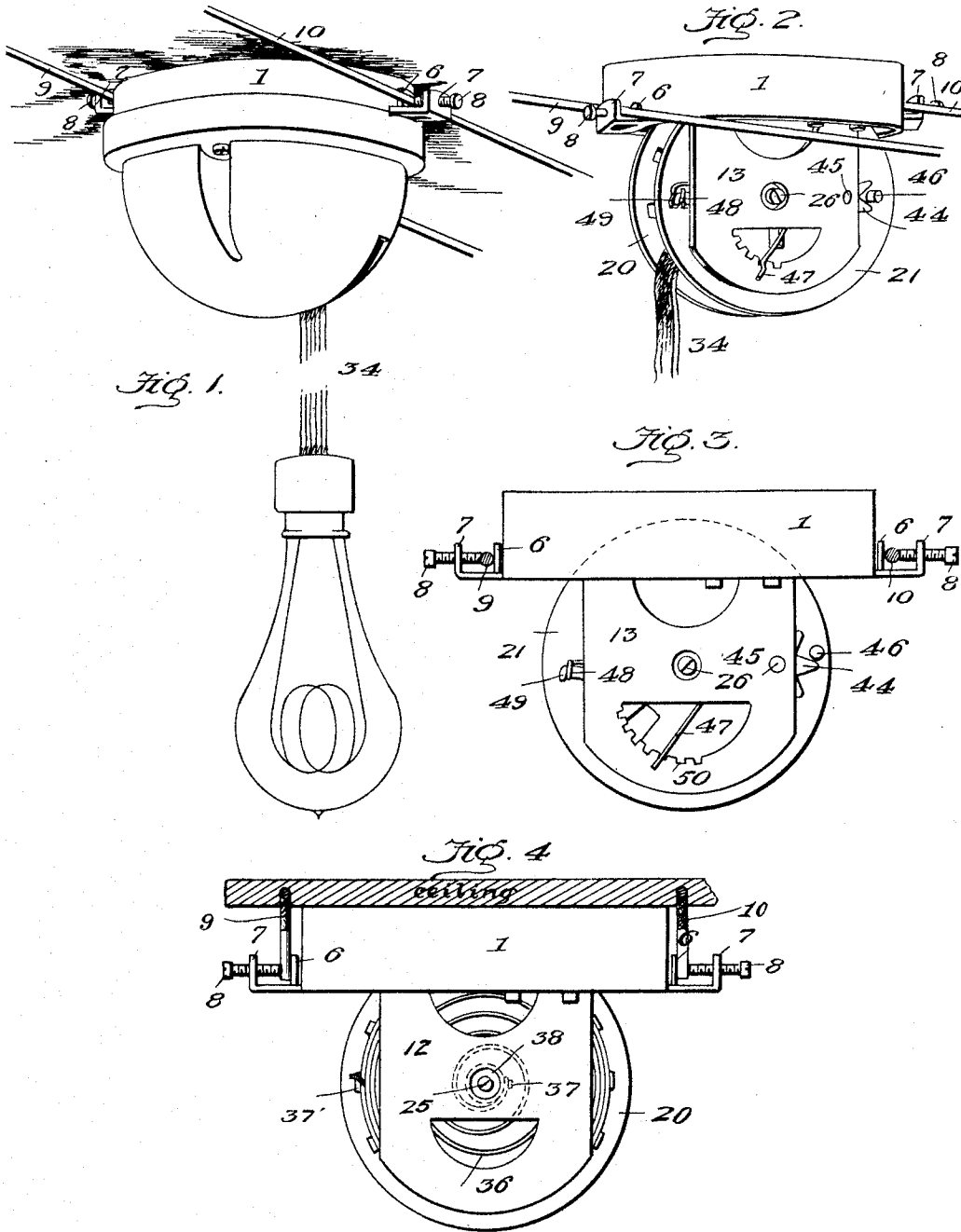


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ADJUSTABLE SUPPORT FOR INCANDESCENT ELECTRIC LIGHTS.

No. 586,378.

Patented July 13, 1897.



Witnesses

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Fig. 5.

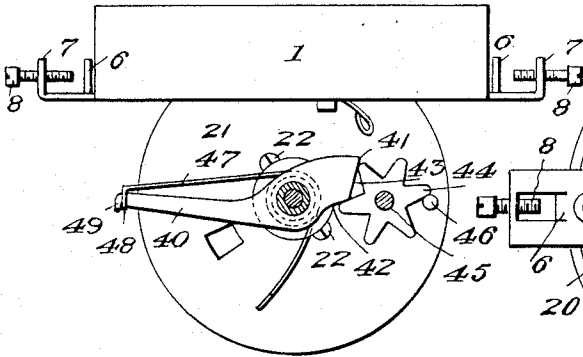


Fig. 6.

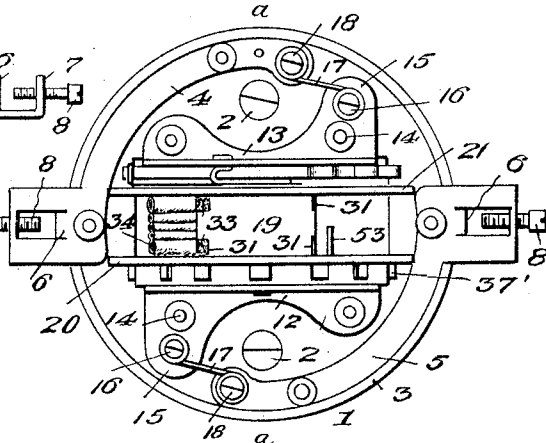


Fig. 7.

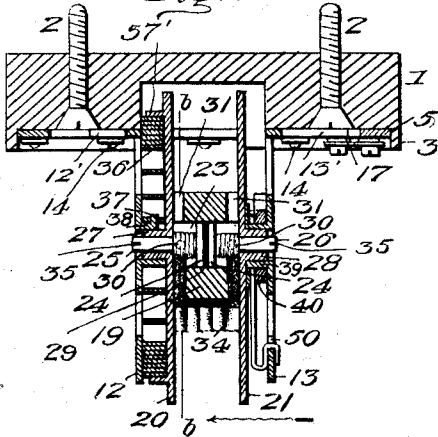


Fig. 8.

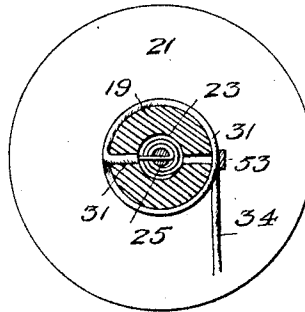
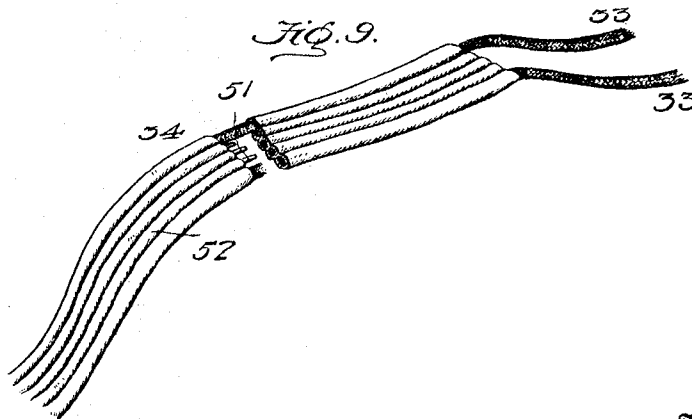


Fig. 9.



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UNITED STATES PATENT OFFICE.

CHARLES A. CARMANY, OF EPHRATA, PENNSYLVANIA.

ADJUSTABLE SUPPORT FOR INCANDESCENT ELECTRIC LIGHTS.

SPECIFICATION forming part of Letters Patent No. 586,378, dated July 13, 1897.

Application filed March 22, 1897. Serial No. 628,766. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. CARMANY, a citizen of the United States, residing at Ephrata, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Adjustable Supports for Incandescent Electric Lights; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a support for incandescent electric lights, and the object is to provide a simple, convenient, and reliable support for adjustably suspending the light from the ceiling of an apartment; and to this end the novelty consists in the construction, combination, and arrangement of the same, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings the same reference-characters indicate the same parts of the invention.

Figure 1 is a perspective view of my improved electric-light support as it appears fixed to the ceiling. Fig. 2 is a similar view with the canopy removed. Fig. 3 is a side elevation. Fig. 4 is a similar view taken from the side opposite to that shown in Fig. 2 and showing the concealed wire connections. Fig. 5 is a similar view with the side plate removed. Fig. 6 is a plan view. Fig. 7 is a cross-section on the broken line *a a* of Fig. 6. Fig. 8 is a similar view on the broken line *b b* of Fig. 7; and Fig. 9 is a perspective detail, partly in section, of the duplex conducting-tape.

1 represents the non-conducting base, which is secured to the ceiling by the screws 2 2. The flange 3 of said base is recessed at opposite ends to receive the projecting ends of the conductor-plates 4 5, which are formed with an integral contact-point 6 and a parallel arm 7, in which is secured a set-screw 8 for connecting the leading-in wires 9 and 10.

12 and 13 represent parallel plate-standards formed with right-angular flanges 12' 13', which are fixed to the base by screws 14 14, and each flange is formed with an extension-ear 15, provided with a screw 16, which secures one end of the fuse-conductor 17, the opposite end of which is in electrical connection

with the inner ends of the conductor-plates 4 5 by a screw 18.

19 represents a non-conducting drum, to the parallel ends of which are secured the metallic disks 20 21 by countersunk head-screws 22. This drum is formed with a central cylindrical orifice 23, which receives the contiguous circular heads 24 of the shafts 25 26, journaled in lateral sleeves 27 28, fixed on the disks 20 21.

29 represents an insulating or non-conducting disk located between the contiguous faces of the circular heads 24 of the shafts 25 26. These shafts are provided with transverse orifices 30 30.

31 31 represent radial aligned recesses in the drum 19, so that the contiguous ends 33 33 of the duplex conducting-tape 34 may be inserted through the recesses 31 in the drum and into the orifices 30 in the shafts 25 26 and by means of a screw-driver applied to the slots 35 in the outer ends of the shafts to coil the ends of the conductor-wires 33 33 around said shafts and make a permanent contact at this point, the circuit being continued to the standards 12 13 through the sleeves 27 28, thence to their respective conductor-plates 4 5 and to the leading-in wires, as above described.

The inner end of the spiral spring 36 is fixed to a radial lug 37 on the stationary sleeve 38 on the standard 12, which also forms a bearing for the sleeve-journal 27 of the disk 20, and the outer end of this spring 36 is fixed to one of an annular series of studs 37', arranged concentrically on said disk, and which also form the barrel or case for said spring to expand in.

The sleeve 28 on the disk 21 has a bearing in the stationary sleeve 39 on the standard 13, and the periphery of said stationary sleeve 39 forms a bearing for a lever 40, fulcrumed thereon, and the free end of said lever 40 terminates in an obtuse-angular pawl 41, having two plane bearing-faces 42 and 43, the face 42 being closer to and extending in a radial line from the fulcrum-point of said lever, while the face 43 is further removed from the fulcrum-point and extends at a tangent thereto.

44 represents a star-wheel journaled on a fixed stud 45 on the inside of the standard

13, the contiguous faces of any two adjoining teeth of which engage the faces 42 and 43 of the pawl 41, while the corresponding teeth on the opposite edge of said star-wheel project
 5 into the path of a lateral-projecting stud 46 on the disk 21, which coming in contact with said star-wheel will ordinarily stop the rotation of said disk, owing to the pressure exerted on the star-wheel by the pawl 41 of the lever 40. This combination of parts is peculiar and novel, inasmuch as the action thereof admits the adjustment of different-weight lamps with or without shades to any desired height, and at the same time when the drum
 15 is allowed to rotate rapidly the stud 46 coming into contact from either direction with any one tooth of star-wheel 44 said contact causes no apparent interference with the rotation of the drum, but when slowly operated
 20 the contact causes the lamp to be held at any desired height, no matter if the weight of the lamp be greater than the tension of spiral spring 36 or the tension of said spring be greater than the weight of the lamp. The pressure of the lever on said star-wheel is adjusted or regulated by a spring 47, loosely coiled about the sleeve 39, and having one of its ends formed with a stirrup 48, which engages a notch 49 in the outer end of the lever
 25 40, to hold its opposite pawl in engagement with the star-wheel, while the other projecting end of said spring is adjustably secured in one of a series of rack-teeth 50, formed in the standard 13. A loose washer is also
 30 mounted on the sleeve 28 between the coil of the spring and the contiguous face of the rotating disk to prevent the latter wearing the spring.

The conducting-tape 34 is of novel construction, comprising the two parallel woven conductors 33 33, suitably insulated, and the series of flexible non-conducting cords 51 51, arranged parallel with said conductors and in the same plane between them, the whole being bound together by a transversely-interwoven strand 52 of any suitable fabric, such as silk, linen, or the like, as shown. This construction forms a very compact, durable, and effective conducting-tape, while the flat
 45 shape of the tape facilitates its winding and unwinding on the drum and at the same time prevents the formation of "kinks," so common to circular conductors. The fastening of the conductors can be done more quickly
 50 and permanently on account of their being woven, and, besides, this form of construction prevents the presence of stray wires, which often cause a short circuit. After the contiguous ends 33 33 of said tape are secured to
 55 the conducting-shafts 25 and 26 the body por-

tion of the tape proper is coiled once around the drum and under a lateral guard 53, formed integral with and projecting inwardly from the disk 20, and which acts as a stop to prevent the tape being drawn entirely off the
 65 drum.

Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such changes
 70 or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof.

Having thus fully described my invention, what I claim as new and useful, and desire
 75 to secure by Letters Patent of the United States, is--

1. A device for adjustably supporting incandescent electric lights, comprising the non-conducting base, the parallel standards secured thereto, a non-conducting drum, conducting-disks fixed on the outer ends of said drum and journaled in said standards, a transversely-divided cylindrical shaft mounted in said drum and having the contiguous
 80 ends insulated from each other by a non-conducting disk, a spiral spring having its inner end fixed to one of said standards and its outer end connected to one of said disks, in combination with a duplex flexible conducting-tape
 85 having the contiguous ends of its conductors electrically connected to the insulated sections of said divided shaft, and adapted to be wound on said drum in the contrary direction to the spiral spring as and for the purpose set
 90 forth.

2. A device of the character described, comprising the parallel standards, the drum, the disks secured to said drum and journaled in said standards, the shafts 25 26, mounted
 100 transversely in said drum and separated by a non-conducting disk 29, the spiral spring connected to one of said disks and its contiguous standard and adapted to rotate said drum and disks in a reverse direction to that
 105 from which it is wound, in combination with the star-wheel journaled on the standard 13, a lever 40, having an obtuse-angled pawl 41 engaging said star-wheel, a spring 47 adapted to regulate the pressure of said pawl on the
 110 star-wheel and a projecting stud 46 on the face of the rotating disk 21, adapted to engage said star-wheel, substantially as and for the purpose set forth.

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

CHARLES A. CARMANY.

Witnesses:

HENRY S. ROYER,
 J. M. FRY.