Dec. 18, 1928. 1,695,413

W. P. CROCKETT

ELECTRIC LIGHT FIXTURE

Filed April 4, 1927 2 Sheets-Sheet 1

Fig. 1.

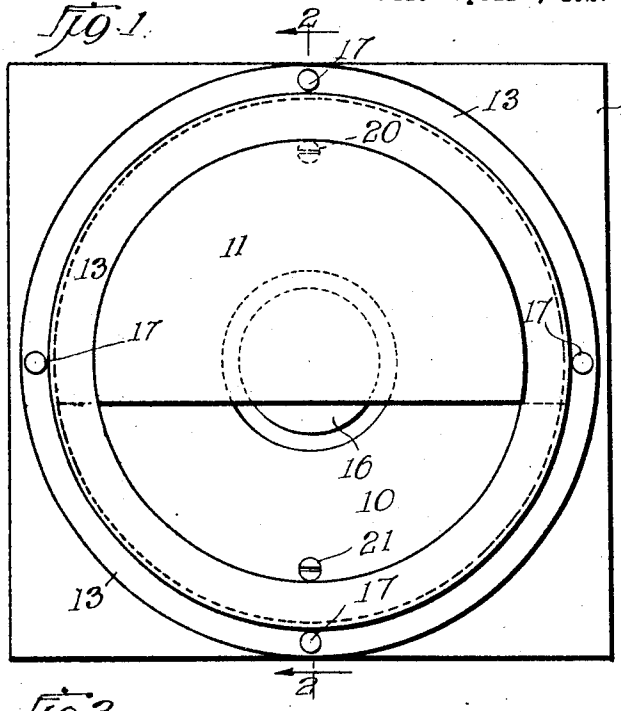


Fig. 2.

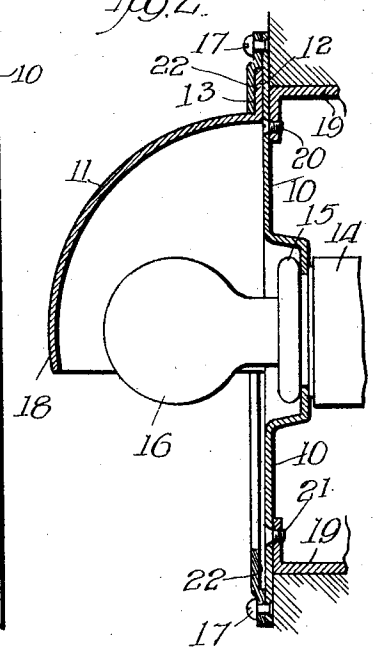


Fig. 3

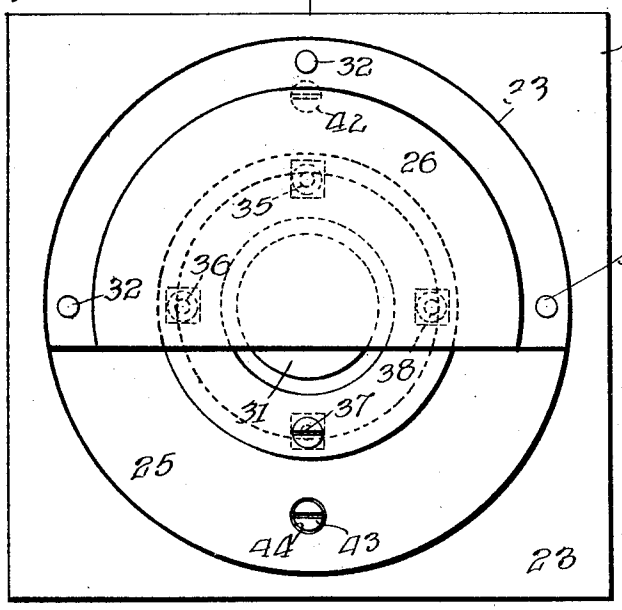
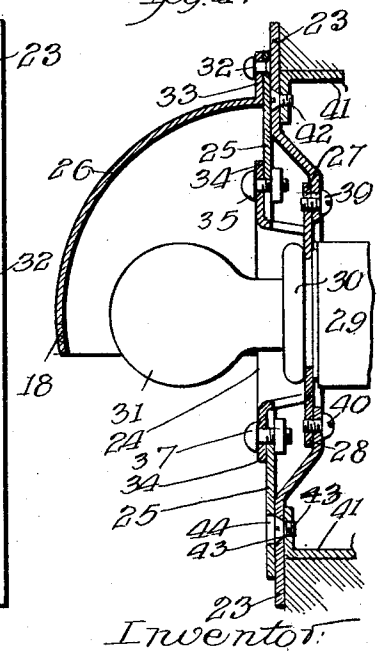


Fig. 4.



Witness

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Fig. 5.

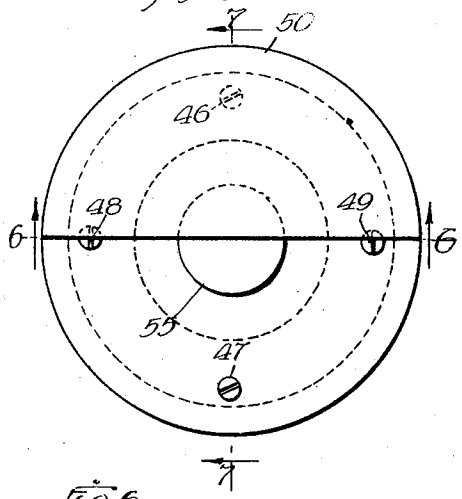


Fig. 9.

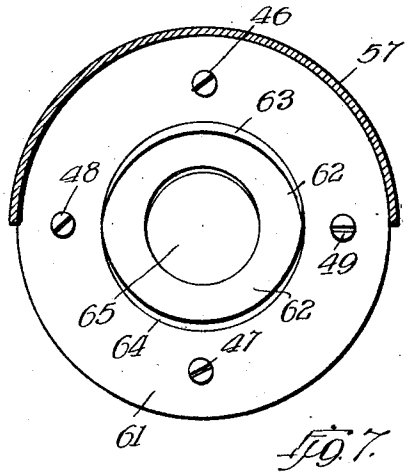


Fig. 6.

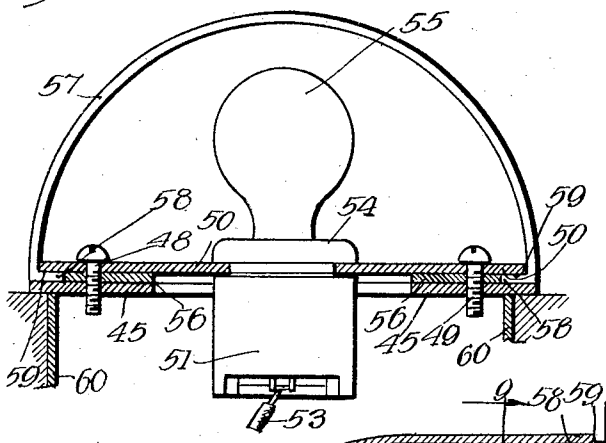


Fig. 7.

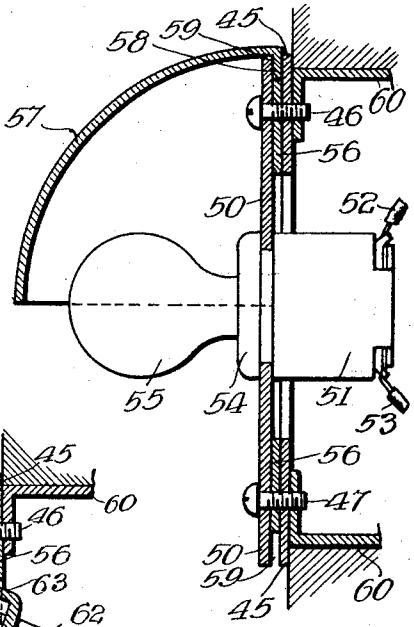
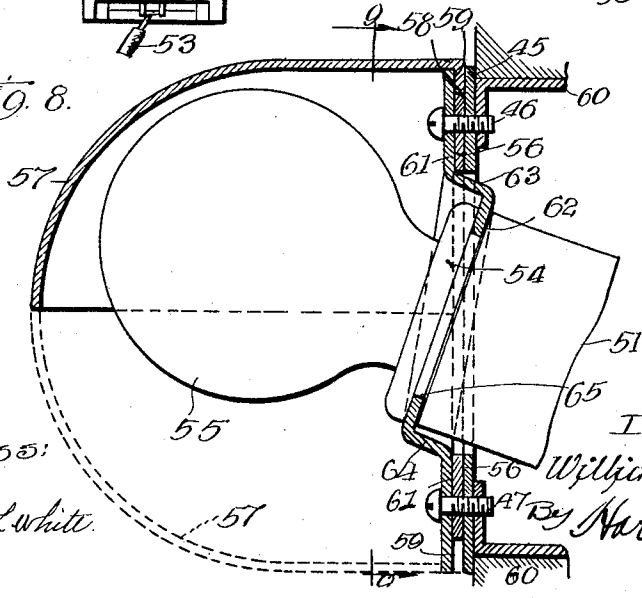


Fig. 8.



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UNITED STATES PATENT OFFICE.

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ELECTRIC-LIGHT FIXTURE.

Application filed April 4, 1927. Serial No. 180,672.

The invention relates to an electric light fixture, and particularly that type of fixture wherein a shade is used which may be rotated to cause the light from the electric lamp to be reflected in any direction which may be desired.

This application is a continuation in part of my co-pending application for United States Letters Patent for improvement in electric light fixture, filed November 27, 1925, and given Serial No. 71,603, and this application also includes further modified forms of electric light fixtures not shown or disclosed in the co-pending application.

The electric light fixture of the invention is particularly adapted for use in any instance where it is desired to shade the lamp and cause the rays of light to be reflected in a certain direction, being also constructed in such a manner that the shade may readily be rotated and frictionally held in any desired position to cause the light rays to be reflected in any desired direction.

The principal object of the invention is to provide a construction which is especially useful in hospitals when a subdued light from the lamp is desired and not a full flood of light. In order to make the light inconspicuous and not disturb the patient, if the fixture is in the room, or disturb anyone, if the fixture is in the corridor, the fixture is preferably placed about 18 inches from the floor with the shade in position to cause the light rays to be reflected downwardly. In case anyone should desire to use the light available from the shaded lamp, as, for instance, to examine instructions, a thermometer, etc., the shade may be rotated about one-half turn and the light will then be reflected upwardly, or it may be rotated any amount and frictionally held in any desired position to cause the rays of light to be reflected where desired.

In connection with one of the modified constructions referred to hereinafter, it is an object of the invention to construct the fixture in such a manner that the light socket receiving member of the fixture shall have offset portions to receive an electric light bulb which is larger than the bulb which could be readily used in connection with the other fixtures shown and described herein. Because of the nature of the offset in the member, when the shade is rotated to a certain position the larger bulb may be inserted and removed without removing the shade or unscrewing portions of the fixture. By means of the offset member referred to, light bulbs of various standard dimensions can be used with the invention.

The invention will be explained and more clearly understood when read in conjunction with the accompanying drawings which illustrate embodiments of which the invention is susceptible, it being obvious that changes and modifications in various details of the device may be made without departing from the spirit of the invention as expressed in the appended claims forming a part hereof.

In the drawings:

Figure 1 is a front elevation of a form of electric light fixture with its supporting wall plate.

Figure 2 is a vertical sectional view of the form of light fixture shown in Figure 1, on the line 2—2 thereof, looking in the direction of the arrows.

Figure 3 is a front elevational view of a modified form of the electric light fixture.

Figure 4 is a vertical sectional view of the modified form of the light fixture shown in Figure 3, on the line 4—4 thereof, looking in the direction of the arrows.

Figure 5 is a front elevational view of another modified form of electric light fixture.

Figure 6 is a horizontal sectional view of the light fixture illustrated in Figure 5, on the line 6—6 thereof, looking in the direction of the arrows.

Figure 7 is a vertical sectional view of the light fixture illustrated in Figure 5, on the line 7—7 thereof, looking in the direction of the arrows.

Figure 8 is a vertical sectional view of still another modified form of electric light fixture which employs a light socket receiving member having offset portions, and,

Figure 9 is a front elevational view of the light fixture shown in Figure 8, on the line 9—9 thereof, with the lamp bulb removed and showing the lamp shade in section.

The structure of the invention, as shown in Figures 1 and 2, comprises the relatively stationary combined supporting wall face plate and electric lamp and lamp socket receptacle 10, the lamp shade or cowl 11, which is preferably opaque, with its flange 12, and the annular retaining ring 13.

The supporting wall face plate 10 may have a square outline, may be circular, conforming to the outline of the inner retaining

ring 13 and shade 11, or, it may be rectangular, and may embody various features such as switches, sockets, connecting mechanism and the like.

The plate and lamp socket receptacle 10 is formed to receive the electric lamp socket 14, the lamp socket collar 15, and the electric lamp or bulb 16, the lamp socket collar and bulb being of the usual construction. The annular retaining ring 13 is permanently and securely fastened to the combined face plate and lamp receptacle 10 by means of a plurality of rivets 17, or in any other suitable manner.

The shade 11 is shown with its lower portion 18 extending beyond the longitudinal central line of the lamp 16 to thereby furnish more shade than would be the case, if the lower edge of the shade 11 was in line with the longitudinal central line of the lamp 16. Although the shade 11 has been shown with the portion 18 extending beyond and below the longitudinal central line of the lamp 16, it will be understood that the shade 11 may be formed without the extended portion 18, but with the lower edge in line with the longitudinal central line of the lamp or bulb 16. In some instances, it may be advantageous, from a manufacturing standpoint, to form an annular piece of metal into a cupped or dished-in portion and a suitable peripheral flange, and then cut or saw the metal through its central line and thereby produce two shades from the single piece of metal. In this form of shade it is obvious that there will not be an extended portion, such as the extended portion 18 referred to.

The electric light fixture may be mounted in a suitable receptacle or terminal box 19 set in the wall. The fixture is secured in the terminal box 19 by means of screws 20 and 21, which are countersunk in the combined face plate and socket receptacle 10 and extend through the inwardly projecting walls or sides of the terminal box 19.

As will be clearly seen from an inspection of Figures 1 and 2, the lamp shade 11 with its flange 12 may be rotated to any position desired. The shade is held between the face plate and socket receptacle 10 and the retaining ring 13 by having the shade flange 12 held in the groove formed by the ring and plate. It will be noted that the retaining ring 13 is formed in such a manner as to provide a slot or groove 22 when it is secured in place to the face plate and socket receptacle 10, within which slot or groove, the flange of the shade may travel. It is essential that there shall be a friction fit between the movable shade 11 and its flange 12 and the stationary members 10 and 13, so that the shade 11 may remain in the position in which it is placed upon rotation, until it is desired to move it to some other position. It will be understood that it is the primary purpose of the invention to have the parts constructed in such a manner that the shade 11 may be rotated and placed in any position, and that it will remain in that position until it is removed therefrom, as, for instance, by grasping the shade 11 and rotating it to a changed position. It will thus be seen that the shade 11 may be rotated at will to cause the rays of light from the lamp 16 to be reflected downwardly, upwardly, or to either side.

The light fixture as a single unit may be mounted in any suitable location on the wall, or, as shown in the drawings, it may be mounted in a suitable receptacle or terminal box 19 which has been set in the wall. The light fixture is fastened and secured to the terminal box 19 by means of the screws 20 and 21, as above described. In order to place the screw 20 in position, the shade 11, with its attached flange 12, must be rotated a half turn until the upper screw hole in the supporting wall face plate 10 is seen to register with the screw hole in the upper part of the terminal box 19. The screw 20 may then be put into place, thus securing the supporting wall face plate 10 to the terminal box 19. When this has been accomplished, the shade 11 may be rotated a half turn to its upper position revealing the screw hole in the bottom of the supporting wall face plate 10 registering with the screw hole in the lower part of the terminal box 19. The screw 21 may then be put into place. The fixture is now ready for use and the shade may be rotated in the manner set forth.

A further modification of the electric light fixture is shown in Figures 3 and 4. The structure, a shown in these figures, comprises the relatively stationary supporting wall face plate 23, the electric lamp and lamp socket receptacle 24, and the rotatable annular apertured plate 25, to which is secured the lamp shade or cowl 26. The supporting wall face plate 23 is bent inwardly a sufficient distance to enable the lamp socket receptacle 24 to be suitably secured to it. The receptacle 24, which is cup-shaped and adapted to fit within the inwardly extending portion of the face plate 23, has ears or lugs 27 and 28 punched therefrom. The supporting wall face plate 23 and the lamp socket receptacle 24 are both apertured to receive the electric lamp socket 29, the lamp socket collar 30, and the electric lamp or bulb 31.

The lamp shade 26 is permanently and securely fastened to the rotatable annular apertured plate 25 by means of the plurality of rivets 32, or other suitable means. The rivets extend through the flange 33 of the shade 26 and the rotatable annular apertured plate 25. It will thus be seen with this type of construction, that the shade 26 and the plate 25 always rotate together.

The lamp socket receptacle 24 has an outwardly extending annular flange 34. A plu-

rality of bolts and nuts 35, 36, 37 and 38 are disposed in the annular flange 34. The flange 34 and the plurality of bolts and nuts 35, 36, 37 and 38 provide a means which is the equivalent of a groove for supporting the rotatable annular apertured plate 25 and permitting the plate 25 and the shade 26 to rotate about the electric lamp 31. The inner portion of the plate 25, at the aperture in the plate, rotates between the outer portion of the flange 34 and the nuts on the bolts 35, 36, 37 and 38. The bolts serve as shoulders or limiting stops in the rotation of the plate 25.

In assembling the form of light fixture last described, the shade 26 is secured to the rotatable apertured plate 25 by means of the rivets 32 passing through the plate 25 and the flange 33. The lamp socket receptacle 24 is then passed into the aperture of the plate 25 with the annular flange 34 against the inner portion of the plate 25. The bolts and nuts 35, 36, 37 and 38 are then placed in position. The wall plate 23 is next attached to the ears 27 and 28 of the lamp socket receptacle 24 by means of the plurality of screws 39 and 40. The lamp socket 29, collar 30 and lamp 31, may be secured into position in the apertures of the lamp socket receptacle 24 and the face plate 23. As thus assembled, the fixture may be mounted in the terminal box 41 set in the wall. The fixture is fastened to the terminal box 41 by means of screws 42 and 43 countersunk in the plate 23 and extends through the inwardly extending walls of the terminal box 41. In order to place the screw 42 in position, the shade 26, together with the apertured plate 25, is rotated a half turn until the screw hole 44 in the plate 25 registers with the screw hole in the upper part of the supporting wall plate 23 for the admission of the screw 42. After the screw 42 has been put in place, the shade 26 and attached plate 25 may be rotated a half turn until the screw hole 44 registers with the screw hole in the bottom part of the supporting wall plate 23 for the admission of the screw 43. The fixture is now assembled ready for use and the shade may be rotated as desired.

Another modification of the invention will be found in Figures 5, 6 and 7 of the drawings. As shown in these figures, the electric light fixture comprises the relatively stationary supporting wall plate 45 to which is secured by a plurality of screws, 46, 47, 48 and 49, or other suitable means, a flat, annular, apertured face plate 50. Besides serving as a face plate, the plate 50 functions as an electric lamp socket and electric lamp receptacle. The electric lamp socket 51, having conductors 52 and 53, and the lamp socket collar 54, are secured in the aperture of the annular face plate 50. An electric light bulb 55 is fitted into the socket and collar.

A flat, annular, apertured ring 56 is interposed between the wall plate 45 and the face plate 50. This ring 56 is held in position between the plates 45 and 50 respectively by means of the screws 46, 47, 48 and 49.

The shade 57, which is preferably opaque and which may or may not have the extended portion 18 as shown in Figures 1 to 4 inclusive, is provided with the inwardly turned and extended flange 58. The shade may be rotated to any position desired, as heretofore described, the flange 58 of the shade rotating in the groove 59 formed by the face plate 50, the wall face plate 45 and the intermediate spacer ring 56. The intermediate spacer ring may be of fibre or any suitable material and is compressed between the two plates 45 and 50, but always in such a manner that the flange 58 of the lamp shade will be frictionally held in the desired position to which the shade is rotated in the groove 59.

The electric light fixture of Figures 5, 6 and 7 may be mounted in a terminal box 60 or other suitable receptacle which may be set in the wall. The fixture is secured to the box by means of the screws 46 and 47 which extend through the inwardly projecting walls or sides of the box.

As was described in connection with the preceding structures, in order to place the screw 46 in position, the shade 57, with its attached inwardly extending flange 58, must be rotated a half turn until the upper screw hole in the plates 45 and 50 and the intermediate ring 56 are seen to register with the screw hole in the upper part of the terminal box 60. The screw 46 should then be inserted into place, thus securing the face plate 50, the ring 56 and the inner wall plate 45 into position on the wall box or other receptacle. After this has been done, the shade 57 may be rotated a half turn to its upper position, revealing the screw hole in the bottom of the wall face plate 50, which screw hole registers with the screw holes in the inner wall plate 45, the ring 56 and the inwardly extending flange of the wall box 60. After the screw 47 has been inserted into position, the fixture is ready for use and the shade may be rotated in the groove 59 to any position desired.

The modified electric light fixture which is shown in Figures 8 and 9 of the drawings, is identical with the electric light fixture construction of Figures 5, 6 and 7, except as to the construction of the outer face plate corresponding to the outer face plate 50. The same reference numerals will be used in connection with the modifications shown in Figures 8 and 9 as were used in Figures 5, 6 and 7, except as to the outer face plate.

The outer face plate 61, serving the same function as the plate 50 referred to, is provided with the apertured angularly offset portion 62. The top portion is indented inwardly as shown at 63, whereas the lower portion extends outwardly as indicated at 64. The purpose of the offset arrangement of the

face plate 61 is to permit within its aperture 65 the inclusion of a larger sized electric light socket, and accordingly a larger sized electric lamp bulb than would be possible in structures like those of Figures 1 to 7 inclusive. The electric light bulbs inserted in the structures of Figures 1 to 7 inclusive must necessarily be small, since they must be inserted horizontally within the confines of the curved shades and the plates or socket receptacles of the fixtures. A large bulb could not be fitted into the light socket, since it could not pass the lower end of the shade and therefore of course could not be inserted into the lamp socket. However, with the offset arrangement of the face plate 61 a large electric lamp socket with a large lamp bulb may be used because they may be placed in position in the aperture 65 when the lamp shade is rotated downwardly one-half turn as shown in the dotted lines in Figure 8. After insertion of the lamp in place, the lamp shade may be rotated to its normal position as shown in the full lines in Figure 8. After the light bulb has been inserted in position, the shade may be rotated to any desired position where it will be frictionally held as long as may be desired. When there is need of replacement of the light bulb because it has burned out or for any other reason, it will be seen that the light bulb may readily be removed by rotating the shade downwardly, extracting the used bulb and inserting the new one, and then rotating the shade to its former position.

Although not shown in any of the views of the drawings in this application, it will be understood that shims of suitable form and dimension, such as the shims 27 in my copending application, may be employed between the rotatable and stationary members of the various constructions of electric light fixtures.

Having thus described the invention, what I claim and desire to secure by Letters Patent is:

1. In a light fixture the combination of a plate, a shade, a lamp receptacle, a groove formed between said plate and receptacle said groove formed by said plate and receptacle and another member of lesser diameter than said plate and receptacle, said shade being rotatable in said groove.

2. In an electric light fixture of the class described, the combination of a wall plate, said wall plate being apertured, a face plate also apertured and adapted to receive an electric light socket and lamp, a ring interposed between said wall and face plates, said ring being of a lesser dimension than both of said wall and face plates and of a sufficient thickness to furnish a shoulder on its outer perimeter, said shoulder and outwardly extending portions of said wall and face plates forming a groove, a shade, an inwardly extending flange on said shade, the inner perimeter of said flange being adapted to contact with the outer perimeter of said intermediate ring, said wall plate, face plate, shade flange and intermediate ring having frictional contact to permit the rotation of said shade and flange in said groove to any place desired.

3. In an electric light fixture of the class described, the combination of a wall plate, said wall plate being apertured, a face plate having its central portion angularly offset, an aperture in said angular offset portion of said plate adapted to receive an electric light socket and lamp, a ring interposed between said wall and face plates, said ring being of a lesser dimension than both of said wall and face plates and of a sufficient thickness to furnish a shoulder on its outer perimeter, said shoulder and outwardly extending portions of said wall and face plates forming a groove, a shade, an inwardly extending flange on said shade, the inner perimeter of said flange being adapted to contact with the outer perimeter of said intermediate ring, said wall plate, face plate, shade flange and intermediate ring having frictional contact to permit the rotation of said shade and flange in said groove to any place desired.

4. In an electric light fixture of the class described, the combination of a wall plate, said wall plate being apertured, a face plate having its central portion angularly offset, an aperture in said angular offset portion of said plate adapted to receive an electric light socket and lamp, said angular offset being indentured at one portion and outwardly extended at another, a ring interposed between said wall and face plates, said ring being of a lesser dimension than both of said wall and face plates and of a sufficient thickness to furnish a shoulder on its outer perimeter, said shoulder and outwardly extending portions of said wall and face plates forming a groove, a shade, an inwardly extending flange on said shade, the inner perimeter of said flange being adapted to contact with the outer perimeter of said intermediate ring, said wall plate, face plate, shade flange and intermediate ring having frictional contact to permit the rotation of said shade and flange in said groove to any place desired.

5. In an electric light fixture of the class described, the combination of a wall plate, said wall plate being apertured, a face plate having its central portion angularly offset, an aperture in said angular offset portion of said plate adapted to receive an electric light socket and lamp, said angular offset being indenturned at one portion and outwardly extended at another, in opposite directions from the plane of said face plate, a ring interposed between said wall and face plates, said ring being of a lesser dimension than both of said wall and face plates and of a sufficient thickness to furnish a shoulder

on its outer perimeter, said shoulder and outwardly extending portions of said wall and face plates forming a groove, a shade, an inwardly extending flange on said shade, the inner perimeter of said flange being adapted to contact with the outer perimeter of said intermediate ring, said wall plate, face plate, shade flange and intermediate ring having frictional contact to permit the rotation of said shade and flange in said groove to any place desired.

6. In an electric light fixture of the class described, the combination of a wall plate, said wall plate being apertured, a face plate having its central portion angularly offset, an aperture in said angular offset portion of said plate adapted to receive an electric light socket and lamp, said angular offset being indentured at one portion and outwardly extended at another, in opposite directions from the plane of said face plate, a ring interposed between said wall and face plates, said ring being of a lesser dimension than both of said wall and face plates and of a sufficient thickness to furnish a shoulder on its outer perimeter, said shoulder and outwardly extending portions of said wall and face plates forming a groove, a shade, an inwardly extending flange on said shade, the inner perimeter of said flange being adapted to contact with the outer perimeter of said intermediate ring, said wall plate, face plate, shade flange and intermediate ring having frictional contact to permit the rotation of said shade and flange in said groove to any place desired, whereby, on the half turn of said shade in said groove, a relatively large lamp bulb may be inserted in said lamp socket aperture and held in place against removal upon the restoration of said lamp shade to its normal position in said groove.

7. In an electric light fixture the combination of a plate, a lamp socket receptacle, a shade, and means intermediate said plate and receptacle for guiding the rotation of said shade on said plate.

8. In an electric light fixture the combination of a plate, a lamp socket receptacle, a shade, and means for guiding the rotation of said shade on said plate, said means consisting of a spacing member intermediate the plate and receptacle forming a pathway for the rotation of said shade, said spacing member being of a lesser diameter than the plate and receptacle.

In witness whereof, I hereunto subscribe my name this 30th day of March, A. D., 1927.

WILLIAM P. CROCKETT.