

Sept. 19, 1944.

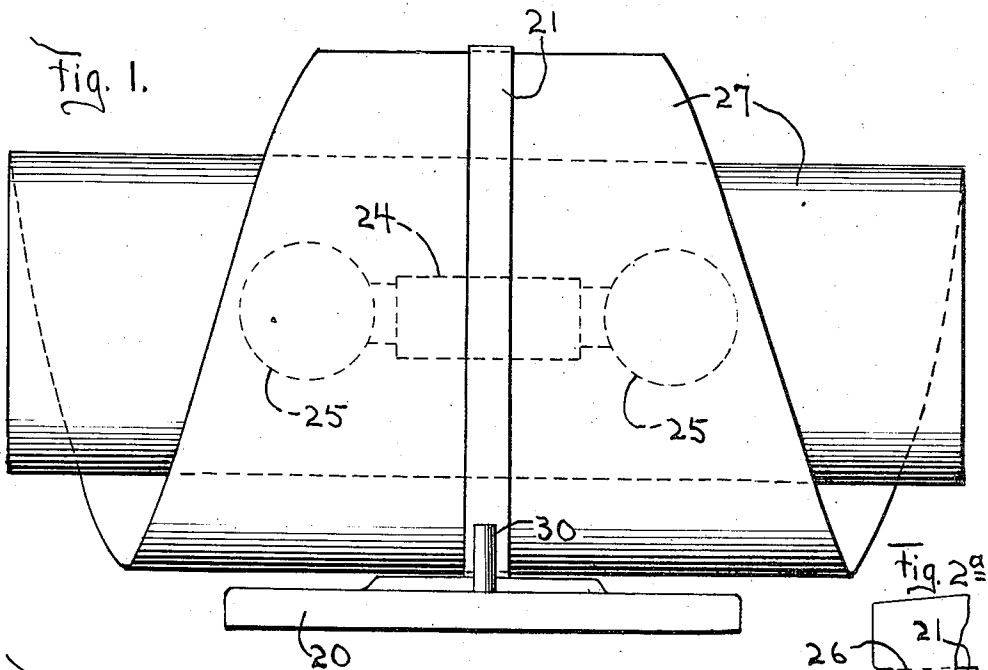
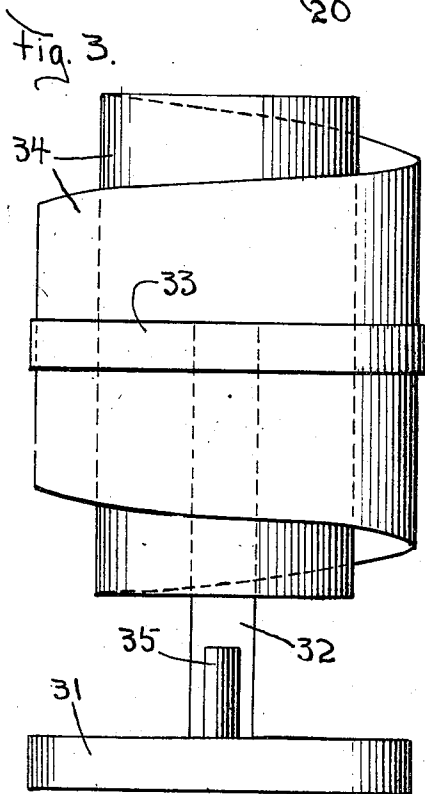
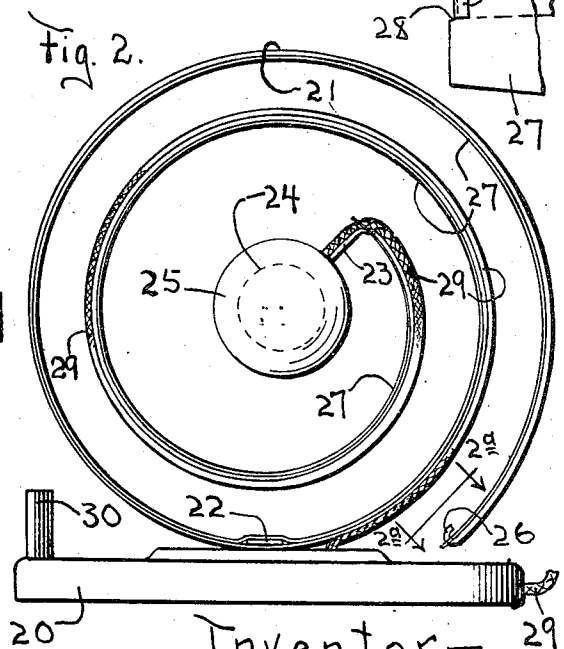
D. W. PAUL

2,358,347

LAMP

Filed July 26, 1940

3 Sheets-Sheet 1



Inventor,—
Donald W Paul,
By William H. DeBusk,
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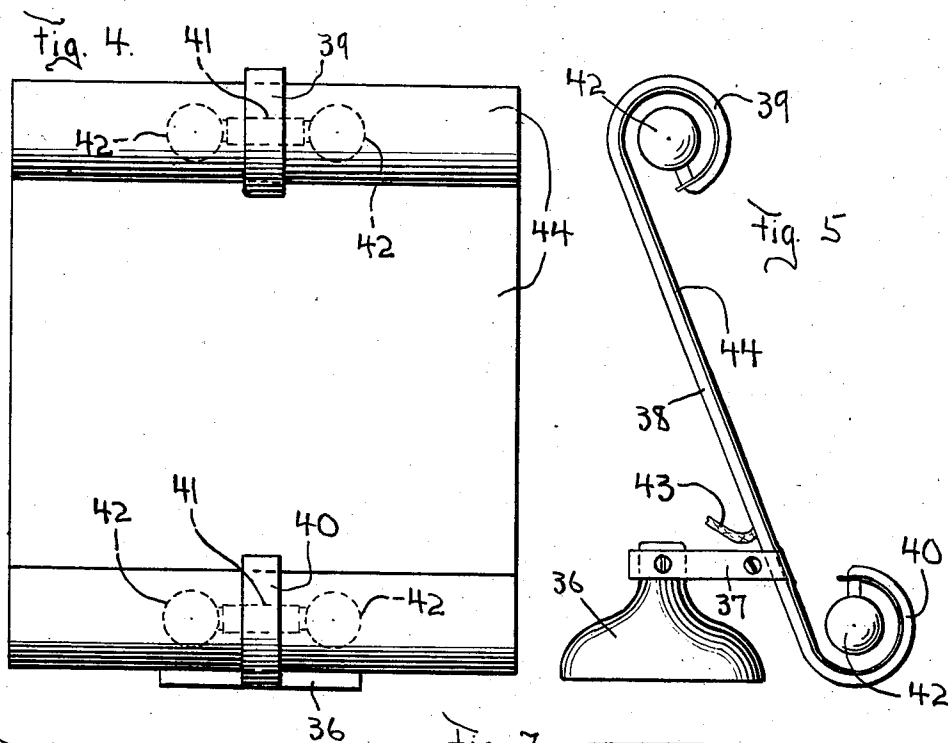
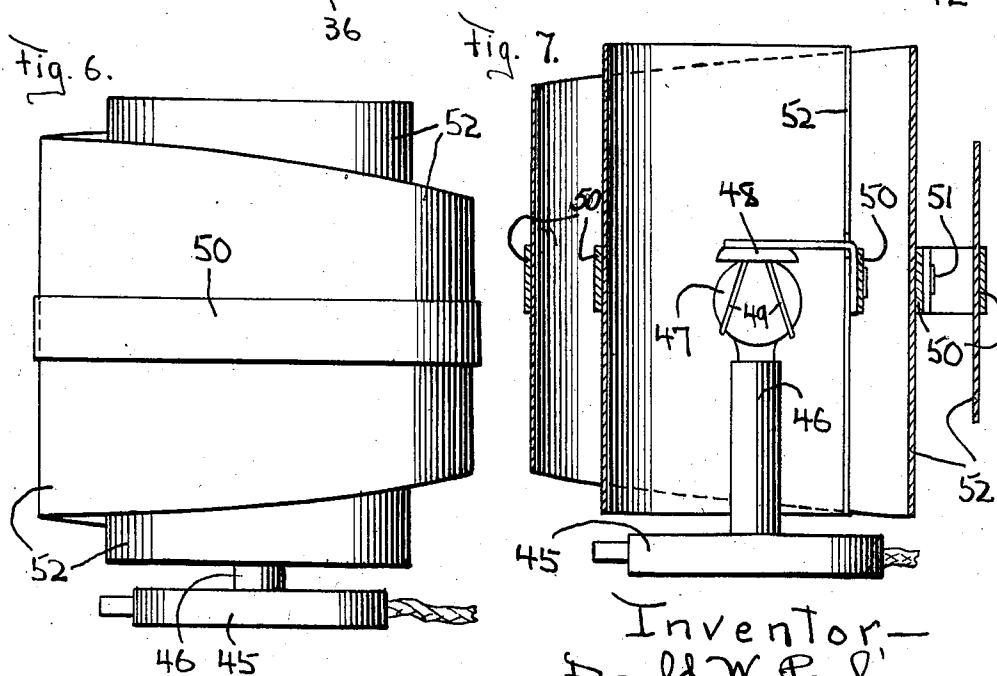
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Fig. 8.

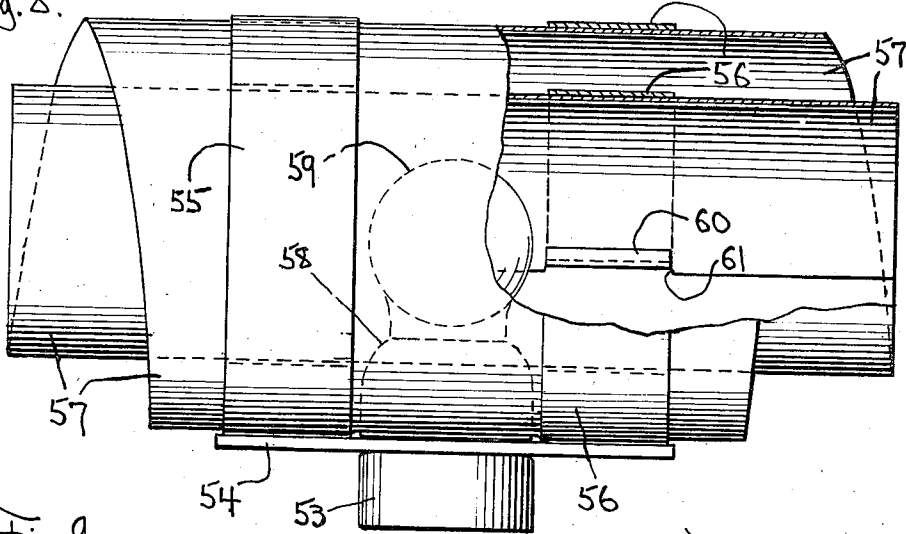


Fig. 9

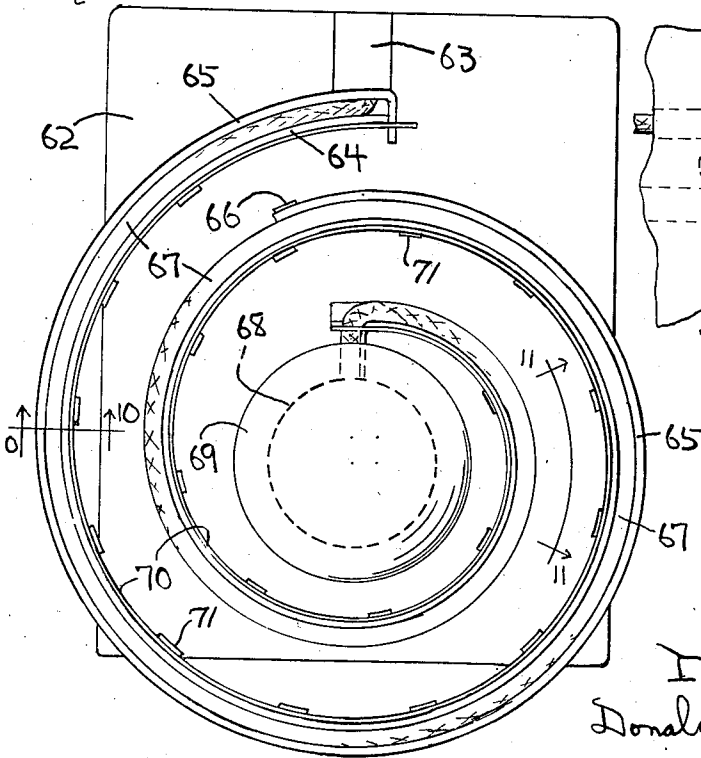
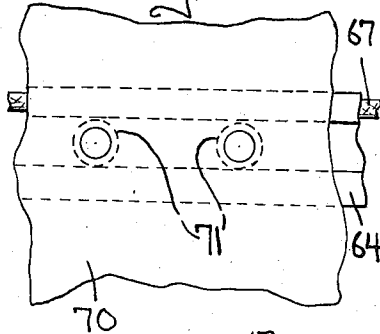
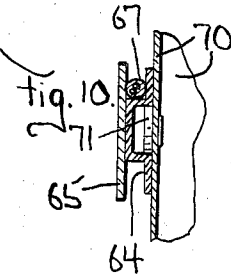


Fig. 11.



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UNITED STATES PATENT OFFICE

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LAMP

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Application July 26, 1940, Serial No. 347,717

7 Claims. (Cl. 240—81)

This invention relates to lamps, and it has for its object the provision of a new and improved form and arrangement of parts by which an effectively diffused light shall be produced with a minimum tendency for the lamp to produce shadows on the ceiling or the walls of the room in which the lamp is used. In working out this object, I have employed translucent material such as parchment or the like arranged in a great variety of different novel combinations by which the diffusion of the light is controlled for attaining the desired results.

In many of the novel combinations the light is caused to pass through a plurality of thicknesses of translucent material, with the gradation from one number of thicknesses to a different number marked merely by the unsupported edge of one of the thicknesses of material, with the result that the light is extremely soft and mellow and the contrast from one step to the next is extremely mellow and bland.

In the preferred form of my improved lamp, I employ a translucent structure in the form of a spiral or scroll with the electric light bulb, or other source of light, in substantially centered position in the scroll, the scroll being positioned either vertically or horizontally, or in other desired angular arrangement. The translucent scroll is preferably supported by a strip of metal bent into spiral form with the light bulb supported in most cases by the looped metal strip. This metal strip is preferably resilient with the scroll material of such length that the looped support is normally held distorted into slightly expanded condition by the pressure of the scroll material on the strip, the arrangement being such that as the temperature of the translucent scroll material and the metal strip rises the strip is adapted to yield to the necessary extent for keeping the scroll material at all times smoothly in the predetermined designed relationship to the strip.

In one of the forms of device as shown, a sheet of parchment or the like is employed, held flat by the supporting means in position for displaying advantageously advertising sign subject matter on its face.

It is another object of this invention to improve lamps in sundry details hereinafter pointed out. The preferred means by which my several objects are attained are shown in the accompanying drawings, in which

Fig. 1 is a side elevation of a preferred form of lamp embodying my invention.

Fig. 2 is an end view of the lamp shown in Fig. 1 as seen from the right therein.

Fig. 2a is an inside face view of a fragmentary portion of the scroll material and its associated parts, substantially as seen at the line 2a—2a of Fig. 2.

Fig. 3 is a side elevational view showing a modified form of the lamp.

Fig. 4 is a front face view of a combination lamp and advertising sign structure.

Fig. 5 is an end view of the device as seen from the left in Fig. 4.

Fig. 6 is a side elevational view of a modified form of lamp.

Fig. 7 is a central vertical sectional view through the lamp of Fig. 6.

Fig. 8 is a side elevational view of a modified form of lamp, with parts broken away for clearness of illustration.

Fig. 9 is a top plan view of still another modified form of lamp.

Fig. 10 is a vertical section view taken substantially at the line 10—10 of Fig. 9, and

Fig. 11 is an inside face view of a fragmentary portion of the scroll of the lamp of Fig. 9 substantially as seen at the line 11—11 of Fig. 9.

Referring now to the several figures of the drawings in which corresponding parts are indicated by the same reference characters, 20 indicates a base of any suitable type having a spiral 21 secured in vertical position thereon, the spiral being in the form of a strip of metal bent into spiral form as is best shown in Fig. 2, and being secured to the base 20 at an intermediate point along the strip by means of a bolt 22, as is clearly shown in Fig. 2. In this arrangement, the part of the spiral 21 extending toward the left from the bolt 22 in Fig. 2 comprises an outer loop, and the part extending toward the right from said bolt 22 comprises an inner loop. At its inner end, the strip 21 is bent inwardly at an angle and is connected with a socket member 24 in which electric light bulbs 25 are mounted in substantially centered position with respect to the spiral 21. At its outer end, the strip 21 is provided with a hook 26 adapted to hold in position one edge of a sheet of translucent material 27 which in the arrangement shown is in the form of a piece of parchment which is notched at 28 for receiving the hook 26 as is clearly shown in Fig. 2a. The sheet material is held in spiral form corresponding to the form of the strip 21, with its inner edge engaging the hook 23. In the arrangement shown, the spiral 21 is resilient so as to yield upon the application of a comparatively

light pressure thereon. The parchment sheet 27, wound loosely into the form of a volute scroll as shown in Fig. 1, is of such length between the hooks 23 and 26 as to cause the spiral to be expanded very slightly from normal condition upon the threading of the sheet material into position in the spiral, such expansion being produced by the pressure of the parchment sheet at its ends on the hooks longitudinally of said strip 21.

In the arrangement shown, an electric light wire 29 is connected with the base 20 and extends upwardly through the wall of the base into engagement with the spiral 21 and extends thence around on the outer face of the strip 21 to the socket 24 with which it has an effective electrical connection in any suitable manner. The wire 29 is preferably connected with a switch of any suitable form, not shown, located inside of the base 20 for controlling the delivery of current to the light bulbs 25, such switch being controlled by a thumb piece 30 of any suitable type as shown in Figs. 1 and 2.

With the parchment 27 notched at both ends for engagement with the hooks 23 and 26, and with the proportions of the parts such as to cause the spiral to be placed slightly under tension under normal conditions, the parchment is held very securely and very smoothly in position. As the heat at the bulb 25 builds up gradually, so as to raise the temperature of the scroll 27 and the spiral 21, the parts are adapted to yield to the necessary extent as expansion takes place for keeping the scroll constantly under light spring tension.

In the arrangement as shown in Fig. 3, the construction is generally similar to that above described, except that the parchment is placed in vertical position rather than in horizontal position. In the lamp of Fig. 3 a base 31 is provided with a standard 32 upon which a spiral 33 is secured so as to support a parchment 34 in the form of a scroll about a source of light in centered position within the scroll. A thumb piece 35 is shown for operating the switch by which the delivery of current to the light source means is controlled.

In the device of Figs. 4 and 5 a base 36 of any suitable type is provided, having brackets 37 rigidly mounted thereon, the brackets 37 being connected at their outer ends with a flattened tubular member 38 which is secured at an intermediate point there along to the brackets. The major portion of the tubular member 38 is straight and held in oblique position, as is clearly shown in Fig. 5, with its upper and lower end portions bent into the form of loops 39 and 40. At the free end portions of the loops, the tubular member 38 is bent inwardly and is connected in each instance with a socket member 41 supporting the electric light bulbs 42, the electric light wire 43 for supplying current to the bulbs being threaded along the tube 38, as is best indicated in Fig. 5.

Along the straight portion of the tubular member 38 and inside of the loop portions 39 and 40 a sheet of parchment 44 is mounted, having notched engagement at its ends with the inwardly turned end portions of the tube so as to cause the parchment to be held snugly in position as shown in said Figs. 4 and 5. The arrangement is such that the parchment 44 is adapted to display to very great advantage any advertising subject matter printed on its front face, as will be appreciated from an inspection of Fig. 4.

In the arrangement shown in Figs. 6 and 7, a base 45 is provided having a standard 46 rising therefrom for supporting an electric light bulb 47 at its upper end. Upon the bulb 47, a bracket 48 is releasably mounted by means of a clip 49 of any suitable type, the bracket 48 being connected at its free end with a spiral member 50 similar to the spiral member 21 as shown in Fig. 2, the spiral 50 being connected at its inner end portion with the bracket 48. At its outer end portion, the spiral member 50 is bent inwardly at an abrupt angle for connecting the outer ply of the coil with the adjacent ply at 51. A sheet of translucent material 52 in the form of a scroll is supported by the spiral 50 by notched engagement with the spiral at its end portions. The arrangement is such that the spiral 50 and scroll 52 can be supported from any lamp under any ordinary conditions.

In the arrangement shown in Fig. 8, a base member 53 preferably of porcelain, is provided with a cross bar 54 at opposite ends of which two spiral members 55 and 56 are mounted in vertical position, such spiral members 55 and 56 being of similar size and shape so as to cooperate with each other for holding a scroll 57 removably in position, such scroll 57 being formed of parchment or similar material. The base 53 is provided with a socket member 58 in which an electric light bulb 59 is removably mounted in centered position with respect to the scroll 57. As is shown at the right in Fig. 8, each of the spiral members 55 and 56 is provided with a hook 60 at its inner end having engagement with a notch 61 in the inner edge of the scroll 57. At its outer end, it is in notched engagement with the socket member 58. The construction is such that the scroll 57 can be very quickly and easily placed in position or removed therefrom when desired.

In the arrangement of Fig. 9, a base 62 is provided supporting a standard 63 at the upper end portion of which a spiral member 64 is connected at its outer end portion. An auxiliary strip of sheet metal 65 is provided along the outer face of the spiral member 64 for reinforcing the spiral member 64 at its outer end portion, the strip 65 being connected to the spiral 64 by means of a bolt 66, as is clearly shown in Fig. 9. As is best illustrated in Fig. 10 the spiral 64 is in the form of a channel opening inwardly, the electric light wire 67 being mounted between the upwardly extending flange of the channel and the auxiliary reinforcing bar 65 so as to be supported securely in position. At its inner end, the spiral 64 is provided with a socket member 68 within which one or more electric light bulbs 69 are removably mounted in centered position with respect to the spiral. Threaded inside of the spiral 64, there is a parchment 70 having hooked engagement with the end portions of the spiral structure for securing the parchment firmly in position. For insuring the support of the parchment within the spiral, I have provided a series of lugs 71 in spaced relation to each other about the scroll so as to have readily releasable engagement with the spiral member 64, as is best indicated in Fig. 10. By the provision of the lugs 71 engaging the spiral member 64, I am assured that the parchment scroll 70 will be maintained at all times in the designed shape and in the designed position.

By the improved arrangement as shown and as above described, a highly effective and attractive lamp construction has been attained in which the light is diffused thoroughly, and by which

objectionable glare is prevented. The arrangement is such, also, as to avoid shadows upon the ceiling and walls almost entirely. By the diffusion of the light through succeeding plies of the translucent scroll material, the light is made very mellow and even, and the gradation of light from the one point to another is effected without abrupt contrast from one point to another, since the edge portions of the parchment are not supported except as they form parts of the parchment as a whole.

While I prefer to employ the form and arrangement of parts as shown in my drawings and as above described it is to be understood that my invention is not limited to the arrangement of parts as shown except so far as the claims thereto are limited, it being understood that changes might well be made in the form and arrangement of the parts without departing from the spirit of my invention.

I claim:

1. In a lamp, the combination of means for producing light, spiral supporting means formed of strip material bent into shape about the light producing means in substantially centered position with respect thereto, and a piece of translucent sheet material in the form of a scroll supported by said spiral supporting means in spaced relation to the ends of the scroll and comprising a plurality of thicknesses of the sheet in spaced relation to said light producing means and in spaced relation to each other and with the outer end portion of the sheet material of decreased width so as to cause the outer turns of the scroll to be shorter than the inner turns.

2. In a lamp, the combination of a resilient strip of material bent into spiral form adapted to yield upon the application of pressure thereon, a means for producing light connected with said spiral member in substantially centered position with respect thereto, means for supporting said spiral member and said light producing means, and a piece of resilient translucent sheet material threaded inside of said spiral member and held yieldingly thereby in spiral form with the sheet material holding the spiral member in slightly expanded condition.

3. In a lamp, the combination of a base, a strip of resilient material mounted at an intermediate point on said base with its end portions at opposite sides of the point of connection with the base bent into the form of loops, a piece of translucent sheet material mounted on said strip so as to be held in position thereby with the end portions of the sheet material shaped by said loops, and margin stop means carried by said strip for limiting the edgewise movement of the sheet material with respect to said loops, said piece of sheet material being of such length as to expand said

loops slightly against their resiliency for causing the loops to press snugly against the sheet material.

4. In a lamp, the combination of a strip of material bent into spiral form, a base on which said spiral is mounted on edge at an intermediate point therealong, a means for producing light connected with the inner end portion of said strip in substantially centered position with respect to the spiral, and a piece of translucent sheet material threaded inside of said spiral member so as to be held thereby in spiral form and having its end portions held in position by hooked end portions of said strip.

5. In a lamp, the combination of a strip of material bent into spiral form, a clip on the inner end of said spiral adapted to be supported by engagement with an electric light bulb at substantially the center of curvature of the spiral, and a piece of translucent sheet material positioned inside of said spiral member so as to be held thereby in spiral form and having its end portions held in position by engagement with stop portions of the spiral at the opposite ends of the strip.

6. In a lamp, the combination of a standard, a strip of supporting material bent into spiral form and mounted in a horizontal plane on said standard, a means for producing light connected with the inner end portion of said spiral so as to be held in substantially centered position with respect to the spiral, a piece of translucent sheet material positioned inside of said spiral member so as to be held in spiral form thereby, and supporting devices on said sheet at comparatively small intervals therealong adapted by loose contact with said spiral to hold the sheet material removably in position pressed outwardly against the strip by the resiliency of the sheet.

7. In a lamp, the combination of a standard, a strip of material in the form of a channel bent into spiral form with the channel opening inwardly and mounted in horizontal position on said standard, a reinforcing bar curved to conform with the shape of the spiral connected with said standard and engaging an intermediate portion of said spiral for supporting it more strongly in position, a means for producing light connected with the inner end portion of said spiral so as to be held in substantially centered position with respect to the spiral, a piece of translucent sheet material threaded inside of said spiral member so as to be held in spiral form thereby, and lugs on the outer face of said sheet at spaced points thereon adapted by engagement inside of the channel of said strip to support the sheet material in position.

DONALD W. PAUL.