May 27, 1952 J. E. PETRIE 2,598,596

ADJUSTABLE SUPPORT

Filed May 27, 1950

Fig. 1

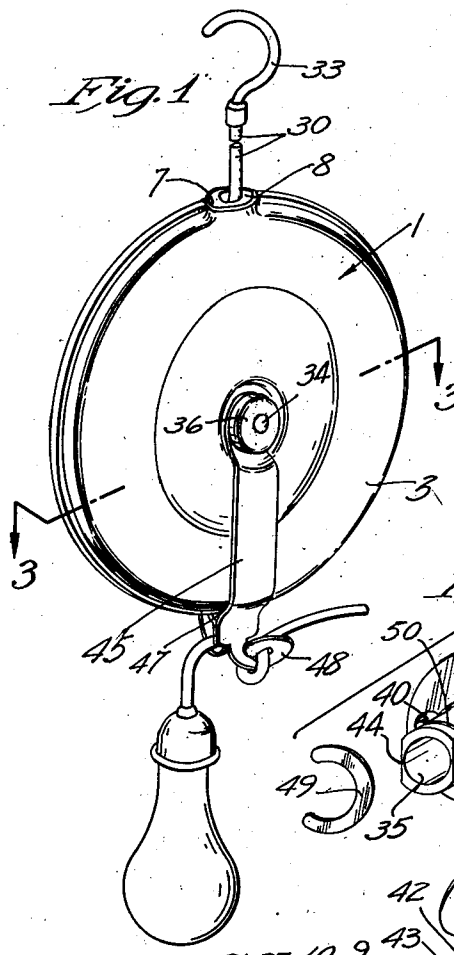


Fig. 2

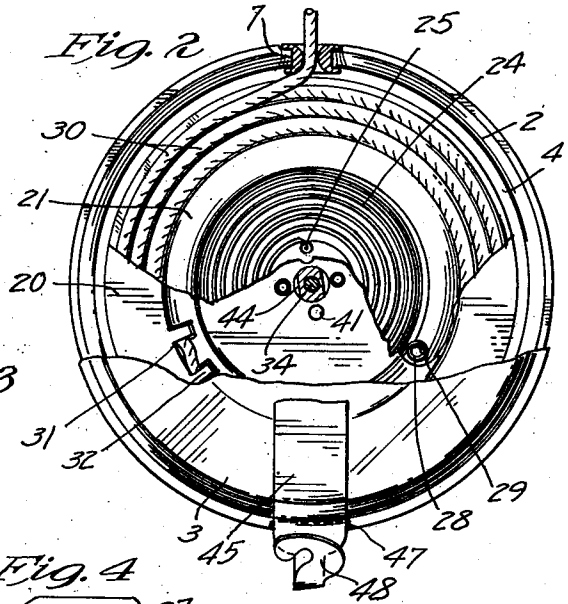


Fig. 4

Fig. 5

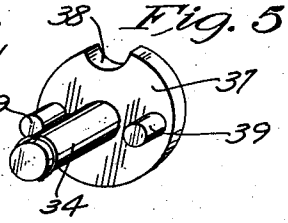


Fig. 3

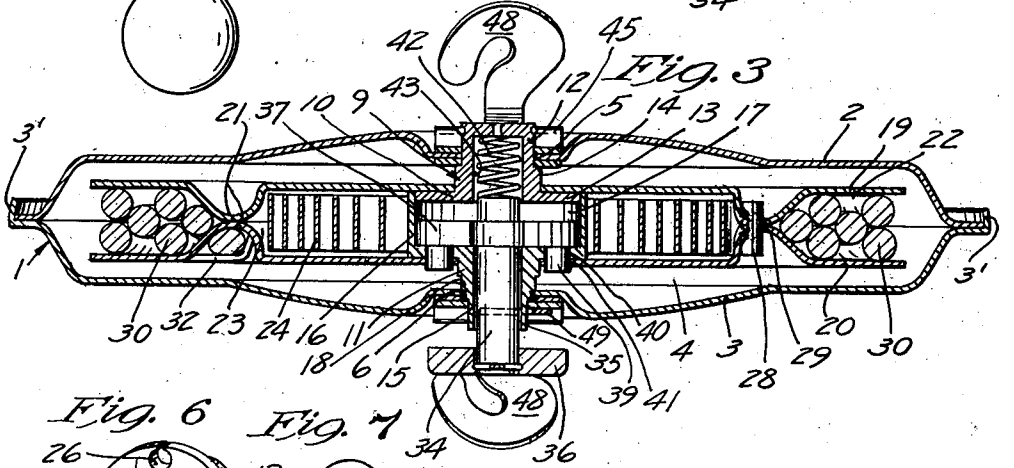


Fig. 6

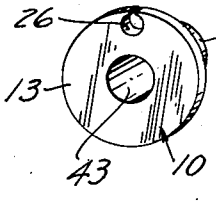
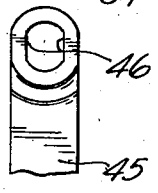


Fig. 7



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ADJUSTABLE SUPPORT

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1 Claim. (Cl. 242—107)

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My invention relates to improvements in adjustable supporting structures of the type utilized in vertically suspending articles at varying distances from the ground.

One common use of such adjustable suspending devices is in tailor shops or dry cleaning establishments, wherein it is desired to examine the article of clothing or other fabric goods after completion of a pressing, cleaning, or repairing operation, and without requiring stooping over by the examining personnel. Such establishments are frequently provided with a depending supporting eye or hook in the ceiling or the like, which is adapted to receive a hook on the upper end of my novel supporting structure. At its lower end, my novel structure is provided with a hook which is adapted to receive a hanger or the like. This arrangement makes it possible to examine any portion of the article of clothing or the like at the eye level of the examiner by mere adjustment of my novel support.

However, it is specifically understood that my novel structure has numerous other uses, such as the suspension of a cord-equipped electric light at a given distance from the ground.

The primary object of my invention is the provision of such a device, which is light in weight, inexpensive to manufacture, and durable in use.

A still further object of my invention is the provision of a device which is extremely easy to operate and which has a minimum of working parts.

The above and still further objects of my invention will become apparent from the following detailed specification, appended claim, and attached drawings.

Referring to the drawings, wherein like characters indicate like parts throughout the several views:

Fig. 1 is a perspective view of my novel structure, illustrating one of its many uses;

Fig. 2 is an enlarged view in side elevation, some parts being broken away and some parts shown in section;

Fig. 3 is an enlarged view in transverse section taken on the line 3—3 of Fig. 1;

Fig. 4 is an enlarged perspective view showing one of the hub-forming elements of my novel device and a lock ring utilized therewith;

Fig. 5 is an enlarged perspective view of the locking member adapted to be received within the hub-forming portion of Fig. 4;

Fig. 6 is an enlarged perspective view of another hub-forming portion of my novel structure; and

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Fig. 7 is an enlarged fragmentary view in side elevation of a portion of the hanger straps utilized in my novel structure.

Referring with greater particularity to the drawings, the numeral 1 indicates, in its entirety, a casing including a pair of dished abutting side plates 2 and 3 which are secured together at their peripheral edges in any well known manner such as by crimping the latter around the former, as shown particularly in Fig. 3, and there indicated by the numeral 3'. The side plates 2 and 3 define a circular chamber 4 which, in turn, is provided with aligned central openings 5 and 6 and a peripheral opening 7. As shown, the peripheral opening 7 is preferably provided with a rubber grommet or the like 8. A hub, identified in its entirety by the numeral 9, is made up of a pair of cooperating components 10 and 11. Hub-forming member 10 is shown as including a reduced cup-shaped central portion 12 which projects axially outwardly of the casing 1 through the central opening 5 therein, and an enlarged radially-projecting circular flange 13 within the casing. The flange 13 is maintained in spaced relation to the interior of the side plate 2 by engagement of the shoulders 14 on the reduced portion 12 with the side plate 2. Hub-forming element 11 includes a reduced portion 15, which projects axially outwardly through the opening 6 in the casing section 3, and a circumferentially-enlarged cup-shaped portion 16 within the chamber 4, which cooperates with the flange 13 to provide a cylindrical recess 17. Circumferentially-extended shoulder 18 on the reduced portion 15 maintains the enlarged portion 16 in laterally-spaced relation to the side plate 3.

A pair of axially-spaced annular flanges 19 and 20 are rotatably received on the reduced portions 12 and 15 respectively within the circular chamber 4. It will be noted that flanges 19 and 20, at their intermediate portions, are provided with opposed circumferentially-extended abutments 21, which, when suitably secured together by welding or the like, cooperate with the flanges 19 and 20 to provide an outwardly-opening spool 22 and an annular compartment 23 radially-inwardly of the abutments 21. A torsion spring 24 within the annular compartment 23 has its tightly-wound inner end 25 snugly received within peripherally-slotted openings 26 and 27 in the hub-forming members 10 and 11 respectively, and its tightly-wound outer end 28 received in a transversely-extended opening 29. A flexible rope or cord 30 is wound about the spool 22, the inner end thereof projecting through an opening 31 in

the abutments 21 and held securely under a lip 32 while the outer end projects outwardly through the grommet opening 7, and is preferably provided with a hook or the like 33. Spring 24 thus biases the cord 30 in a wound position on the spool 22 with the hook member 33 held tightly against the opening 7.

For the purpose of releasably locking the spool 22 against rotation within the casing 1, I provide a pin 34 received within an axially-extending opening 35 in the reduced end portion 15. As shown, the outer end of the pin 34 projects outwardly of the reduced end 15 and is provided with a head 36. At its inner end, pin 34 is likewise provided with an enlarged head 37 rotatably received within the cylindrical recess 17. Head 37 is provided with a segmental slot 38, which is alignable with the slotted openings 26 and 27, whereby to permit passage therethrough of the inner end 25 of the torsion spring 24 (see Fig. 5). Head 37 is also provided with radially outwardly-projecting circumferentially-spaced detents or fingers 39 adapted to be received within circumferentially-spaced alignable openings 40 and 41 in the hub-forming portion 16 and in the flange 20 respectively when said openings are in alignment. A coil compression spring 42, received within the axially-extended well 43 in the hub-forming portion 12, biases the head 37 and pin 34 axially outwardly, whereby to cause detents 39 to be received within the openings 40 and 41 when the same are aligned upon relative rotation, one with respect to the other.

It will be seen that the reduced end portion 15 is provided with a pair of opposed angular faces 44. A pair of elongated metallic straps 45 have their radially inner ends surrounding the reduced portions 12 and 15 immediately outwardly of the side plates 2 and 3. It will be noted, particularly by reference to Fig. 7, that one of the straps 45 has opposed angular faces 46 which are adapted to abut angular faces 44 on the reduced portion 15, whereby to prevent rotation of one strap 45 with respect to the hub-forming member 11. Adjacent their radially outer ends, the straps 45 are tightly pressed against the peripheral edge of the casing 1 and secured together such as by welding within a slot 47 in the casing 1, whereby to prevent rotation of the straps 45 with respect to the casing 1. At their extreme outer ends, the straps 45 are formed to provide hooks 48 which may be bent to any desired position. It should here be noted that the reduced end portion 25 of the torsion spring 24, extending as it does through the aligned openings 26 and 27 in the hub-forming members 10 and 11, prevents rotation of these two members with respect to each other. A spring clip 49 is receivable within a slot 50.

From the above, it should be obvious that, when it is desired to put my novel structure into use, either the hook 33 or hooks 48 are secured to a cooperating hook line or the like suspended from overhead. The cord is then released under the tension of spring 24 by pressing inwardly upon the head 36, whereby to disengage the detents 39 from the openings 41 in the spool-forming section 20 and thus permit rotation of the spool with respect to casing 1. When it is desired to lock the cord 30 at any desired uncoiled extent, this is accomplished merely by releasing the pressure upon the head 36, whereby to allow the

spring 41 to cause engagement of the detents 39 with the aligned openings 40 and 41. Needless to say, rapid retraction of the cord 30 upon the spool 22 within the casing 1 may be accomplished by again pressing inwardly upon the head 36.

My invention has been thoroughly tested and found to be completely satisfactory for the accomplishment of the above objects; and, while I have shown a preferred embodiment of my novel structure, it will be seen that the same is capable of modification without departure from the spirit and scope of the invention as defined in the claim.

What I claim is:

In a device of the class described, a casing including abutting side plates defining a circular chamber provided with aligned central openings and a peripheral opening, a hub, said hub including cooperating components, one of which defines a cup-shaped central portion which projects axially outwardly through the central opening on one side of the casing and a radially-projected annular flange within said casing, the other of said components defining a reduced tubular central portion projecting axially outwardly through the central opening of the other side of said casing and a circumferentially-enlarged cup-shaped portion within said casing which cooperates with said flange to provide a cylindrical recess, a pair of axially spaced flanges rotatably mounted one on each side of the recess-forming portions of said hub, said flanges being provided with opposed circumferentially-extended abutments concentric with said hub which define a radially outwardly opening spool and a compartment radially inwardly of said abutments, a torsion spring within said compartment yieldingly biasing said spool in one direction of rotary movement, a pin slidably mounted in the tubular end of said hub for axial sliding movements, an enlarged head on the inner end of said pin within said cylindrical recess, said hub and one of said flanges being provided with circumferentially-spaced axially extended openings which are alignable upon rotation of one thereof with respect to the other, a detent carried by said head and adapted to be received within said openings when said openings are in alignment, whereby to lock said flange against rotation with respect to said hub, a coil spring received within the cup-shaped reduced end of said hub and yieldingly biasing said head toward engagement with the detents carried thereby with the aligned openings in said hub and fiange, and a flexible cord element coiled about said spool, said cord element having one end secured to said spool and its other end projecting outwardly through the peripheral opening in said casing.

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