

No. 685,856.

Patented Nov. 5, 1901.

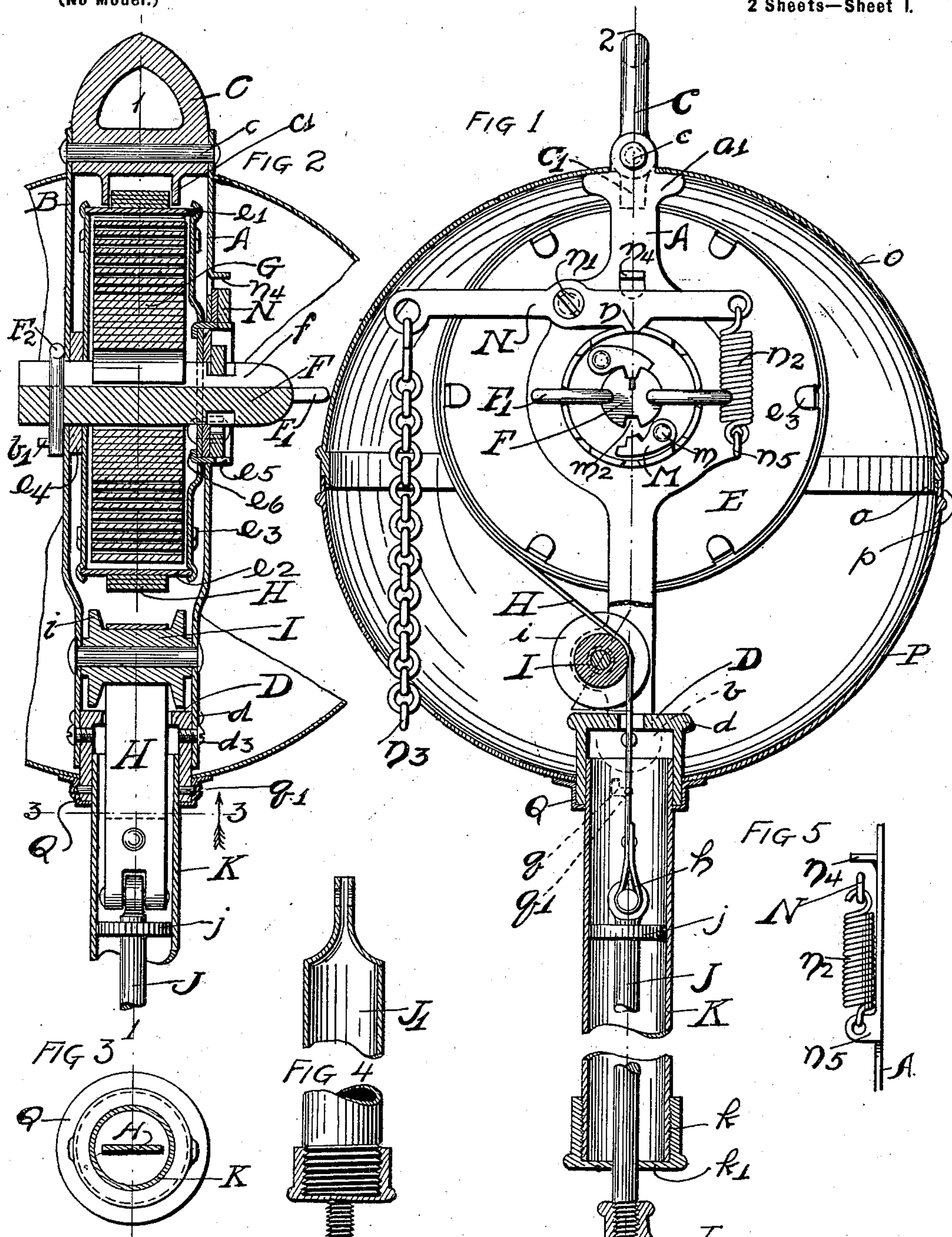
V. A. MENUEZ.

DROP LIGHT.

(Application filed Nov. 1, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES

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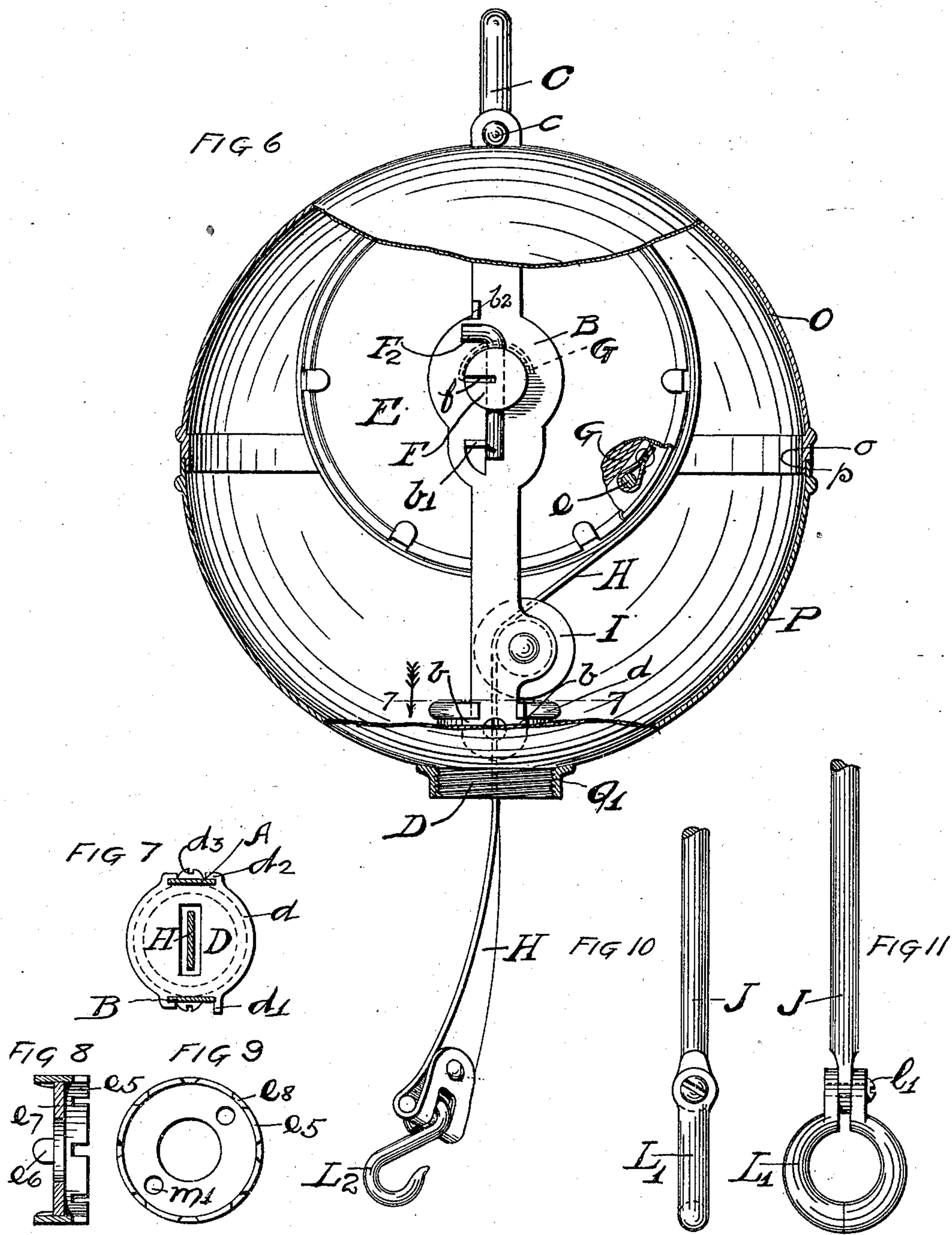
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WITNESSES

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UNITED STATES PATENT OFFICE.

VINCENT A. MENUEZ, OF MEMPHIS, TENNESSEE.

DROP-LIGHT.

SPECIFICATION forming part of Letters Patent No. 685,856, dated November 5, 1901.

Application filed November 1, 1900. Serial No. 35,155. (No model.)

To all whom it may concern:

Be it known that I, VINCENT A. MENUEZ, a citizen of the United States, residing at Memphis, Shelby county, State of Tennessee, have invented certain new and useful Improvements in Drop-Lights, of which the following is a specification.

My invention relates to certain new and useful improvements in drop extensions for hanging lamps, and more especially to that class of extensions which are made detachable from the lamp and which depend upon the tension of a spring to counterbalance the weight of the lamp.

My invention has for its object to provide an improved drop of neat and compact shape that may be readily raised and lowered and set to any height in a convenient manner.

It consists of the novel combination and arrangement of parts, as hereinafter set forth in the specification, drawings, and claims.

In the drawings, Figure 1 is a sectional elevation of the extension, taken on the center line with covering-globe and guide-pipe in section. Fig. 2 is a sectional elevation on the line 2 2 of Fig. 1. Fig. 3 is a cross-section on the line 3 3 of Fig. 2, taken in the direction of the arrow and showing the holding-cap twisted so that it may be removed. Fig. 4 is a detail of a modification. Fig. 5 is a detail. Fig. 6 is a sectional elevation showing back of extension with covering-globe partially in section. Fig. 7 is a section on the line 7 7 of Fig. 6 looking in the direction of the arrow. Figs. 8, 9, 10, and 11 are details.

Referring now to the drawings, in which like parts are indicated by the same or like letters in all the views, the extension consists of a metal frame made up of similarly-situated pieces A and B, held together at their upper ends by a piece C, formed with an eye, as shown, or a hook for fastening it to a support, a rivet *c* being passed through the three pieces to hold them together. The lower end of these pieces A' and B have shoulders *b*, which shoulders catch under a collar *d* on the thimble D. By referring to Fig. 7 it will be seen that this collar *d* is non-continuous in that it is cut away to form flat surfaces for the frame-pieces A and B to rest against and has lugs *d'* extending outward therefrom. These lugs are bent over after the frame-

pieces A and B are in place, taking then the positions *d*² and securely holding the frame-pieces in their places. As an additional security, however, round-head screws *d*³ are inserted to hold the said frame-pieces A and B. Journaled in these frame-pieces a short distance above the center of same is a drum which turns freely on a central shaft or bearing F, to which bearing, however, it is connected by a flat spring G, one end of which is inserted in a slot *f*, cut for convenience the entire length of the shaft F, the other being fastened to the drum E by a rivet *e* or like convenient means.

The supporting chain or strap H is wound around the outside of the drum E and passes thence around a roller I, also journaled in the frame-pieces A and B, but near the lower end of these pieces and sufficiently out of the center to bring the center line of the chain or strap H into the center of the fixture. It passes from the roller I downward and terminates in a loop *h*, to which is fastened a guided rod J, having a collar *j* thereon fitting close on the inside of a guiding-tube K. The rod J is guided at the lower end by a thimble *k*, which fits close around it. L is a hook for the lower end of the rod to support the lamp. Figs. 10 and 11 show a modified form in which a loop or ring L' is substituted for the hook L. The lower end of the rod J is flattened, and this ring secured by a screw *l*, though it is obvious that the threaded shank shown on the rod J or any other well-known means may be used for this purpose.

The tube K is fastened in the thimble D by brazing or screwed in, as desired, to form the guide, as above mentioned.

Fig. 6 shows a modification of the extension in which the guiding-tube K and the rod J are omitted, the strap H in this case having a hook L² fastened in the loop *h* instead of the end of the rod J.

Fig. 4 illustrates a modified form, in which a pipe J' is substituted for the rod J. This pipe J is made of such size that it fits and moves easily in the guide K. In this case the bottom *k'* of the thimble K is cut out to the same size as the tube K.

The tension of the spring G, which winds up the strap H, is regulated by turning the shaft F by means of the wings F'. To do this,

the pin F^2 is removed and the spring wound up. The pin F^2 is then replaced and allowed to seat against the lug b' on the frame-piece B.

- 5 The lugs b' and b^2 are struck up from the piece B, the lug b' to hold the pin F^2 from rotating and the lug b^2 to prevent its removal when the tension is on.

Referring now to the drum E, it will be
10 seen that the same consists of two circular disks E, having circular grooves e' around the edges of same, into which grooves is fitted a band of sheet metal e^2 , which has tongues e^3 , which extend through cuts in the disks E and
15 are bent over to hold the drum together. The disks E have holes punched out of their centers to make them fit the shaft F. A washer e^4 separates the drum from the frame-piece B, while on the opposite side the disk
20 E is dished to come against the frame-piece A and has a cylindrical dog-plate e^5 (see Fig. 8) fastened to it by means of ears e^6 , which ears are inserted through holes in the disk E made for the purpose and are bent over to
25 hold the dog-plate e^5 in place. Within this dog-plate e^5 is a washer e^7 , also closely fitting the shaft F, and to this washer and the disk E dogs M are fastened by means of rivets m , which pass through the holes m' . (Shown in
30 Fig. 9.) Notches m^2 are cut in the shaft F, into which notches the dogs M fall by gravity when the extension is raised slowly and from which notches they are held by centrifugal force when same is raised rapidly. These
35 dogs are of such pattern that they do not offer resistance to downward pull, but prevent the spring G from raising the extension except at a speed sufficient to keep the dogs out of the notches m^2 . In addition to this I provide a
40 positive stop, consisting of a lever N, having a lug n thereon, which lug catches in notches e^8 in the dog-plate e^5 . This lever N is pivoted at n' and is held down and the lug n kept in place by a spring n^2 . As in the case of the
45 centrifugal dogs, this lug n is of such shape as not to prevent the downward movement of the extension, but provides a positive stop against raising unless the said lug n be held out of the notches e^8 , which may be done by
50 means of the chain n^3 . n^4 is a lug to prevent excessive movement of the lever N when the chain n^3 is pulled.

The strap H is guided by flanges i on the roller I at the bottom and by ears c' , which
55 project downward from the piece C at the top. It is also evident that in addition the side disks E of the drum on which the strap winds may be extended to form flanges to prevent the side displacement of the strap H.

60 Over the entire mechanism as a finish I place a spun-brass ball composed of upper and lower halves O and P. The half O is supported by lugs a' (b' not shown) on the frame-pieces A and B, near their upper ends,
65 and has a male annular flange which fits within the lower half P. The said lower half is supported by a flange-collar Q, which is sup-

ported by a bayonet-slot q and pin q' . In Fig. 6 I show a modification in which a flange-collar Q' is screwed on the lower end of the
70 thimble D. The cover-ball O P is parted, and the shaft F is so placed that the removal of the half O will give access to the said shaft to increase or lessen the tension of the spring G.

To raise or lower the extension or lamp at-
75 tached thereto, the chain n^3 is pulled and the hook L pulled down to loosen the dogs M. The spring G is then allowed to lift the hook L rapidly until it comes to such place as is desired. The chain n^3 is then released and
80 the lug n allowed to engage one of the notches e^8 . To increase or lessen the tension of the spring G, remove the upper half of the ball O and catch the wings F' of the shaft F, rotate same to the right, and remove the pin
85 F^2 . When the desired tension is obtained, reinsert the pin F^2 and allow the shaft F to turn back till the pin seats against the lug b' .

Having thus fully described my invention, what I claim, and desire to secure by Letters
90 Patent of the United States, is—

1. In a drop-light, the combination with supporting means lamp-attaching means, a spring-actuated drum journaled on a central shaft, a supporting-frame carrying said shaft,
95 an annular extension from one end of said drum, having notches therein, a lever pivoted on said frame, a lug on said lever, a spring normally depressing said lever to cause the lug to engage one of the notches in the said
100 annular extension, lugs struck up from said frame to limit the motion of the lever and to permit attachment of the said spring, and a chain attached to the opposite end of the lever to raise the lug thereon out of engage-
105 ment with the said notches to permit the spring-drum to raise the lamp, all substantially as shown and described.

2. In a drop-light, the combination with supporting means, lamp-attaching means and
110 guiding means for same, a spring-actuated drum journaled on a central shaft, a supporting-frame carrying said shaft, an annular extension from one end of said drum having notches therein, a lever pivoted on said frame,
115 a lug on said lever, a spring normally depressing said lever to cause the said lug to engage one of the notches in the said annular extension, lugs struck up from said frame to limit the motion of the lever and to permit
120 attachment of the said spring, and a chain attached to the opposite end of the lever to raise the said lug thereon out of engagement with the said notches to permit the spring-drum to raise the lamp, all substantially as shown
125 and described.

3. In a drop-light, the combination with a supporting-frame, a spring-actuated drum journaled therein, lamp-attaching means, and
130 a flexible connector from said drum to said lamp-attaching means, of means of guiding the lower end of said lamp-attaching means comprising a thimble secured to the lower end of said frame, a tube fastened into said

thimble and depending therefrom, a thimble on the lower end of said tube and a rod passing through said lower thimble, said rod having the lamp-attaching hook thereon and having its upper end enlarged to loosely fit the inner part of said tube, all substantially as shown and described.

4. In a drop-light, the combination with a spring-actuated raising-drum, a central shaft on which said drum is pivoted, a flat strap having one end fastened to the periphery of said drum and the opposite end to lamp-attaching means, a frame comprising a supporting-loop, oppositely-disposed sides fastened thereto and depending therefrom, in which sides the drum-carrying shaft is pivoted, a guide-roller so located that it brings the strap passing thereover to the center line of said frame, a thimble connecting the lower ends of said opposite sides, said thimble having a dependent guide for the end of said strap, and lamp-attaching means, of lugs projecting from said frames near their upper ends, a flange-collar on said thimble, and a hollow sphere supported by said lugs and collar and inclosing the said frame and drum, all substantially as shown and described.

5. In a drop-light, the combination with a spring-actuated raising-drum, a central shaft on which said drum is pivoted, a flat strap having one end fastened to the periphery of said drum and the opposite end to lamp-attaching means, a frame comprising a supporting-loop, oppositely-disposed sides fastened thereto and depending therefrom, in which sides the drum-carrying shaft is pivoted, a guide-roller so located that it brings the strap passing thereover to the center line of said frame, a thimble connecting the lower ends of said opposite sides, said thimble having dependent guides for the end of said strap, and lamp-attaching means, of lugs projecting from said sides near their upper ends, a flange-collar on said thimble, and a hollow sphere supported by said lugs and collar and inclosing the said frame and drum, said sphere being split substantially along its center line and so held by the said lugs and collar that the upper half may be removed, and when so removed shall permit access to the drum, all substantially as shown and described.

6. In a lamp extension, the combination with a spring-actuated raising-drum, a central shaft on which said drum is pivoted and a flat strap having one end fastened to the periphery of said drum and the opposite end to lamp-attaching means, of a frame supporting said drum and guiding said strap, said frame comprising a supporting-loop, oppositely-disposed sides fastened thereto and depending therefrom, in which sides the drum-carrying shaft is pivoted, a guide-roller so located that it brings the strap passing thereover to the center line of said frame and a thimble connecting the lower ends of said opposite sides, said thimble having a dependent guide for the end of said strap and the lamp-

attaching means, all substantially as shown and described.

7. In a lamp extension, the combination with a spring-actuated raising-drum, a central shaft on which said drum is pivoted and a flat strap having one end fastened to the periphery of said drum and the opposite end to lamp-attaching means, of a frame supporting said drum and guiding said strap, said frame comprising a supporting-loop with ears projecting downward therefrom to guide the strap at the highest point of said drum, oppositely-disposed sides fastened thereto and depending therefrom, in which sides the drum-carrying shaft is pivoted, a guide-roller, so located that it brings the strap passing thereover to the center line of said frame, and a thimble connecting the lower ends of said opposite sides, said thimble having a dependent guide for the end of said strap and the lamp-attaching means, all substantially as shown and described.

8. In a lamp extension, the combination with a spring-actuated raising-drum, a central shaft on which said drum is pivoted and a flat strap having one end fastened to the periphery of said drum and the opposite end to lamp-attaching means, of a frame supporting said drum and guiding said strap, said frame comprising a supporting-loop, oppositely-disposed sides fastened thereto and depending therefrom, in which sides the drum-carrying shaft is pivoted, a guide-roller, so located that it brings the strap passing thereover to the center line of said frame, and a thimble connecting the lower ends of said opposite sides, a tube fastened into said thimble and depending therefrom, a thimble on the lower end of said tube and a rod passing through said lower thimble, said rod having the lamp-attaching hook thereon and having its upper end enlarged to loosely fit the inner part of said tube, all substantially as shown and described.

9. In a lamp extension, the combination with a spring-actuated raising-drum, a central shaft on which said drum is pivoted and a flat strap having one end fastened to the periphery of said drum and the opposite end to lamp-attaching means, of a frame supporting said drum and guiding said strap, said frame comprising a supporting-loop, oppositely-disposed sides fastened thereto and depending therefrom, in which sides the drum-carrying shaft is pivoted, a guide-roller, so located that it brings the strap passing thereover to the center line of said frame, and a thimble connecting the lower ends of said opposite sides, a rigid guide dependent from the said thimble and a rod, with lamp-attaching hook thereon, slidably mounted within said guide, all substantially as and for the purposes set forth.

10. In a lamp extension, the combination with a spring-actuated raising-drum, a central shaft on which said drum is pivoted and a flat strap having one end fastened to the

periphery of said drum and the opposite end
to lamp-attaching means, of a frame support-
ing said drum and guiding said strap, said
frame comprising a supporting-loop, oppo-
5 sitely-disposed sides fastened thereto and de-
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carrying shaft is pivoted, a guide-roller, so
located that it brings the strap passing there-
over to the center line of said frame, and a
10 thimble connecting the lower ends of said op-
posite sides, a tube dependent from said thim-

ble to form a guide and a rod fitting the in-
ner surface of said tube and guided thereby,
said rod carrying the lamp-attaching means,
substantially as shown and described. 15

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

VINCENT A. MENUEZ.

Witnesses:

C. W. HEISKELL,
J. B. STANLEY.