

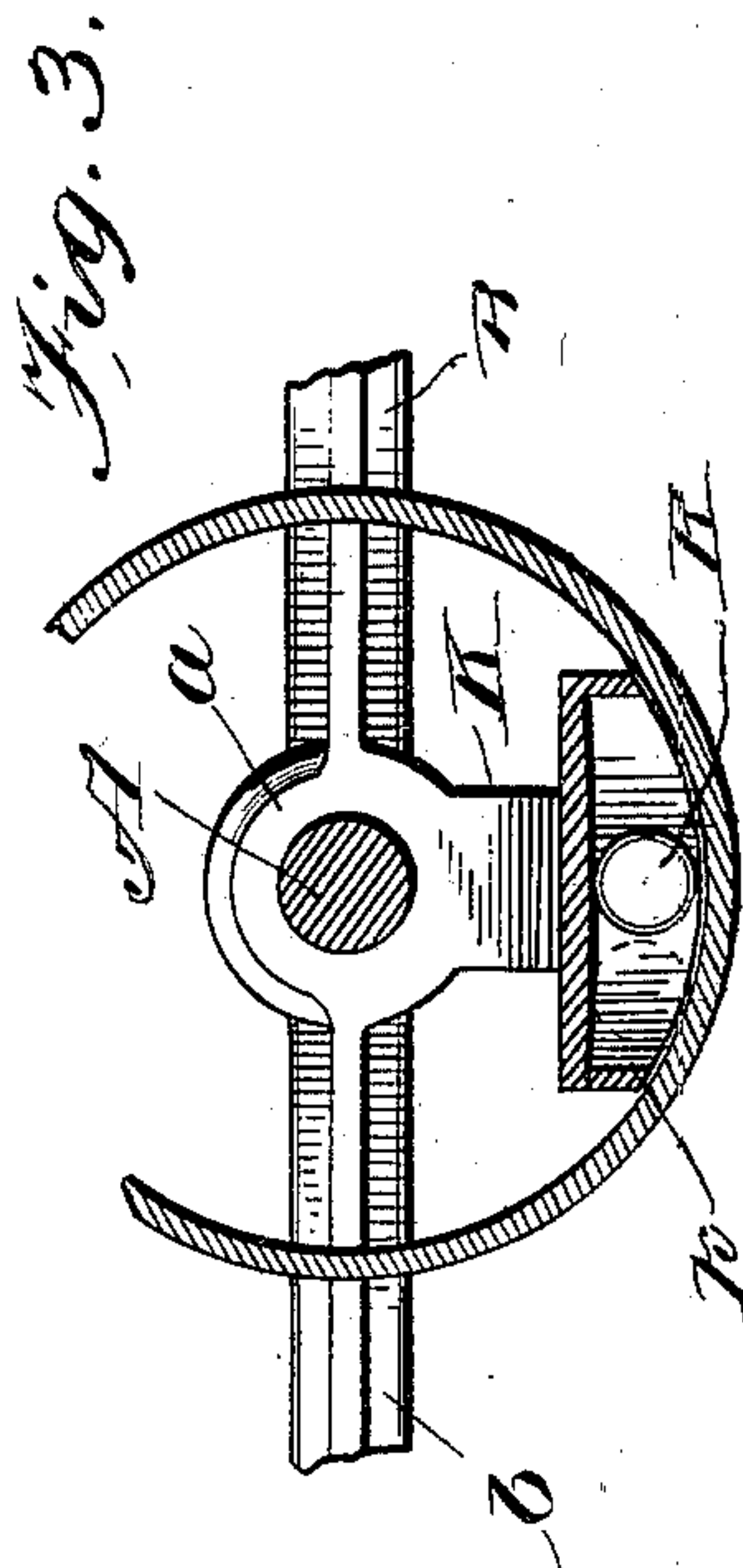
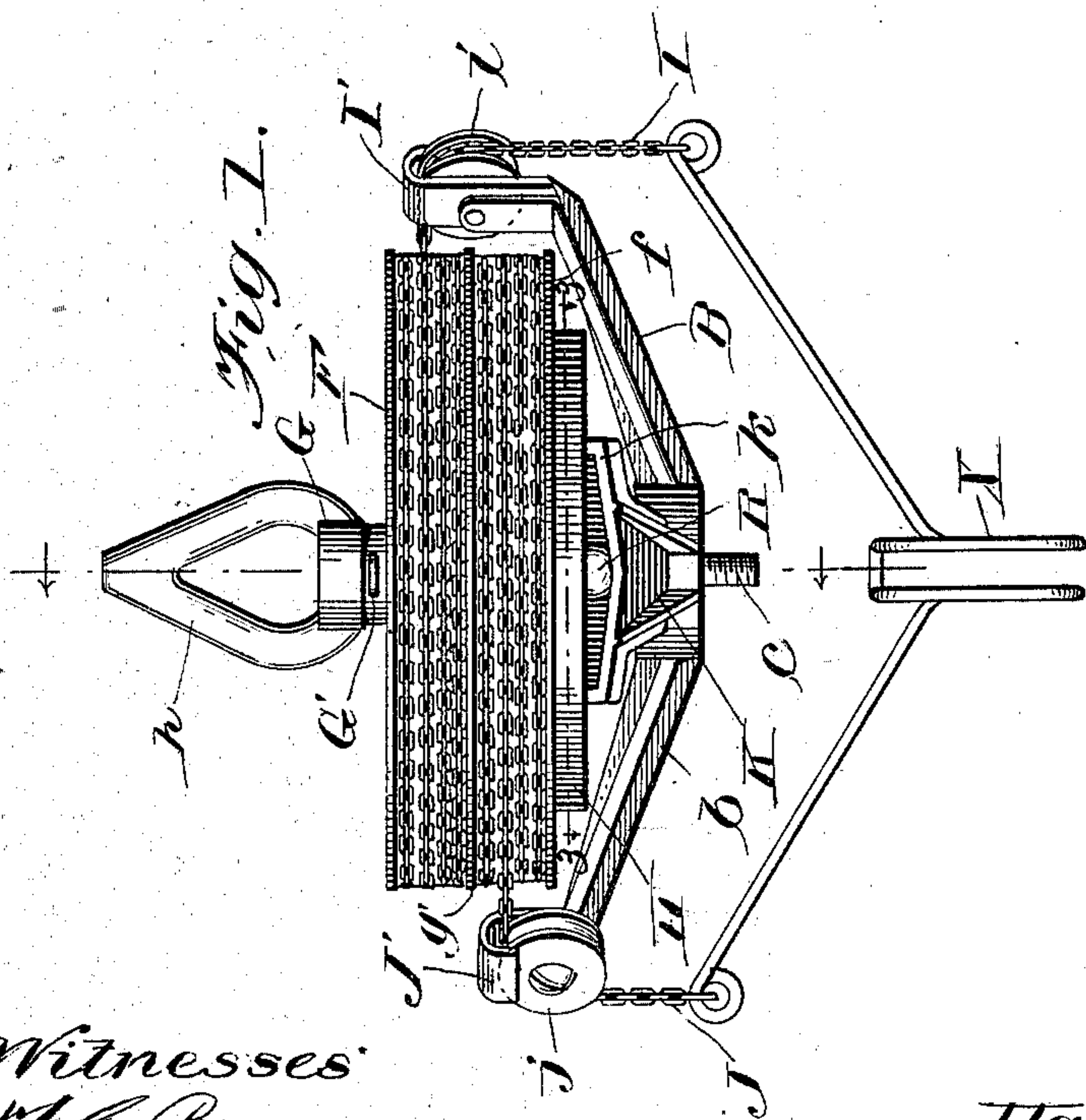
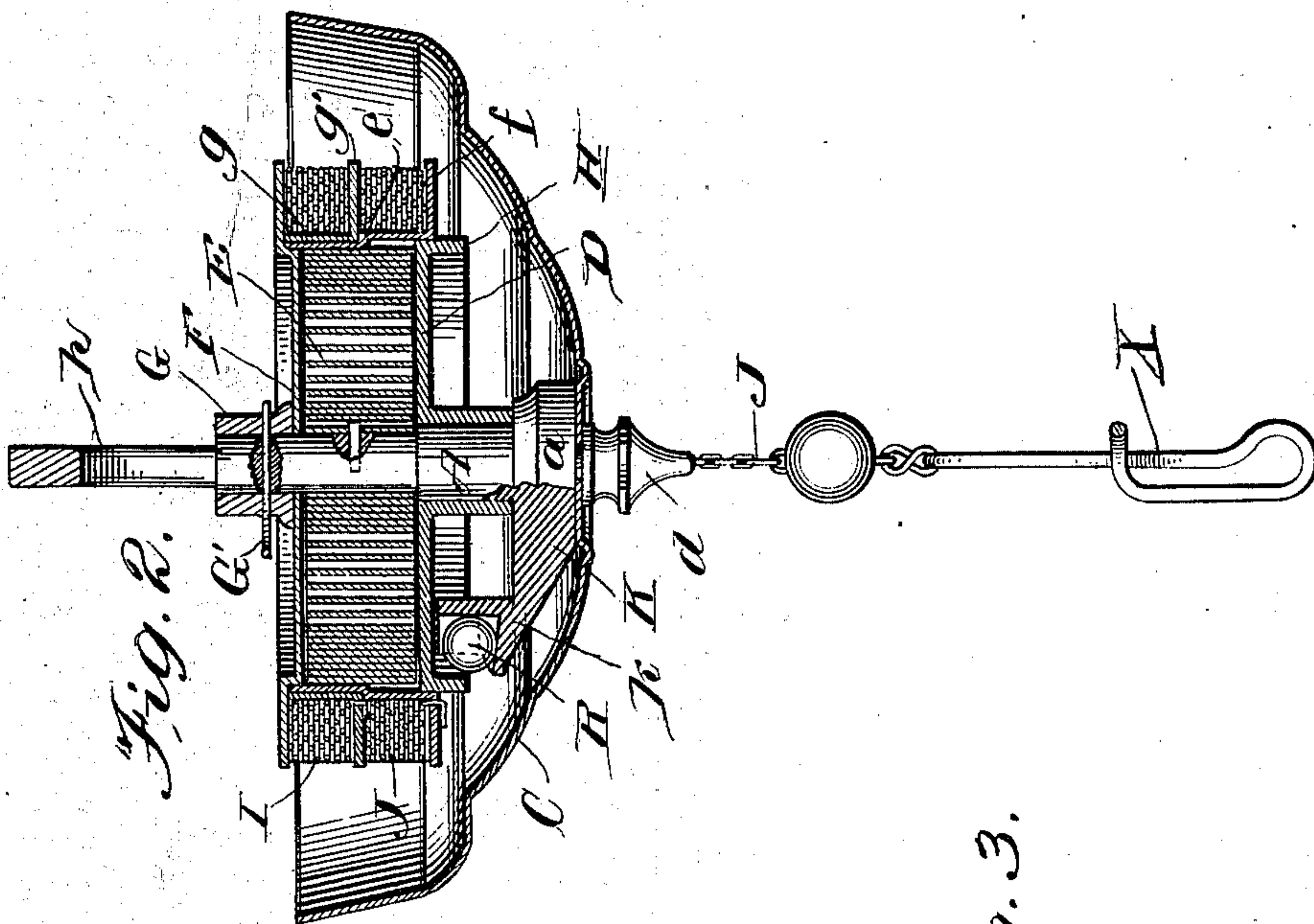
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PATENTED JULY 7, 1903.

H. S. BURLEY.
ADJUSTABLE EXTENSION HANGER.

APPLICATION FILED APR. 24, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

HARRY S. BURLEY, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
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ADJUSTABLE EXTENSION-HANGER.

SPECIFICATION forming part of Letters Patent No. 733,003, dated July 7, 1903.

Application filed April 24, 1903. Serial No. 154,043. (No model.)

To all whom it may concern:

Be it known that I, HARRY S. BURLEY, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Adjustable Extension-Hangers, of which the following is a full, clear, and exact description.

The object of my invention is to provide a simple, economically-constructed, and perfect-operating adjustable extension-hanger for lamps, bird-cages, flower-baskets, &c., one of the principal features of which is that it can be locked by tilting the canopy thereof in the proper direction either against the winding up of the suspending-chains or the further paying out of the same or left unlocked, so as to leave the weight suspended therefrom free to be counterbalanced by the tension of the spring of the chain-rewinding devices. This I accomplish by the means hereinafter fully described, and as particularly pointed out in the claims.

In the drawings, Figure 1 is a side view of my invention with the lower depending portions of the suspending-chains and with the canopy thereof removed. Fig. 2 is a vertical central section of said invention, taken on dotted line 2 2, Fig. 1, looking in the direction indicated by the arrows. Fig. 3 is a horizontal section thereof, taken on dotted line 3 3, Fig. 1, looking in the direction of the arrows, showing part of the annular flange through which it strikes and the sheave-carrying arms broken away.

Referring to the drawings, A represents a vertical spindle, the body of which is cylindrical and the lower end of which merges into and has made integral therewith a boss *a* of greater diameter, which has two arms *b* B projecting therefrom in diametrically opposite directions. Extending downward from this boss is a short screw-threaded stud *c*, which aligns with the body of the spindle and extends down through a central opening in a suitably-shaped canopy C, which latter is secured thereto and held in place, substantially as shown in Fig. 3, by a suitable nut *d*. The portion of the spindle immediately above the boss *a* is slightly greater in diameter than

the remainder of the length thereof above the same, and has journaled thereon the hub of the lower circular plate D of the drum, upon which the suspending-chains of my invention are wound. This drum comprises a circular hollow shell having an interior chamber, in which a coil contraction-spring E is placed, and this spring is wound around the portion of the spindle within said chamber and has its inner end secured thereto in any suitable manner. The outer end of spring E is suitably secured to the circumferential sides or shell of the drum, and the normal tendency of this spring when the chain unwinds from the drum is to rewind itself upon said spindle.

The drum just referred to for convenience and economy of manufacture comprises several parts and includes, besides the plate D, an annular shell *e* of a width corresponding to that of the periphery of the drum, which it assists in forming, and is provided with a circumferential flange *f*, projecting outwardly from its lower side edge that fits tightly over and is secured to the circumference of plate D. The upper half of the width of this shell *e* is stepped to a slightly less diameter than its lower half, and seated in the circumferential depression so made is a sleeve *g*, which is of such width that its upper edge is in the same horizontal plane as the upper edge of the shell *e*. The lower edge of this sleeve *g* rests against the shoulder formed by thus decreasing the diameter of the upper portion of shell *e* and has an outwardly-projecting flange *g'*, the circumference of the outer edge of which is the same as that of flange *f*. The upper side of the drum is provided with a circular head F, the diameter of which is the same as flanges *f* and *g'*, and the central portion of which is depressed so as to fit snugly within the inner circumference of the upper end of the shell *e*. The parts of the drum after they are assembled are held in position by a collar G, secured to the upper end of the spindle A, extending above the head F by means of a transaxial pin G'. Secured to and extending up from the sides of the collar G is a loop *h* of suitable design, by means of which the hanger is suspended from the ceiling.

ing or other means of support. The drum thus constructed has two peripheral channels, the lower of which is between the flanges *f* and *g'* and the upper of which is between the flange *g'* and the head *F*. A chain *I* is wound around the drum in the upper channel thereof and extends laterally therefrom over and around a concave sheave *i* and then downward through a suitable opening in the canopy, and a similar chain *J* is wound around the drum in the lower channel in the same direction as chain *I* and extends laterally therefrom in a direction opposite to that in which chain *I* extends to and around a concave sheave *j* and then down through a suitable opening in the canopy diametrically opposite chain *I*. Sheave *i* is journaled in a suitable manner to the upturned end of the arm *B*, projecting from the boss *a* of the spindle, and sheave *j* is journaled in like manner to the end of the arm *b* of said boss, and the chains are prevented from riding over the edges of the concave circumference of these sheaves by inverted-J-shaped guards *I' J'*. The lower ends of the chains *I* and *J* are connected in any suitable manner to a cross bar or frame *X*, upon a suitable hook at the center of length of which the object to be suspended is attached in any suitable manner.

Projecting down from the circumferential edge of plate *D* is an annular flange *H*, the inner circumference of which is preferably parallel to the axis of the spindle *A*. Now projecting from the boss *a* of the spindle, preferably at right angles to arms *b* and *B*, is a bracket *K*, the outer end of which supports and has preferably made integral therewith a transverse runway *k*. This runway comprises a platform or floor which inclines from its ends to its center of length and a straight vertical wall *k*, arising from the edge of this floor farthest from the inner circumference of the flange *H*, and suitable end walls. This runway is located adjacent to and just inside of the circumference of the flange *H* in such manner that a ball *R* of substantially the diameter shown when placed in said runway and not otherwise engaged will, when the canopy is in a horizontal position, rest in the dip of said platform at its center of length. When, however, the canopy is inclined to one side or to the other, the ball *R* will roll toward the end of the runway toward which the canopy is inclined and wedge between the straight vertical wall of said runway and the inner circumference of the flange *H*. When the canopy is inclined in one direction, the ball *R* will lock the drum, so as to prevent the paying out of the chains *I* and *J* and the consequent lowering of the lamp or other object supported thereby, and when the canopy is inclined in the opposite direction the ball will lock said drum, so as to prevent its revolution in such direction as to wind up chains *I* and *J* and raise the object suspended thereby.

When the drum is locked to prevent the re-winding of the chains, a slight pulling down upon said chains will cause the drum to revolve in such direction as to release ball *R* and unlock the drum, so that it will be free to revolve in either direction, and when the drum is locked so as to prevent the unwinding of the suspending-chains therefrom it can be unlocked by lifting the suspended object slightly. In either case when released the ball *R* will gravitate to the center of length of the runway *k* and in this position will be out of engagement with the drum and leave the drum free to either wind or unwind the suspending-chains according as desired.

It will be noticed that as a result of the construction of the locking devices of my invention the strain upon the parts thereof will be in a plane radial to the axis of the spindle *A* and that in consequence there will not be a tendency to force the drum upward and spring the same or force the bracket *K* downward away from it. I do not, however, desire to be understood as limiting myself to the engagement of the ball *R* against the flange *H*, because, if desired, its engagement with the bottom of the plate *D* could be provided for even though not so desirable.

What I claim as new is—

1. An extension-hanger comprising a horizontally-rotatable drum; suspending-chains wound thereon; and gravity-controlled means, movable horizontally in either direction from its plane of rest to lock said drum against further revolution in the same direction.

2. An extension-hanger comprising a horizontally-rotatable drum; suspending-chains wound thereon; and gravity-controlled means engaging the under side of said drum and movable horizontally in either direction from its plane of rest to lock said drum against further revolution in the same direction.

3. An extension-hanger comprising a horizontally-rotatable drum; suspending-chains wound thereon; and a lock comprising a ball adjacent to the under side of said drum having a limited horizontal movement in either direction from its plane of rest which at the extremes of its movement locks said drum against further revolution in the direction of the extreme nearest which it approaches.

4. An extension-hanger comprising a horizontally-rotatable drum; suspending-chains wound thereon; and a lock comprising a horizontal runway adjacent to the under side of said drum, and a ball having a limited longitudinal movement in said runway, and adapted to wedge against and lock said drum against further revolution when at the extreme of its movement in either direction therein.

5. An extension-hanger comprising a horizontally-rotatable drum; suspending-chains wound thereon; and a lock comprising a horizontal runway, the floor of which is inclined from its ends toward its center of length, adjacent to the under side of said drum, and a

ball having a limited longitudinal movement in said runway, and adapted to wedge against and lock said drum against further revolution when at the extreme of its movement in either direction therein.

6. An extension-hanger comprising a horizontally-rotatable drum, having a concentric annular flange projecting down from its under surface; suspending-chains wound thereon; gravity-controlled means movable horizontally in either direction adjacent to and within the inner circumference of said flange from its plane of rest to engage the inner circumference of said flange and lock said drum against further revolution toward the extreme near which said means are located.

7. An extension-hanger comprising a horizontally-rotatable drum having a concentric annular flange projecting down from its under surface the inner circumference of which is parallel to the axis of said drum; suspending-chains wound thereon; and gravity-controlled means adjacent to and within the circumference of said flange and movable horizontally in either direction from its plane of rest to engage the inner circumference of said flange and lock said drum against further revolution in the direction nearest which said means are located.

8. An extension-hanger comprising a horizontally-rotatable drum having a concentric annular flange projecting down from its under surface; suspending-chains wound thereon; and a lock comprising a ball located adjacent to and movable in a straight line within the circumference of said flange and having a limited horizontal movement in either direction from its plane of rest and locking said drum against further revolution when at the extremes of its movement.

9. An extension-hanger comprising a horizontally-rotatable drum having a concentric annular flange projecting down from its under surface; suspending-chains wound thereon; and a clutch comprising a suitable horizontal runway located adjacent to and within the circumference of said annular flange the side of which adjacent to the inner circumference of said flange being open, and a ball having a limited longitudinal movement in said runway, and adapted to wedge against and lock said drum against further revolution when at the extremes of its movement in either direction therefrom.

10. An extension-hanger comprising a horizontally-rotatable drum having a concentric annular flange projecting down from its under surface; suspending-chains wound thereon; and a clutch comprising a suitable horizontal runway, the floor of which is inclined from its ends toward its center of length, located adjacent to and within the circumference of said annular flange the side of which adjacent to the inner circumference of said flange being open, and a ball having a limited longitudinal movement in said runway,

and adapted to wedge against and lock said drum against further revolution when at the extremes of its movement in either direction therefrom.

11. An extension-hanger comprising a horizontally-rotatable drum having a concentric annular flange projecting down from its under surface; suspending-chains wound thereon; and a clutch comprising a suitable horizontal runway, the floor of which is inclined from its ends toward its center of length and the vertical wall of which forms the side of said runway farthest from the inner circumference of said annular flange and is straight from end to end, located adjacent to and within the circumference of said annular flange the side of which adjacent to the inner circumference of said flange being open, and a ball having a limited longitudinal movement in said runway, and adapted to wedge against and lock said drum against further revolution when at the extremes of its movement in either direction therefrom.

12. An extension-hanger comprising a horizontally-rotatable drum consisting of a lower circular plate, a circumferential shell the lower edge of which is provided with an outwardly-projecting circumferential flange, a sleeve seated in the depressed outer circumference of the upper half of said shell whose lower edge is provided with an outwardly-projecting circumferential flange, and a head corresponding to the circumference of the flanges of said shell and sleeve fitted over the top of the same; a vertical spindle on which said drum is journaled; a coil-spring inclosed within said drum having its inner end secured to said spindle and its outer end to said circumferential shell; and gravity-controlled means movable horizontally in either direction from its plane of rest and engaging the underside of said drum when at the extremes of its movement to lock the same against further revolution.

13. An extension-hanger comprising a horizontally-rotatable drum consisting of a lower circular plate having a downwardly-projecting concentric annular flange, a circumferential shell the lower edge of which is provided with an outwardly-projecting circumferential flange, a sleeve seated in the depressed outer circumference of the upper half of said shell whose lower edge is provided with an outwardly-projecting circumferential flange, and a head corresponding to the circumference of the flanges of said shell and sleeve fitted over the top of the same; a vertical spindle on which said drum is journaled; a coil-spring inclosed within said drum having its inner end secured to said spindle and its outer end to said circumferential shell; and a lock comprising a ball adjacent to and having a movement in a straight line within the circumference of the same which is adapted to move in either direction from its plane of rest and engage and lock said drum against further

revolution when at the extremes of its movement.

14. An extension-hanger comprising a horizontally-rotatable drum consisting of a lower
5 circular plate having a downwardly-projecting concentric annular flange, a circumferential shell the lower edge of which is provided with an outwardly-projecting circumferential
10 flange, a sleeve seated in the depressed outer circumference of the upper half of said shell whose lower edge is provided with an outwardly-projecting circumferential flange, and
15 a head corresponding to the circumference of the flanges of said shell and sleeve fitted over the top of the same; a vertical spindle on which said drum is journaled; a coil-spring inclosed within said drum having its inner
20 end secured to said spindle and its outer end to said circumferential shell; and a lock comprising a suitable horizontal runway adjacent to the under side of said drum and within the circumference of said annular flange, and
25 a ball having a limited longitudinal movement in said runway and adapted to wedge against and lock said drum against further revolution when at the extremes of its movement.

15. An extension-hanger comprising a horizontally-rotatable drum consisting of a lower
30 circular plate having a downwardly-projecting concentric annular flange, a circumferential shell the lower edge of which is provided with an outwardly-projecting circumferential flange, a sleeve seated in the depressed
35 outer circumference of the upper half of said shell whose lower edge is provided with an outwardly-projecting circumferential flange, and a head corresponding to the circumference of the flanges of said shell and
40 sleeve fitted over the top of the same; a vertical spindle on which said drum is journaled; a coil-spring inclosed within said drum having its inner end secured to said spindle and its outer end to said circumferential shell;
45 and a lock comprising a suitable horizontal runway, the floor of which is inclined from its ends toward its center of length, adjacent to the under side of said drum and within the circumference of said annular flange, and a
50 ball having a limited longitudinal movement in said runway and adapted to wedge against and lock said drum against further revolution when at the extremes of its movement.

16. An extension-hanger comprising a horizontally-rotatable drum consisting of a lower
55 circular plate having a downwardly-projecting concentric annular flange, a circumferential shell the lower edge of which is provided with an outwardly-projecting circumferential flange, a sleeve seated in the depressed
60 outer circumference of the upper half of said shell whose lower edge is provided with an outwardly-projecting circumferential flange, and a head corresponding to the circumference of the flanges of said shell
65 and sleeve fitted over the top of the same; a vertical spindle on which said drum is journaled; a coil-spring inclosed within said drum having its inner end secured to said spindle and its outer end to said circumferential
70 shell; and a lock comprising a suitable horizontal runway, the floor of which is inclined from its ends toward its center of length and the longitudinal wall of which farthest from said annular flange being
75 straight from end to end, adjacent to the under side of said drum and within the circumference of said annular flange, and a ball having a limited longitudinal movement in said runway and adapted to wedge against
80 and lock said drum against further revolution when at the extremes of its movement.

17. An extension-hanger comprising a vertical spindle having an enlarged boss on its
85 lower end; arms projecting therefrom diametrically opposite each other; sheaves journaled to the extremes of said arm; a bracket projecting radially from said boss at right angles to said arms; a horizontal transverse
90 runway carried on the outer end of said bracket; an automatically-returnable drum journaled on said spindle above said boss the under side of which has a concentric annular flange projecting downward therefrom
95 and a ball having a limited longitudinal movement in said runway and adapted to engage the inner circumference of said flange and lock said drum when at the extremes of its movement.

In testimony whereof I have hereunto set
my hand this 17th day of April, 1903.

HARRY S. BURLEY.

Witnesses:

BLAIR A. ESTEP,

FRANK D. THOMASON.