L. SCHEPMOES.

LAMP.

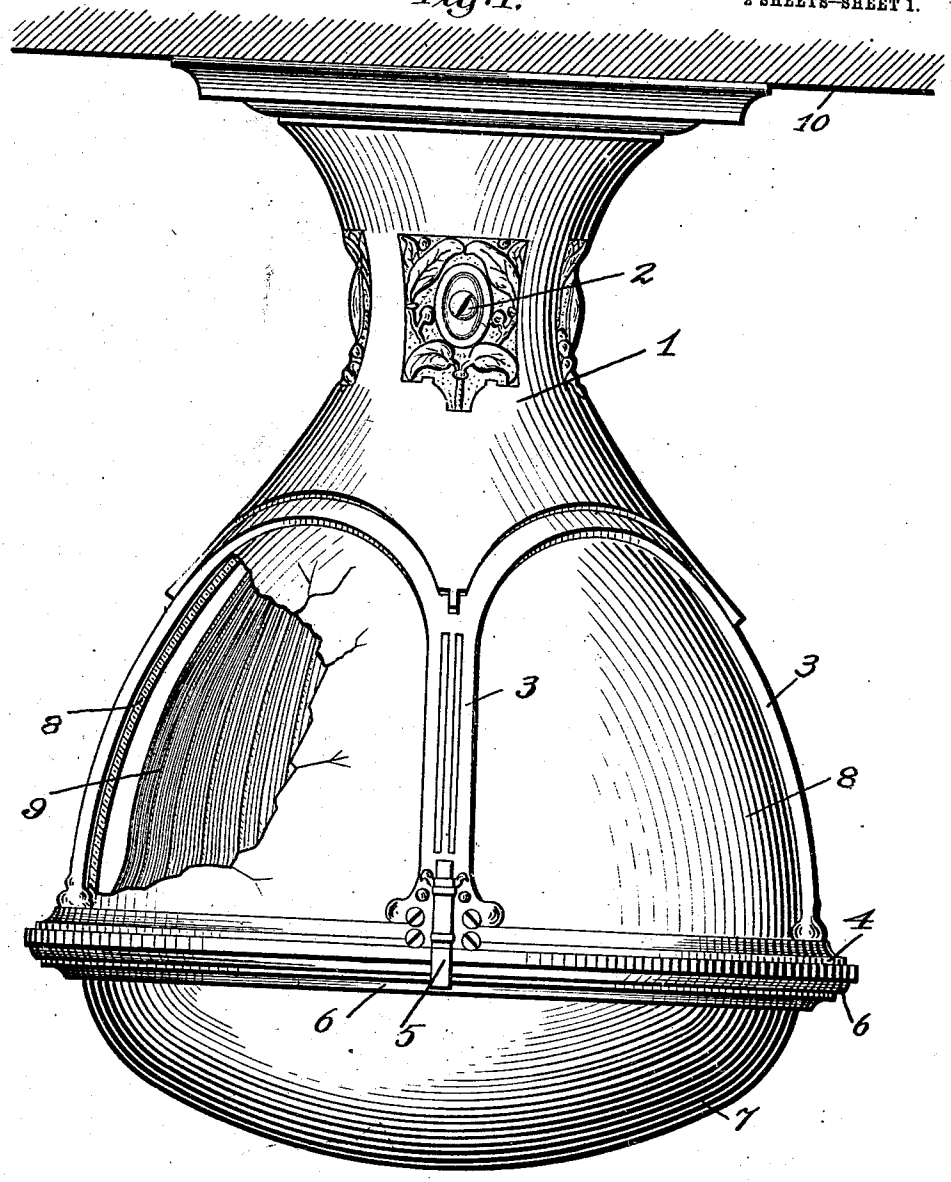
APPLICATION FILED MAY 21, 1912.

1,043,256.

Patented Nov. 5, 1912.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 2.

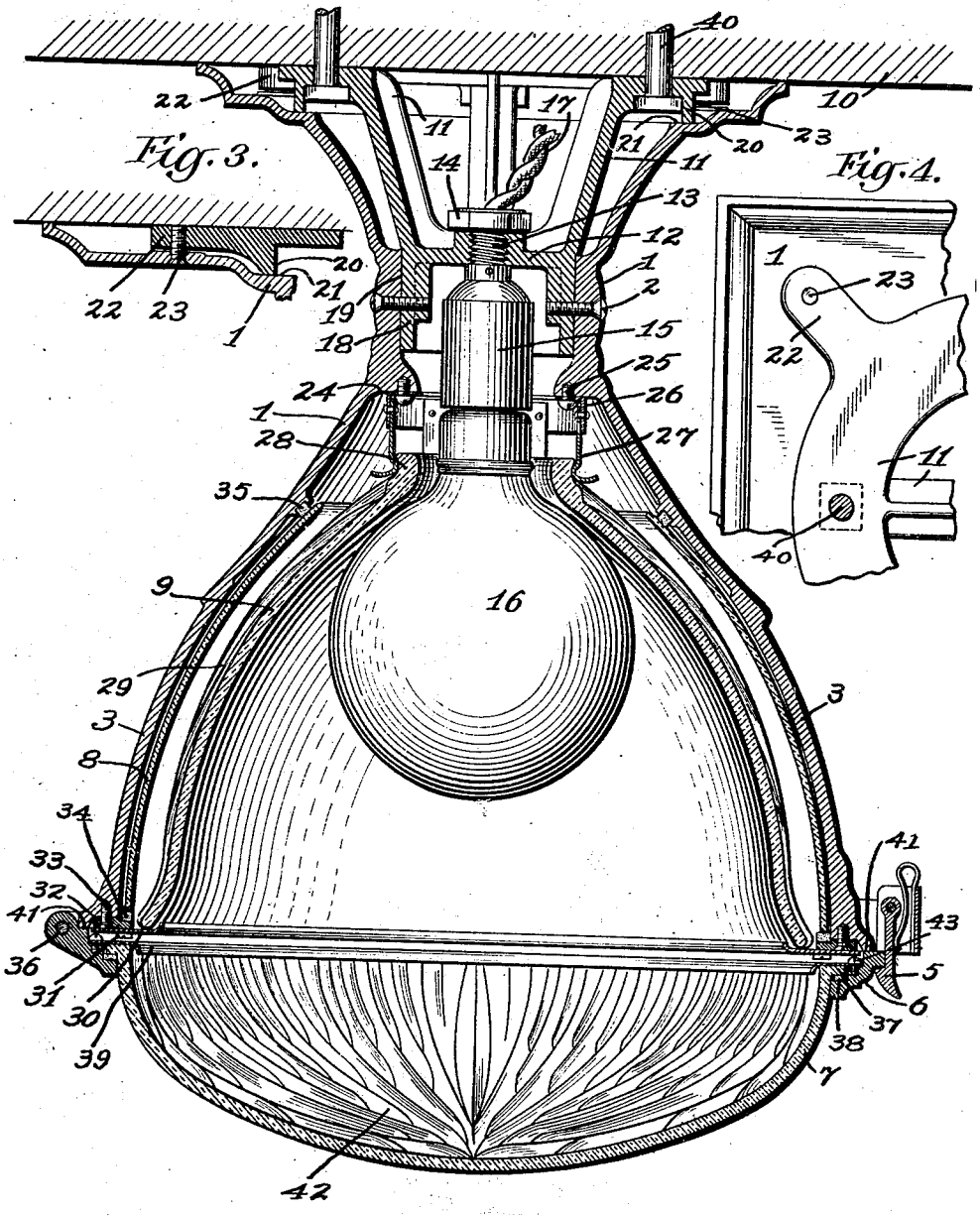

Fig. 3.

Fig. 4.

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LAMP.

1,043,256. Specification of Letters Patent. Patented Nov. 5, 1912.

Application filed May 21, 1912. Serial No. 698,725.

To all whom it may concern.

Be it known that I, LINDSLEY SCHEPMOES, a citizen of the United States, residing in Hasbrouck Heights, county of Bergen, and State of New Jersey, have invented new and useful Improvements in Lamps, of which the following is a description.

My invention pertains to that class of lamps wherein it is desired to support a source of illumination and direct the rays thereof in a predetermined manner.

My invention has for a particular object to provide such a lamp wherein a source of illumination will be properly supported and reflecting or refracting means retained in proper operative relation to said source in such manner as to properly direct the rays in desired directions and be protected in such manner that the reflecting or refracting surfaces will not have their functions altered by contact with dust, moisture or other matter which may come in contact with the lamp.

Figure 1 is an elevation of a pendant type of lamp to which my invention is particularly applicable, a portion of the said lamp being broken away to show a portion of the interior in elevation. Fig. 2 is a vertical section of the lamp shown in Fig. 1 as viewed from the left. Fig. 3 is a section showing in detail a portion of the lamp shown in Figs. 1 and 2. Fig. 4 is a top plan of a portion of the lamp as appearing in section in Fig. 2.

Referring particularly to Fig. 1, 1 represents a shell or body portion which may possess any desired ornamental characteristics and which may be held in place by suitable screws indicated at 2, as will hereinafter more plainly appear. The shell member 1 is preferably provided with ornamental extending members 3, which carry the annular ring 4, supporting the latch 5, which holds the bezel ring 6 closed against the ring 4, as will hereinafter more plainly appear. The bezel 6 carries the light transmitting bowl 7. 8 represents a light transmitting dome held in place within the members 3 and may be preferably of semi-transparent material, as for example, a colored or opal glass. A portion of the dome 8 is shown broken away in Fig. 1 so as to expose the outer surface of the reflecting member 9 carried in proper position within the dome 8. The outer surfaces of the bowl 7 and dome 8 are preferably smooth so that these light transmitting members which are exposed to the atmosphere and most liable to become covered or coated with dust or moisture may be readily cleaned, and furthermore, the bowl 7 and dome 8 are so designed and disposed that their outward surfaces are not utilized in the reflection or refraction of the light from the source in desired directions but are as near as possible mere transmitting surfaces as will hereinafter be more plainly brought out, it being well understood that moisture or dust upon such mere transmitting surfaces will not cause as great an effect upon the proper distribution of the light as when the reflecting or refracting surfaces are coated.

Referring to Fig. 2, 11 represents a spider casting or supporting member which may be secured against a ceiling or deck 10, as by means of bolts or screws indicated at 40. The supporting member 11 is provided with a central portion 12 into which is threaded a nipple 13 which may be held in proper position as by means of lock nut 14. The nipple 13 carries a socket or receptacle 15 adapted to support a proper source of illumination, as for example, the electric lamp or bulb 16 which may be connected electrically with any suitable source of supply as by the wires 17 passing through the nipple 13. The supporting member 11 is provided with a sleeve portion 18 turned to fit the internal bore of the neck of the shell 1 as indicated at 19. The member 11 is formed with an annular flange 20 which is turned true upon its face in such manner as to engage the annular portion 21 of the shell 1, which is also turned true so that when the members 20 and 21 are pressed together a dust tight joint is formed at their junction. The openings for engaging the screws 2 are so disposed that when the face of the flange 21 is pressed against the face of the flange 20, the screws will properly register with their respective openings, as shown in Fig. 2, and in order to more definitely insure a dust tight joint between 20 and 21, the supporting member 11 is provided with lugs 22 shown plainly in Figs. 3 and 4, into which are made up the screws 23 passing through slip holes in the flange of the member 1, in such manner that by making up the

screws 23 the flange 21 is firmly held against the flange 20. The interior of the shell 1 is provided with a shoulder 24 against which the screws 25 hold a spun shell of light material indicated at 26. The member 26 carries a series of flexible fingers 27 adapted to be sprung into the annular recess in the flanged neck 28 of the reflecting member 9. The inner surface of the reflecting member 9 is preferably smooth so that the same may be readily cleaned when necessary. The outer surface thereof is provided with reflecting prisms 29 adapted to reflect the rays from the bulb 16 in desired directions, as will hereinafter more plainly appear. The member 9 is held firmly in place by the annular member 30 provided with an upturned lip and held in place as by screws 31 made up into the ring 32 held in place against the internal face of the ring 4 as by screws 33. The ring 32 is provided with an annular felt ring or gasket 34 upon which rests the dome 8 and a felt ring 35 is carried within a groove in the inner portion of the shell 1, so as to engage the upper part of the dome 8, as clearly shown in Fig. 2, in such manner that as the screws 33 are made up and the ring 32 drawn into place, the dome 8 is held firmly between the felt rings or gaskets 34 and 35 so as to form dust proof joints at both contacts with the said rings. 36 represents a hinge which unites one side of the bezel 6 with the ring 4, while the opposite side of the bezel is engaged by the latch 5, the hinge 36 and the latch 5 coöperating to hold the bezel properly in place to form a dust proof joint between the bezel 6 and the ring 4 indicated at 41. The inside diameter of the bezel 6 is such that the bowl 7 may pass therethrough while the flange 37 of the bowl rests upon a felt packing or gasket 38 attached to the bezel, as indicated. The bowl 7 is firmly held in place within the bezel as by means of the spun metallic ring 39 fastened to the bezel as by screws 43. The inner portion of the bowl 7 is provided with prisms 42 for diffusing the light emitted by the bulb 16.

In practice my lamp may be assembled, put up and operated as follows:—If desired, the socket 15 may first be wired and then made up with the nipple 13 into the member 11 and firmly held therein as by lock nut 14, the wire 17 being readily adapted for making connection with an external circuit. The dome 8 may be placed within the shell 3 against the soft gasket 35 and then the ring 32 may be placed in position as indicated in Fig. 2, with the gasket 34 against the rim of the dome 8. The screws 33 may then be made up and the ring 32 held firmly in place, the making up of the screws 32 causing the gaskets 34 and 35 to yield and form dust tight joints with the dome 8. The dome 9 may then have its flange 28 forced into proper position between the fingers 27 and then the ring 30 may be placed in its proper position against the rim of the dome 9, as shown in Fig. 2, and the screws 31 made up into the ring 32, in such manner as to firmly hold the ring 30 and the dome 9 in their proper positions. The bowl 7 may be passed through the opening in the bezel 6 and the lip 37 of the bowl will rest upon the soft gasket 38. The ring 39 may then be placed in its proper position and the screws 43 made up into the bezel 6 which may cause the soft gasket 38 to yield somewhat and form a dust tight joint between the lip 37 and the bezel. If desired, the parts may be assembled as above outlined at the factory and the supporting member 11 may have its sleeve 18 inserted into the neck of the shell 1 and the screws 2 and 23 may be made up as shown in Fig. 2. A proper bulb 16 may then be made up into the socket 15 and the lamp will be complete and may be kept in stock or shipped as a complete finished article comprising all the glassware and all parts necessary for operation. If the lamp be completely assembled as outlined above, in order to place the same in use, it is simply necessary to proceed as follows: The latch 5 may be sprung open and the bezel 6 together with the bowl 7 lowered, and the bulb 16 removed. The screws 23 and 2 may then be withdrawn and the spider 11 and socket 15 may be removed from the shell of the lamp. The spider or supporting member 11 may then be fastened against the ceiling or deck as by means of screws or bolts 40, drawn up in such manner as to draw the spider tightly against the deck so as to form a dust tight joint between the upper ring portion of the spider and the deck, a gasket being used if desired. The wires 17 may then be connected with any suitable external circuit. The shell 1 together with the glass ware carried thereby may then be slipped over the sleeve 18 until the flange 21 abuts the flange 20 of the supporting member then the shell 1 may be revolved until the screws 22 may be inserted, as shown in Fig. 2, and these screws may then be properly made up. The screws 23 may then be made up into the bosses 22 and when the bulb 16 is screwed into the socket 15, the lamp is ready for use. It will thus be obvious that if at any time it be desired the entire shell 1, together with all of the glass ware of the lamp; that is, the dome 8, the reflector 9 and the bowl 7 may be removed as a unit from its operative position by merely removing the bulb 16 and withdrawing the screw 23 and the screws 2 and that this removal of the shell will leave the spider or supporting member together with the socket and its electrical connections in their operative positions undisturbed. However, it will also be noted that any of the

glass ware may be removed from my lamp and replaced without necesssity of removal of the shell 1 from its operative position.

The prisms 29 are so designed and arranged that they reflect most of the rays which they receive from the bulb 16 downwardly into the bowl 7 but allow a portion of the light to pass through and illuminate the translucent dome 8 and thus serve to a degree which may be determined by design to illuminate the deck or ceiling. The direct rays of the bulb 16, together with those returned by the reflecting member 9, which fall upon the prisms 42 of the bowl 7. are so reflected and refracted as to be dispersed in a desired manner which is usually in the form of a cone having considerable divergence, as the divergence is preferably increased by the prisms so as to light a considerable area. When my lamp is assembled and operated as above mentioned, it will be noted that if any dust or moisture pass between the upper flange of the shell 1 and the deck or ceiling, it cannot enter the lamp inasmuch as the upper face of the supporting member 11 is firmly bolted against the deck or ceiling and forms a dust tight joint therewith and flange 20 and surface 21 of the member 1 are drawn together so as to form a dust proof joint. Dust or moisture cannot enter between the upper portion of the dome 8 and the inner surface of the shell 1 on account of the dust tight joint made with the gasket 35. No dust can enter between the lower portion of the dome 8 and its supporting means, owing to the dust tight joint made between the gasket 34 and the lower edge of the dome 8. The bezel 6 is closely fitted to the ring 4 as indicated at 41 and no dust can enter the lamp at this joint, while dust is prevented from coming in between the bowl 7 and the bezel by the tight joint secured between the lip of the bowl and the gasket 38. It is, therefore, obvious that moisture and dust cannot enter the lamp so as to become deposited either on the prisms 29 of the reflecting dome 9 nor upon the inner prisms 42 of the bowl 7. However, if, for example, a small amount of dust in time should filter its way into the lamp and become deposited on the inner surface of the member 9 or the prisms of the bowl 7, the inner surfaces of these members may be cleaned by releasing the latch 5 and opening the lamp. The dust and moisture which may accumulate on any of the external light emitting surfaces of the lamp, may be readily removed at any time as these surfaces are perfectly smooth and do not hold dust like the prismatic reflecting and refracting surfaces, and furthermore a slight accumulation on these surfaces does not interfere with the operation of the lamp as much as would the accumulation upon the prismatic surfaces.

From the foregoing, it will be obvious that I have produced a lamp which possesses an ornate external appearance and may be readily assembled in its proper working position and when so assembled will be substantially dust proof and employ prismatic reflectors or refracting means in such manner that the prismatic surfaces are at all times protected from dust and moisture and that all light emitted by the lamp is emitted through outward surfaces which are smooth and readily cleaned.

I do not wish in any way to limit myself to the exact details of construction set forth in this specification which is given to illustrate one type of lamp comprehending my invention, for it will be obvious that wide departure in the way of details may be made without departing from the spirit and scope of my invention which is as set forth in the following claims.

I claim—

1. A lamp comprehending a light-bulb; a member surrounding said bulb and adapted to reflect a portion of the rays of said lamp and to transmit a portion of said rays therethrough; combined with a light-transmitting dome inclosing said member; and means for sealing the dome so as to protect said member from contact with extraneous materials.

2. A lamp comprehending a shell-portion provided with openings; means for supporting a source of illumination within the boundary of the shell-portion; a source of illumination; a member between said source of illumination and said openings in the shell-portion adapted to reflect a portion of the rays of said source and transmit a portion thereof through said openings; combined with light-transmitting means between said last-named member and said openings allowing rays to pass therethrough and preventing contact of extraneous material with said member.

3. A lamp comprehending a shell-portion provided with openings; means for supporting a source of illumination within the boundary of the shell-portion; a source of illumination; a member between said source of illumination and said openings in the shell-portion adapted to reflect a portion of the rays of said source and transmit a portion thereof through said openings; combined with light-transmitting means between said last-named member and said openings allowing rays to pass therethrough and preventing contact of extraneous material with said member and means for establishing a dust-tight joint between said transmitting means and said shell.

4. A lamp comprehending a supporting-member adapted to be held against a surface to form a dust-tight joint therewith; a shell-portion surrounding said supporting-por-

tion and forming a dust-tight joint against the same; a source of illumination within said shell; a reflector within said shell adapted to reflect a portion of the rays of said source and to transmit a portion therethrough; and means carried by said shell for transmitting rays transmitted through said reflector and protecting said reflector from contact with extraneous matter.

5. A lamp comprehending a supporting-member adapted to be held against a surface to form a dust-tight joint therewith; a shell-portion surrounding said supporting-portion and forming a dust-tight joint against the same; a source of illumination within said shell; a reflector within said shell adapted to reflect a portion of the rays of said source and to transmit a portion therethrough; and means carried by said shell for transmitting rays transmitted through said reflector and protecting said reflector from contact with extraneous matter, combined with a light-transmitting member adapted to receive direct rays from said source and rays returned by said reflector and transmit said rays therethrough and protect said source of illumination and a surface of said reflector from contact with extraneous matter.

6. A lamp comprehending a supporting-member; means for holding the same in a fixed position; a source of illumination carried by said member; a reflecting-member for surrounding a portion of said source of illumination; a light-transmitting member for surrounding a portion of said source of illumination; means for carrying said reflecting-member and said light-transmitting member in their operative relationship with respect to each other; and means for readily attaching said carrying-means to said supporting-member to hold the reflecting and transmitting members in operative relation to the source of illumination, and allowing the carrying-means together with the parts carried thereby to be readily placed in operative relationship with said supporting-member.

7. A lamp comprising a source of light; a supporting-member; an ornamental shell secured to and covering said supporting-member, and carrying a light-transmitting dome; a reflecting-member supported by the ornamental shell within the dome and surrounding the source of light; and a light-transmitting bowl secured to said shell and closing the bottom thereof and the bottom of the reflecting-member.

8. A lamp comprising a source of light; a member supporting said source of light; an ornamental shell carried by said source of light and supporting a light-transmitting dome; a reflector carried by said shell and depending within the dome, and surrounding the source of light; a bowl hinged to the bottom of the shell for closing the dome and the reflecting-member; and a spring-catch for holding the bowl in closed condition.

9. A lamp comprising a source of light; a supporting-member for said source of light; a shell secured to said supporting-member carrying a light-transmitting dome; a reflector secured within the dome and surrounding the source of light; a bowl hinged to the shell; means for holding the dome closed across the bottom of the shell; and gaskets interposed between the dome and the shell and between the bowl and the shell for rendering the latter dust-proof.

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Witnesses:
MAXWELL GREENBERGER,
E. E. ALLBEE.