This invention relates to electric lamps. It is an object of the present invention to provide an electric lamp having a vertical support with a rotatable arm supporting a contact member vertically spaced from the base thereof and a telescoping laterally-extending arm carried by the rotatable member so that the arm can be rotated with the rotatable member about the vertical support and a lamp therein movable by the arm in a circular path and at the same time adjustable to different radial distances from the vertical support so that the lamp while overhung on the work being lighted can be easily and readily adjusted for the best distribution of the light upon the work surfaces.

It is another object of the invention to provide a novel and efficient slideable contact arrangement for use in electric lamps and similar devices supporting an electrical outlet wherein the contact members that are stationary are fixed to one sleeve at one end by insulating tubes that extend to the opposite end of the sleeve to support the contact members and wherein the sliding contacts are confined respectively in slideable insulating tubes which are adjustable over the stationary contact members and over the insulating tubes, the slideable insulating tubes being fixed to a telescoping sleeve and adjustable with the telescoping sleeve through the first sleeve to alter the length of the electrical outlet arm.

It is another object of the invention to provide a novel and efficient rotatable contact arrangement to permit free rotational adjustment of electrical contacts at fixed ring contacts and to permit the free rotation of an electrical outlet supporting member on a vertical support and to provide a lamp support having a rotatable member for a lamp outlet which can be adjusted angularly and without wires extending upwardly through the vertical support becoming twisted or worn and unsafe.

Other objects of the present invention are to provide adjustable contact arrangements for electric lamps and for vertical supports for electrical outlets, which are of simple construction, inexpensive to manufacture, have a minimum number of parts, easy to adjust, provide for continual tight engagement of contacts, compact, adequately insulated, of pleasing appearance and efficient in use and operation.

For a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing in which

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Fig. 1 is a fragmentary elevational view of a lamp support and with the laterally-extending swingable outlet arm with electrical contact arrangement embodying the features of the present invention,

Fig. 2 is an enlarged sectional view taken through the rotatable contact arrangement and on line 2-2 of Fig. 1.

Fig. 3 is a collective and exploded view of the rotatable contact arrangement, the parts thereof being shown in perspective,

Fig. 4 is an enlarged sectional view taken longitudinally of the laterally-extending arm and through the slideable contact arrangement, the view being taken on line 4-4 of Fig. 1.

Fig. 5 is a perspective view of one of the stationary contact elements of the slideable contact arrangement and of the means for fixing the stationary contact to one of the telescoping sleeves,

Fig. 6 is an enlarged sectional view taken on line 6-6 of Fig. 5 and through the stationary contact member.

Fig. 7 is a perspective and fragmentary view of the insulating tubes bearing the elongated sliding contact elements of the sliding contact arrangement.

Fig. 8 is a perspective view of the ends of the sliding contact insulating tubes and illustrating the manner in which they are supported in the sliding telescoping sleeve of the sliding contact arrangement,

Fig. 9 is an enlarged transverse sectional view taken on line 9-9 of Fig. 4.

Fig. 10 is a fragmentary vertical view of the rotatable contact arrangement and of the rotatable supporting member to which the laterally-extending sliding contact supporting arm is attached.

Referring now to the figures, 21 represents a lamp base having feet portions 22 and plug receptacles 23 by which the lamp can be connected with an electric source. Extending upwardly from the base is a vertical tubular support 24 having intermediate its length an inverted conical lamp deflector 25 from which lamp rays emitted from lamp bulbs 26 therein are reflected upwardly. On the upper end of the vertical tubular support and secured thereto by screws 27, is a rotational contact device or arrangement 28 having upper and lower insulating members 29 and 30, Figs. 1, 2 and 10, and an arm supporting member 31 secured to the upper insulating member 29 by screws 32.

Fixed to the bottom face of the insulating member 32, Fig. 10, is a vertical thrust bearing mem-
number 33 by means of screws 34. This thrust bearing 33 is further supported on an inwardly-extending flange 35 of a tubular member 36 lying within the vertical support tube 24. A vertical shaft 37 has a bottom end bearing 38, rounded to conform to the internal rounded shape of the lower end of the vertical thrust bearing member 33. The vertical shaft extends upwardly from the insulating member 29 and through a spacing collar 39. Resting on the spacing collar 39 is the lower end of a T-fitting 41 which has lower and upper insulating bushings 42 and 43 and an insulated screw 44 secures the T-fitting to the shaft that is detachable from bearing 33. The T-fitting extends through the wall of member 31 and is held against rotational displacement therein by an internally-treaded collar 44 to which external telescoping slide connector arm sleeve 45 is threaded, Fig. 2.

The lower insulating member of the rotational contact arrangement has concentric contact rings 46 and 47 lying within the bottoms of respective grooves 48 and 49, Figs. 2 and 3. Cable wires 51 and 52 respectively connect with the contact rings 46 and 47 to supply electric current thereto. These cable wires 51 and 52 are connected to the plug receptacle 23 in the base 21, the cables extending downwardly through the tubular vertical support 24.

The upper insulating member has depending annular portions 53 and 54 that lie within the respective annular grooves 46 and 49 in the lower insulating member 30 and retain the upper insulating member 29 against lateral displacement from the contact member 30. The annular portions 53 and 54 have openings 55 and 56 to accommodate respectively arcuate contact shoes 57 and 58 having respectively stems 59 and 60 lying within holes 61 and 62 in the insulating member 29. The stems 59 and 60 have respectively wires 53 and 56 connected thereto which extend into a sleeve 65 of insulation that leads into the T-fitting 41 and outwardly therethrough for connection with stationary contacts 65 and 67 passing respectively through rigidly held insulating tubes 68 and 69 that extend through the telescoping sleeve 45 of slide contact arm arrangement indicated generally at 71.

The member 31 has a top portion 72, Fig. 10, upwardly through which extends shaft 37. A transverse portion 73 is provided in the upwardly extending portion 72 and a nut 74 threaded upon the shaft 37 and rests against a washer 76 on the transverse portion 73. This retains the member 51 and the insulating members on the vertical support 24. On the upper end of the portion 72 is fixed a deflector 78 in which is disposed a lamp bulb 71 serving to direct light rays upwardly toward the ceiling.

The outer end of the sleeve 45 has a shoulder portion 76 against which a shoulder 79 of an inner telescoping sleeve 80 will abut to limit the outward sliding movement of the inner telescoping sleeve 88. The sleeve 80 is fitted into sleeve 71 by inserting the same through the inner end thereof and before the outer sleeve 45 is fixed to the lower internally-threaded collar fitting 44. The small insulating tubes 68 and 69 are secured between separable clamping members 81 and 82 adapted to fit in the end of the sleeve 45 in a tight manner and are held against rotational displacement by screws 83 entering respective holes 84 in the separable clamping members to hold the clamping members. Cement may be used to fix the insulating tubes 68 and 69 to the clamping members and the clamping members to the tube 45 to more adequately secure these parts together so that there will be no play or working of the parts as the sleeve 80 is worked in and out of the sleeve 45.

Within the sleeve 80, are two insulating sleeves 65 and 66 respectively receiving the stationary contacts 65 and 67 and having longitudinally-extending contact strips 87 and 88. These strips are held against displacement through the tube by having their ends bent over the ends of the tubes in the manner as indicated at 89 and 90. The insulating tubes 68 and 69 are held in the sleeve 80 by separable clamping members 81 and 82, Fig. 6. There is a pair of these members at each end of the sleeve 80 and accordingly the insulating tubes 68 and 85 are held rigidly and parallel to each other. A screw enters the sleeve 80 similar to the screw 83 as shown in Fig. 8 and enters a hole 83 in one of the separable clamping members whereby to hold the clamping members against rotation and axial displacement within the sleeve 60. Cement may be used to secure the members to the sleeve 80 and to the tubes 65 and 66.

Intermediate the length of the tubes 65 and 66, the tubes can be held together by bands 94. On the end of the inner sleeve 80 there is threaded a fitting 95 having wires 95 and 97 which are respectively connected to the metal strip contacts 87 and 88 as shown in Fig. 9. The fitting 95 supports a lamp socket 96 into which a bulb can be disposed.

It will be seen that the lamp provides for the rotational adjustment of the telescoping sleeves about the vertical support without the necessity of wires being twisted in the vertical support by the provision of a rotational contact arrangement 20 and that by means of the telescoping contact arrangement 71 the arm length can be adjusted to locate the lamp on the end thereof at a desired distance from the vertical support. It should be further apparent that there has been provided contact arrangements wherein the parts thereof are held rigid and tight and wherein in every provision is made for insulating the same from each other and that any chance of short circuit of the parts has been brought to a minimum.

The stationary contacts 65 and 67 are held rigid and against displacement by the hollow tubes 68 and 69 through which the wires extend and are maintained against being bent by these hollow tubes. The sleeve 80 can accordingly move in and out of the sleeve 71 without interference from wires. The sleeve 80 holds rigidly the tubes 65 and 66 that have the metal strip contacts 87 and 88.

While various changes may be made in the detail construction, it shall be understood that such changes shall be in the spirit and scope of the invention as defined by the appended claims.

What is claimed is:

1. A device of the character described comprising a vertical support, a rotational contact arrangement mounted on the upper end of the vertical support, a thrust bearing depending from the rotational contact arrangement, said rotational contact arrangement having lower and upper insulating members with contacts thereon and with the contacts of one member engageable with the contacts of the other member whereby upon relative rotation of the members a continuous supply of electric current will be delivered, wire means in the vertical support connecting
with the contacts of the lower insulating member, an upper structure connected to the upper insulating member and wire means extending from the contacts of the upper insulating member into the upper structure, a vertical shaft seated in the vertical thrust bearing and extending upwardly through the insulating members and into the upper structure, securing means on the upper shaft for securing the shaft to the upper structure, a T-fitting fixed to the shaft within the upper structure and connected to the wall thereof, a telescoping contact arrangement fixed to the wall of the upper structure and connected to the T-fitting thereof, said telescoping contact arrangement having interfitting sleeve parts, stationary contacts connected to one part and strip contacts connected to the other part and slidable over the fixed contacts, an electric outlet connected to the outer end of the telescoping contact arrangement, said wiring means extending from the upper insulating member of the rotational contact arrangement extending through the T-fitting and with the stationary contacts of the telescoping contact arrangement and further wiring means connected between the sliding strip contact means of the telescoping arrangement and the electrical outlet thereof.

2. A sliding contact arrangement comprising interfitting sleeves respectively having shoulders means to prevent the outward displacement of the sleeves from one another upon the same being extended and to limit the telescopic movement of the sleeves relative to each other, a pair of insulating hollow tubes having respectively cylindrical contacts on the outer ends of the same and clamping means for securing these tubes to one end of one of the sleeves and to hold the same in spaced parallel relationship within the one sleeve, wires extending respectively through the tubes and connected respectively with the contacts, a second pair of hollow tubes spaced from one another to receive the spaced contacts to permit relative sliding movement of the contacts through these latter tubes, metal strip contacts extending respectively through these hollow tubes from one end thereof to the other and adapted to have respectively sliding contact with the respective stationary contacts on the ends of the first insulating tubes and means for clamping the second insulating tubes to the other sleeve and against displacement relative to the other sleeve and wire means extending from the sliding contacts.

3. A device of the character described comprising a vertical support, a rotational contact arrangement mounted on the upper end of the vertical support, a thrust bearing depending from the rotational contact arrangement, said rotational contact arrangement having lower and upper insulating members with contacts thereon and with the contacts of one member engageable with the contacts of the other member whereby upon relative rotation of the members a continuous supply of electric current will be delivered, wire means in the vertical support connecting with the contacts of the lower insulating member, an upper structure connected to the upper insulating member and wire means extending from the contacts of the upper insulating member into the upper structure, a vertical shaft seated in the vertical thrust bearing and extending upwardly through the insulating members and into the upper structure, securing means on the upper shaft for securing the shaft to the upper structure, a T-fitting fixed to the shaft within the upper structure and connected to the wall thereof, a sliding contact arrangement having interfitting sleeves fixed to the wall of the upper structure and connected to the T-fitting, said interfitting sleeves having shoulder means to prevent the outward displacement of the sleeves from one another upon the same being extended and to limit the telescopic movement of the sleeves relative to each other, a pair of insulating hollow tubes having respectively cylindrical contacts on the outer ends of the same and clamping means for securing these tubes to one end of one of the sleeves and to hold the same in spaced parallel relationship within the one sleeve, wires extending respectively through the tubes and connected respectively with the contacts, a second pair of hollow tubes spaced from one another to receive the spaced contacts to permit relative sliding movement of the contacts through the latter tubes, metal strip contacts extending respectively through these hollow tubes from one end thereof to the other and adapted to have respectively sliding contact with the respective stationary contacts on the ends of the first insulating tubes and means for clamping the second insulating tubes to the other sleeve and against displacement relative to the other sleeve and wire means extending from the sliding contacts.

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