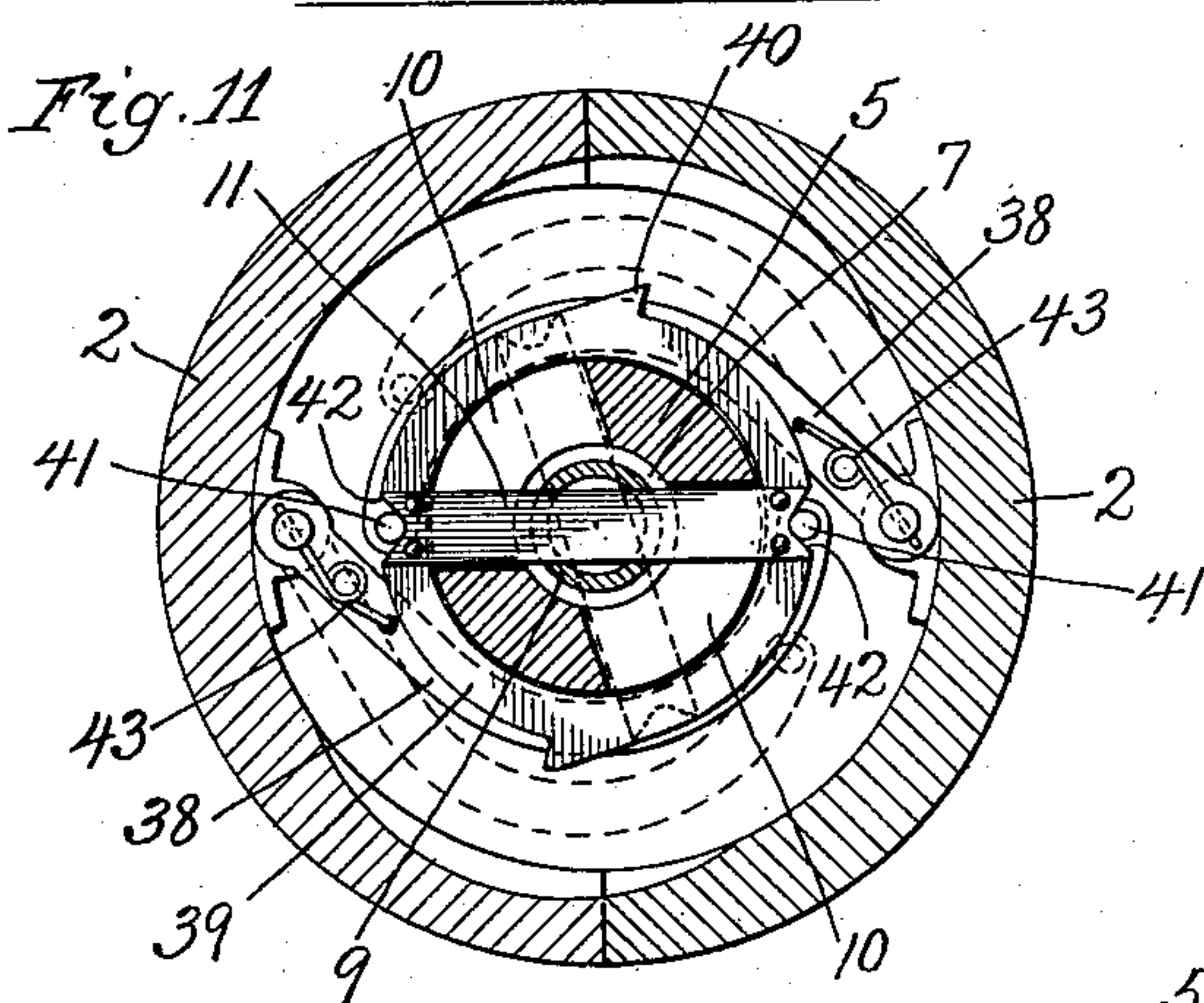


Fig. 10.



Witnesses.

Edward T. Wray.  
J. M. Westerland.

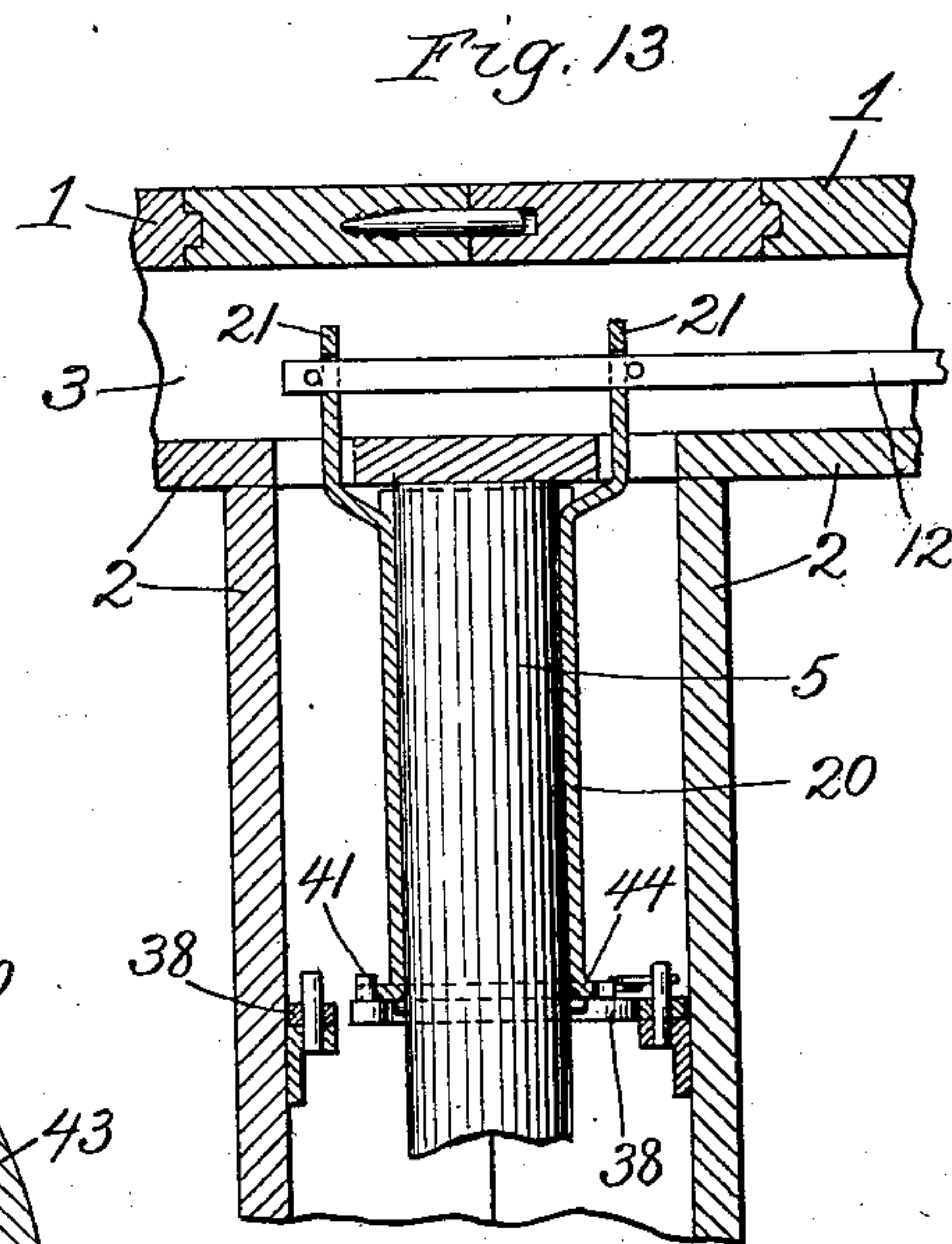


Fig. 13.

Inventor.

Emil Tyden  
by Burton & Burton  
his Atty's.



# UNITED STATES PATENT OFFICE.

EMIL TYDEN, OF HASTINGS, MICHIGAN.

## PEDESTAL-EXTENSION-TABLE LOCK.

SPECIFICATION forming part of Letters Patent No. 734,203, dated July 21, 1903.

Application filed February 19, 1902. Serial No. 94,748. (No model.)

*To all whom it may concern:*

Be it known that I, EMIL TYDEN, a citizen of the United States, and a resident of Hastings, in the county of Barry, State of Michigan, have invented certain new and useful Improvements in Pedestal-Extension-Table Locks, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

10 This invention relates to pedestal extension-tables, and has for its purpose the remedying of a defect generally observed in tables of this class consisting in the tendency of the pedestal to sag at the lower end when the  
15 table-top is closed together.

It consists in new and improved means for locking the parts of the pedestal together and for unlocking them when the table is to be extended, said means consisting in a vertically-journaled rotatable element and connections by which it engages and draws together the two parts of the pedestal at a point substantially below the table-top and means for suitably rotating said element to  
25 effect this result.

It consists, furthermore, in the specific construction set out in the claims.

In the drawings, Figure 1 is a side elevation, partly sectional, of a pedestal extension-table having my invention, the section being made in vertical plane through the pedestal and a portion of the table-top. Fig. 2 is a detail plan of operating means, the table-top being removed. Fig. 3 is a section at the horizontal plane of the line 2 2 on Fig. 1, showing the parts of the pedestal slightly separated ready to be closed up by the locking devices. Fig. 4 is a similar view showing the parts closed up. Fig. 5 is a detail  
40 plan of link connection in a modified form. Fig. 6 is a view similar to Fig. 1, showing a modification. Fig. 7 is a view similar to Fig. 5, showing the modified form presented in Fig. 6. Fig. 8 is a section at the line 8 8 on Fig. 7, showing the pedestal parts slightly separated and ready to be closed up by the locking devices. Fig. 9 is a similar view showing them closed together. Fig. 10 is a view similar to Fig. 4, showing a second modification. Fig. 11 is a section at the line 9 9  
50 on Fig. 8, showing the pedestal parts closed up by the locking devices. Fig. 12 is a simi-

lar view showing them open. Fig. 13 is a sectional view similar to Fig. 12, showing a modification involving a blending of the feature of form shown in Figs. 1, 2, and 3 with the form shown in Figs. 10, 11, and 12.

Describing the form shown in the first group of figures, 1 1 are the two parts of the table-top.

2 2 are the pedestal parts pertaining to the two parts 1 1, respectively, of the table-top.

3 3 are the slides to which the bridge 4 is secured, connecting them and carrying the center leg 5, which is secured rigidly to the bridge in any customary or convenient manner. An aperture 7, axial with respect to the center leg, is made through the same and through the bridge. A journal-plate 8 is secured above this aperture on the bridge and affords bearing for a shaft 9, which is conveniently made of gas-pipe for lightness and torsional rigidity. The shaft 9 may also have bearing at its lower end in the bottom of the axial aperture in the center leg. The latter is provided with a transaxial aperture 10 near the lower end of the axial aperture, and a bar 11, which is inserted through the shaft 9 near the lower end of the latter and held rigid with it, protrudes at both sides of the latter through said transaxial aperture, constituting lever-arms of the shaft, the transaxial aperture being sectoral in extent, so as to allow for certain amount of angular movement of the bar 11 as the shaft 9 may rotate or oscillate about its vertical axis. At the upper end of the shaft 9 it is provided with a lever-handle 12, secured rigidly to it above its bearing in the plate 8, said handle preferably extending off toward the end of the table, so as to be reached conveniently, although out of sight under the table-top at the end, when the operator having closed the table up or desiring to extend it has occasion to operate the locking devices.

13 13 are brackets secured to the inner faces of the pedestal parts 2 2, respectively, opposite the parting plane. 14 14 are links or latches pivoted to these brackets, respectively, and at their outer swinging ends provided each with a stud 15, adapted to form a pivot and to seat in the angle of the hook 16, with which the ends of the bar 11 are provided. Springs 17 17, secured to the brack-



ets 13 and bearing against the links or latches, respectively, operate with a tendency to hold the links in the position shown in Fig. 3, trending from their pivots on the brackets  
 5 back from the parting plane of the pedestal parts at an angle of about thirty degrees from an imaginary line through the axis of the shaft 9 and the pivot of the link on the bracket. The pivot-studs 16 are at a distance  
 10 from the axis of the shaft 9, such that when they are engaged in the pivot-seats 15 and said links are swung back until the two pivots of each link are in line with the axis of the shaft 9 the pedestal parts will be tight  
 15 together. If the lever-handle 12 is swung a little farther, carrying the pivot-studs 16 just past the line through the other pivot of the link and the axis of the shaft 9, the reaction of the parts connected and forming the con-  
 20 nection will cause them to be locked in that position—that is, held so that any force tending to separate the pedestal parts will tend to throw the links 14 farther on in the same direction, such further movement being, how-  
 25 ever, prevented by any convenient stop, as the pivot 19 of the link of the bracket 13. To release the lock and permit the table to be extended, the operator will swing the handle-lever around in the other direction until  
 30 the pivot-hooks 16 are carried away from the studs 15, leaving the parts entirely disengaged.

In the modification shown in Figs. 6, 7, and 8 I substitute for the central shaft 9 a sleeve  
 20 on the outside of the center leg, having  
 35 lugs 21 21 extending up on opposite sides of the bridge 4 at sufficient distance therefrom to allow proper range of oscillating movement to the sleeve and affording means for attaching the handle-lever 12. At the lower end of  
 40 the sleeve, which is at a distance below the table-top corresponding to the lower end of the shaft 9 in the original construction, said sleeve has at diametrically opposite positions  
 45 lugs or brackets 22 22, to which are pivoted links or latches 23 23, trending from their pivots inward toward the axis or at an angle to radii through their pivots of about thirty  
 50 degrees, the free ends of these links or latches having studs 24 24, corresponding to the studs 15 15 in the links 14 in the other construction, and on the pedestal parts at positions opposite the parting plane there are brackets 25  
 55 25, at the outer ends of which are hooks 26 26, adapted to engage and seat in the pivot-seats 24 24, when the rotation of the sleeve brings said seats around to said studs, and springs  
 60 27 27 are provided, operating on the links to hold them normally in the suitable position to cause the pivot-studs to strike the latches, respectively, a little back of or outward from  
 65 said seats as the sleeve brings them around toward the studs when the pedestal parts are very nearly closed together or so that they will strike directly into the seats if the pedestal parts are a little more separated. The length and angular movement of the links between their normal positions under the con-

trol of the springs 27 and their position when swung into radial line are calculated to be such as to take up the necessary amount of  
 70 sag between the pedestal parts, and the operator will close them up by operating the sleeve by means of the handle 12, as in the other construction, a stop 29 being afforded by the pivot of the link to the lug, the same  
 75 being arranged to project so as to strike the bracket at the proper point after the moving pivot is carried past the radial line through the other pivot of the link.

A modification of the first form is shown in 80 Fig. 5. It consists in using two links 30 and 31, pivoted together, the link 30 being pivoted to the bracket at the outer end of the latter and the link 31 having a pivot-stud 32 protruding downwardly into a slot 33 in the bracket  
 85 and upwardly for engagement with the hook 35, which terminates the bar 36, which in this form is substituted for the bar 11 in the original form, said hook 35 being angular—that is, comprising a finger jutting off at right angles  
 90 thereto from its stem. A light spring 37 may be provided in any convenient position tending to hold the pivot-stud 32 inward, so as to keep the links folded, and when the operator at the proper time operates the lever-handle  
 95 12 the hook 35, passing in behind—that is, outside of the stud 32—comes into position to be crowded outward by the latter, which is forced outward when the side or stem of the hook strikes the knee or joint of the two  
 100 links and presses it inward toward the line, connecting the extreme pivots, and in this action it will be seen the pedestal parts are forced together and that the knee-pivot of the two links being forced past the line con-  
 105 necting their remote pivots the parts become locked, as in the other forms. The unlocking is effected in this form as in the others by reversing the movement of the handle-lever, the spring 27 operating to fold the links again  
 110 as soon as the hook is out of the way.

In the form shown in Figs. 10, 11, and 12 I employ links 38 38, pivoted to the pedestal parts at diametrically opposite positions, as in the other structures, said links, however,  
 115 being long enough and of suitable shape to reach around the center leg, so as to engage the bar 11 at the end opposite the pivot of the link to the pedestal part. This construction has the advantage of not requiring the  
 120 brackets to which the links are pivoted to extend out far enough to give the links room for swinging back of their pivots and also makes the clamping movement easier, because of the greater distance between the two  
 125 pivotal engagements of each link. It necessitates, however, provision for diverting the link around the leg as the pedestal parts are moved together, and for this purpose I secure to the bar a ring 39, which encompasses the  
 130 leg and is provided with the tapering noses 40 40 at proper position to be encountered by the pivot-studs 41 41, which the links carry at their free ends, so that the links are di-



verted laterally and caused to pass by the lug, being drawn in again by springs 43 43 to cause the pivot-studs to engage the pivot-seats 42 42 in the ends of the bar 11. The clamping or cramping action in this structure when the shaft 9 is oscillated by the handle-lever will be understood from the description of the preceding structures. It will be manifest also that the same structure, so far as the relation of the links to the leg is concerned, can be employed with the exterior sleeve instead of the central shaft, which is shown in the form represented in Figs. 6, 7, and 8. Such a construction may be understood, as shown in Fig. 13, in which the ring 39 of the last-described construction becomes a flange 44 on the lower end of the sleeve, the bar 11 being dispensed with, of course, the upper structure being identical with the form shown in Figs. 6, 7, and 8, and the construction of the links and their operation being the same as in Figs. 10, 11, and 12.

I claim—

1. In a pedestal extension-table, in combination with the separable parts, the pedestal parts pertaining thereto, respectively, and the extension devices; a member carried by the extension devices; a latching device carried by such member; engaging devices carried by the pedestal parts, respectively, in position to be both engaged with the latching devices when the pedestal parts are near together and before they are entirely closed, said latching devices and the respective engaging devices of the pedestal parts being relatively constructed to draw the pedestal parts together by movement of the latch in one direction after such engagement, and means for giving the latch such movement.

2. In a pedestal extension-table, in combination with the separable parts and the pedestal parts pertaining thereto respectively; an element suitably mounted to be inclosed in the pedestal rotatable about a vertical axis; links for connecting said rotatable element with the pedestal parts respectively at a substantial distance below the table-top, each link being pivotally attached to one of the parts which it is to connect, the other part having means for pivotally engaging the link; means for holding the links normally in position to be thus engaged upon the rotation of the rotatable element when the pedestal parts approach but before they are closed; means for rotating said part to effect the second pivotal connection of the links respectively, the two pivots of each link when the said second connection is effected before the pedestal is closed being out of line with the axis of the rotatable element, the pivot which is moved in such rotation being at the opposite side of the axis from the other pivot; whereby such rotation crowds the pedestal parts together.

3. In a pedestal extension-table, in combination with the two separable parts and the pedestal parts pertaining thereto respectively; an element supported so as to be in-

closed in the pedestal rotatable about a vertical axis; two pairs of links for connecting said rotatable element with the pedestal parts respectively at a substantial distance below the table-top, the two links of each pair being pivoted together, and one of them pivoted to one of the parts to be connected by the pair, the other being guided on the same element in direction substantially radial to the axis of the rotatable element, the other of the two connected parts having a projection in the form of an angular hook one arm of which becomes engaged beyond said guided end in the second link of the pair, while the other side or arm encounters the links at their joint or pivot as the rotatable element is rotated before the pedestal parts are closed; and means for rotating said element adapted to continue such rotation until the pedestal parts are drawn together.

4. In a pedestal extension-table, in combination with the separable parts of the table and the pedestal parts pertaining thereto respectively; an element suitably mounted in the pedestal rotatable about a vertical axis; links for connecting said rotatable element with the pedestal parts respectively at a substantial distance below the table-top, each such link being pivotally attached to one of the parts which it is to connect, the other of said elements having means for pivotally engaging the links; means for holding the links normally in position to be thus engaged upon the rotation of the rotatable element before the pedestal parts are closed; means for rotating said element to effect the second pivotal connection of the links respectively, the relative positions of the link-pivots and the points of such engagement being such that said rotation brings them into line with the axis of the rotatable element when the pedestal parts are closed; and means for stopping the movement of the links when the moving pivot slightly passes the radial line through the other pivot; whereby reaction of all the parts concerned in said operation under the tension and compression thus produced holds the pedestal parts locked.

5. In a pedestal extension-table, in combination with the separable parts of the table and the pedestal parts pertaining thereto respectively; an element supported so as to be inclosed in the pedestal rotatable about a vertical axis; links pivoted to the pedestal parts respectively at a substantial distance below the table-top, said rotatable element having means for engaging said links before the pedestal parts are closed, the point of such engagement of each link being at the opposite side of the link-pivot from the axis of the rotatable element; whereby the rotation of said element after such engagement draws the pivots of the links toward such axis and closes the pedestal parts.

6. In a pedestal extension-table, in combination with the separable parts of the table and the pedestal parts pertaining thereto re-



spectively; the center leg and a rotatable element journaled therein protruding from the upper end thereof and extending down to a substantial distance below the table-top, the leg being transaxially apertured at a like distance below the table-top, and the rotatable element having lever-arms extending through said aperture and projecting beyond the leg at both sides; links for connecting said lever-arms with the pedestal parts respectively, each link being pivotally attached to one of the parts which it is to connect, the other part having means for pivotally engaging the link; means for holding the links normally in position to be thus engaged upon the rotation of the rotatable element before the pedestal parts are closed; a lever at the upper end of said rotatable element extending under the table-top for rotating said element to effect the second pivotal connection of the links respectively, the two pivots of each link when the said second connection is effected before the pedestal is closed being out of line with the axis of the rotatable element, the pivot which is moved in such rotation being at the opposite side of the axis from the other pivot; whereby such rotation crowds the pedestal parts together.

7. In a pedestal extension-table, in combination with the two separable parts of the table and the pedestal parts pertaining thereto respectively; an element journaled in the center leg rotatable about a vertical axis, the leg being transaxially apertured at a substantial distance below the table-top and said rotatable element having lever-arms protruding from said aperture; links pivoted to the pedestal and adapted to engage said arms respectively, the point of such engagement of each link being at the opposite side of the pivot of the link from the axis of the rotatable element; and means for rotating said element to draw the pivots of the links to the pedestal parts toward the axis and close up said parts.

8. In a pedestal extension-table, in combination with the separable parts and the pedestal parts pertaining thereto respectively; an element mounted so as to be inclosed by the pedestal and rotatable about a vertical axis; links for connecting said rotatable element with the pedestal parts respectively at a substantial distance below the table-top, each link being pivoted to the one of the two parts which it is to connect, the other part having means for pivotally engaging it; means for holding the links normally yieldingly in position to be thus engaged upon the rotation of the rotatable element before the pedestal parts are closed, to effect the second pivotal connection of the links, the two pivots of each link when thus connected being out of line with the axis of the rotatable element, the pivot which is moved in such rotation being at the opposite side of the axis from the other pivot; whereby the rotation in direction to bring the pivots in line forces the pedestal

parts together, the parts being adapted for such rotation until the line of the moving pivot passes the line from the axis to the other pivot, and a stop to arrest the movement after the line is passed; and means for rotating said rotatable element at will to and from said stopped position.

9. In a pedestal extension-table, in combination with the separable parts and the pedestal parts pertaining thereto respectively; an element journaled in the center leg and rotatable about a vertical axis, having at the upper end a lever-arm extending horizontally under the table-top for rotating said element through a limited angle; projections from said element at a substantial distance below the table-top extending out through the center leg, the latter being apertured for the purpose; links pivoted to the pedestal parts respectively adapted for pivotal engagement at their free ends with said projections respectively as the latter rotate about said vertical axis; springs holding said links yieldingly in position trending from their pivots on the pedestal parts toward the projections which are to engage them respectively in a direction outward from the axis of rotation and oblique to the radius from said axis to the link-pivot; whereby continued rotation of the rotatable part after effecting pivotal engagement with the free end of the links forces the pedestal parts together.

10. In a pedestal extension-table in combination with the separable parts and the pedestal parts pertaining thereto respectively; an element suitably mounted to be inclosed in the pedestal rotatable about a vertical axis, and having at a substantial distance below the table-top horizontally-extending lever-arms; devices on the pedestal parts respectively in position for engagement with said lever-arms as they rotate, said arms and devices being provided with means for such engagement adapted to crowd the parts together as the engagement is perfected by the rotation.

11. In a pedestal extension-table, in combination with the separable parts and the pedestal parts pertaining thereto respectively; an element suitably mounted to be inclosed in the pedestal rotatable about a vertical axis, and having at a substantial distance below the table-top horizontally-projecting lever-arms; engaging devices for said lever-arms on the pedestal parts respectively, one of the parts in each such engagement being hooked, and the other being adapted to be engaged by the hook as the lever-arm rotates, said engaging parts being adapted to crowd the pedestal parts together as the hook completes its engagement.

12. In a pedestal extension-table, in combination with the separable parts and the pedestal parts respectively; a shaft journaled in the center leg and having lever-arms protruding therefrom at a substantial distance below the table-top; devices on the pedestal



parts respectively adapted for engagement  
with the lever-arms as the shaft rotates, said  
shaft protruding from the upper end of the  
leg, and means connected to it at the upper  
5 end for giving it rotary movement through a  
limited angle, said means comprising a han-  
dle extending off toward the edge of the table  
under the table-top.

In testimony whereof I have hereunto set  
my hand, in the presence of two witnesses, 10  
at Chicago, Illinois, this 12th day of February,  
1902.

EMIL TYDEN.

In presence of—  
CHAS. S. BURTON,  
H. J. ADAMS.