Aug. 22, 1939. W. KNAPP 2,170,201

ADJUSTABLE ELECTRIC LAMP

Filed Sept. 22, 1938 2 Sheets-Sheet 1

FIG. 1

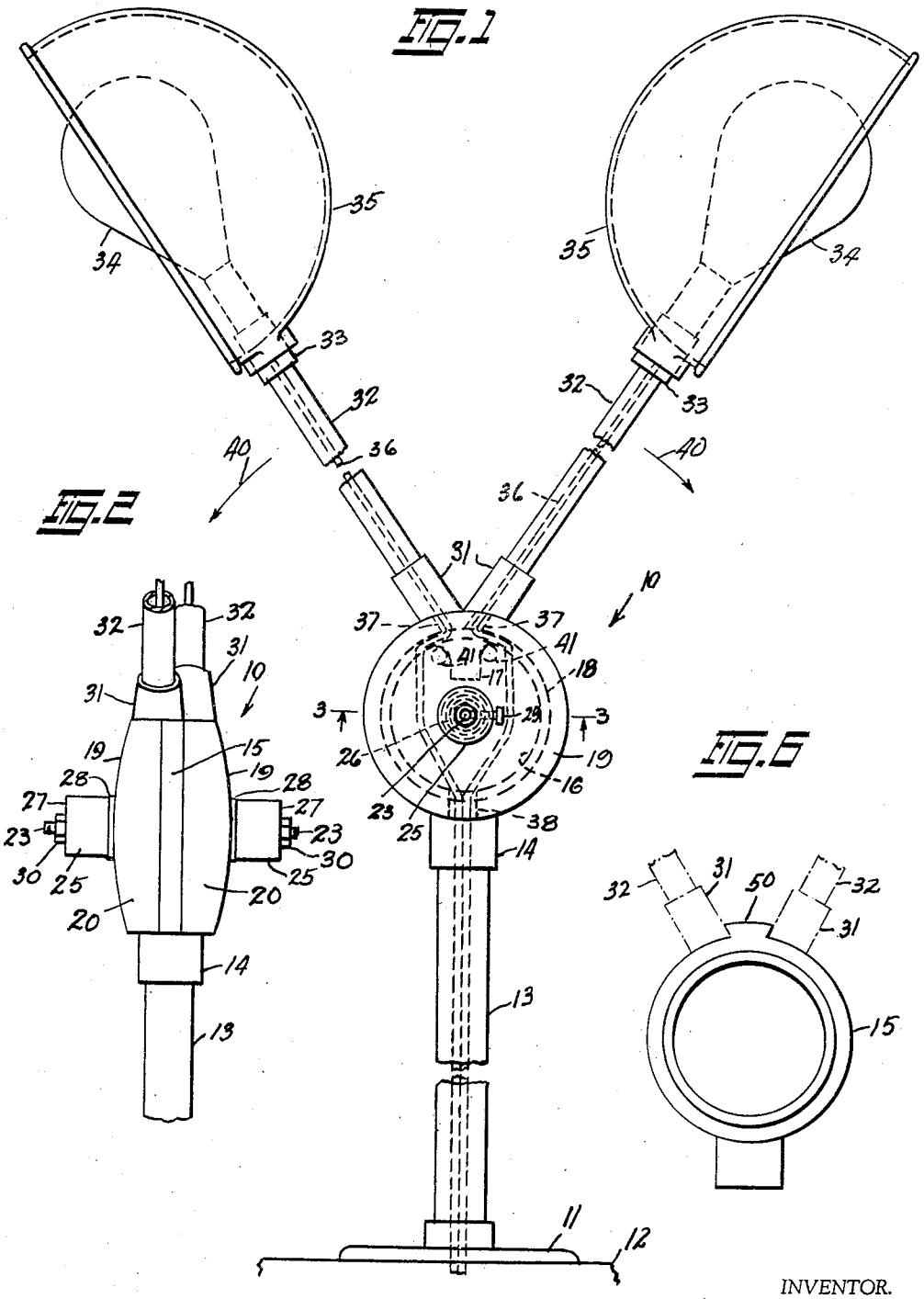


FIG. 2

FIG. 6

INVENTOR.
William Knapp
BY
ATTORNEY.

Aug. 22, 1939. W. KNAPP 2,170,201

ADJUSTABLE ELECTRIC LAMP

Filed Sept. 22, 1938 2 Sheets-Sheet 2

Fig. 3

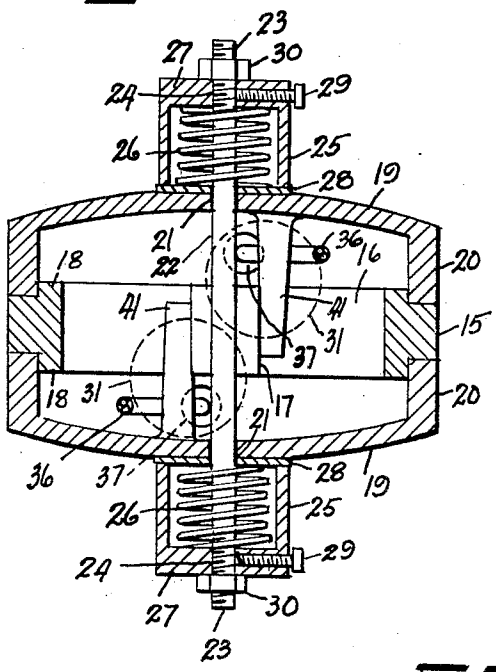


Fig. 4

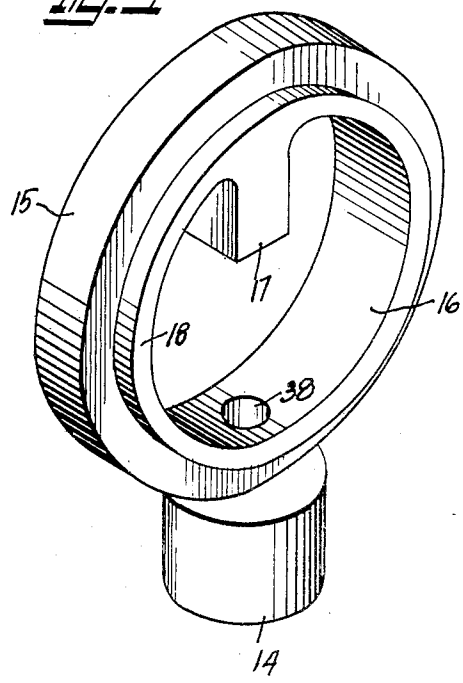
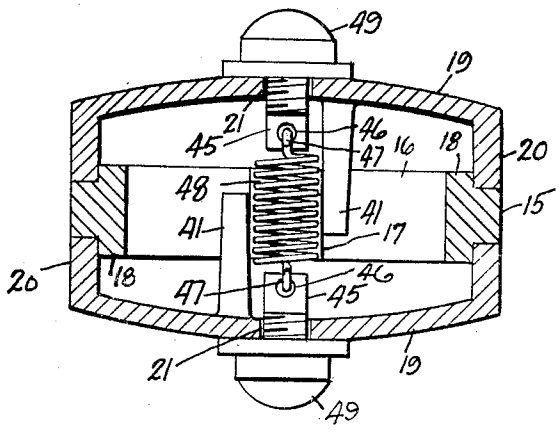


Fig. 5



INVENTOR.
William Knapp.
BY
ATTORNEY.

Patented Aug. 22, 1939

2,170,201

UNITED STATES PATENT OFFICE

2,170,201

ADJUSTABLE ELECTRIC LAMP

William Knapp, Hollis, N. Y.

Application September 22, 1938, Serial No. 231,125

2 Claims. (Cl. 248—122)

This invention relates to jointed electric lamps of the adjustable multiple arm type commonly used in reading rooms, class rooms and the like, and has for one of its objects the provision of a lamp of this nature having means at the joint for maintaining same under constant spring pressure.

Another object of the invention is the provision of a lamp of the nature referred to in which the electric wiring is concealed.

A further object of the invention is the provision of a lamp of the character referred to comprising a central ring-like structure about which a pair of lamp carrying arms are adapted to be rotated to any desired position, and means for frictionally maintaining the said arms in adjusted position.

A still further object of the invention is the provision of friction producing means in a lamp of this nature, which will at all times tend to take up the wear between the moving parts to constantly maintain the said parts in proper frictional contact, thus preventing the discarding of the device due to the wearing of such moving parts.

Another object is to produce a device of the character described in which the maximum simplicity of construction and operation is secured.

Other objects and advantages will appear as the nature of the improvements is better understood, the invention consisting substantially in the novel arrangement and co-relation of parts herein fully described and illustrated in the accompanying drawings, wherein similar reference characters are used to describe corresponding parts throughout the several views, and then finally pointed out and specifically defined and indicated in the appended claims.

The disclosure made the basis of exemplifying the present inventive concept suggests a practical embodiment thereof, but the invention is not to be restricted to the exact details of this disclosure, and the latter, therefore, is to be understood from an illustrative, rather than a restrictive standpoint.

In the drawings forming a part of this application—

Figure 1 is a front view of an electric lamp embodying my improvements;

Fig. 2 is a fragmental side view thereof;

Fig. 3 is a sectional view taken on line 3—3 Fig. 1;

Fig. 4 is a perspective view of the central ring-like structure forming a portion of the joint about which the lamp carrying arms are rotatably adjustable;

Fig. 5 is a view similar to Fig. 3 of a modified form of my invention; and Fig. 6 is a front view of a modified form of the ring structure and stop means thereon, showing in dot and dash lines the lamp carrying arms and disk bosses.

Referring now to Figs. 1 to 4 of the drawings in detail, 10 indicates a table or floor lamp provided with a base 11 which may, if desired, be secured to the floor of a room or any other suitable support 12. Extending from the base 11 is a pipe or tubular stem 13 to the upper end of which there is secured by means of a hub or boss 14, a ring-like member 15 having an inner central annular opening 16 provided at the top thereof with a stop or projection 17. The said ring 15 is provided at each side face thereof with an annular shoulder or upstanding lip or flange 18, defining the central opening 16 and about which flanges there is rotatably mounted a pair of cupped members or disks 19, each provided with an annular peripheral or circumferential wall 20 adapted to rotatably engage the outer circumference of the respective lips or flanges 18.

The cupped members are each provided with a central bore or opening 21 through which passes a rod 22 provided with screw-threaded ends 23 which extend outwardly through threaded openings 24 in housings or shells 25. A compression spring 26 is enclosed within each housing 25 and exerts a tension between the inner surface of the closed end 27 of the said housing and a washer 28 placed at the open end thereof. The springs 26 are first properly tensioned by the housings 25 which housings are then secured in place by means of set screws 29 and lock nuts 30 on the threaded ends 23 of the rod 22.

Each of the cupped members 19 is provided with a boss 31 in which is suitably supported a tubular arm or stem 32 which at its free end is provided with a socket 33 adapted to receive an electric bulb 34 which may be covered by a shade 35 suitably secured to the socket. The electric wiring 36 connecting the lamps or bulbs 34 to the source of electric supply, passes through the tubular arms 32, thence through openings 37 in the peripheral walls 20 into the interior of the ring 15, then downwardly through an opening 38 into the pipe 13, from which it may pass outwardly, there to be connected to the electric supply.

In practice, the lamp carrying arms 32 may be moved downwardly in the direction of the arrows 40, Fig. 1, to any desired position within certain

limits, the upper limit being determined by the stop 17 and pins or projections 41 extending from the cupped members 19, and the lower limit is determined by the ring boss 14 and the hubs or bosses 31 on the said cupped members 19.

In Fig 5 of the drawings, I have shown a modified form of my invention, wherein, instead of the central rod 22, housings 25, spring 26, set screws 29, and lock nuts 30, I utilize a pair of anchoring pins 45 each provided with an opening 46 adapted to receive the hooked ends 47 of a coiled spring 48 exerting a pulling tension on the said pins 45 to draw the heads 49 on the said pins against the cupped members 19 to produce frictional engagement between the said cupped members and the central ring structure 15. In all other respects this form of my invention is identical to that shown in Figs. 1 to 4 above described.

In Fig. 6 I have shown a still further modified form of my invention, wherein, instead of utilizing the projection 17 and pins 41 for limiting the upward movement of the lamp carrying arms 32, the said parts 17 and 41 are omitted and I provide an outer projection 50 which the bosses 31 contact, to limit the upward movement of the lamp carrying arms 32.

From the foregoing it will be seen that I have provided a simple and efficient joint for adjustable muiti-armed electric lamps, in which I utilize spring means for creating constant frictional engagement between the moving parts of the said joint and a common stationary central ring structure about which the said parts move, said spring means always tending to take up any wear between the said parts, thus providing a long-lived lamp which will not become useless due to wear at the adjustment joint. The said frictional engagement is accomplished in one instance by individual springs pushing the cupped members of the joint against the central ring structure and in the other instance by pulling the said cupped members against the central structure by means of a single spring.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a lamp support of the character described, a load-carrying member, a ring carried by said load-carrying member at one end thereof, an internal lug carried by said ring, cup-shaped shells at opposite sides of said ring rotatably engaged therewith, lamp-carrying arms extending radially outwardly from said shells, stop members carried by said shells and extending inwardly therefrom through said ring at opposite sides of said lug for engaging the lug for limiting turning of the shells, and means for rotatably holding said shells in engagement with opposite sides of said ring and frictionally resisting movement of the shells relative to the ring.

2. In a lamp support of the character described, a load-carrying member, a ring carried by said load-carrying member at one end thereof, an internal lug carried by and extending radially from said ring, cup-shaped shells at opposite sides of said ring rotatably engaged therewith, movable members extending radially outwardly from said shells, stop members carried by said shells and extending inwardly therefrom through said ring at opposite sides of said lug for engaging the lug and limiting turning of the shells, said shells being formed with center openings, pins passing through said openings and having heads at their outer ends for engaging the shells about the openings, and a spring extending through said ring centrally thereof between said pins with its ends connected with inner ends of the pins, said spring exerting inward pull upon the pins to hold the shells in rotatable engagement with opposite sides of the ring and maintain the heads of the pins in frictional engagement with the outer faces of the shells to yieldably resist turning of the shells relative to the ring.

WILLIAM KNAPP.