Aug. 15, 1950 J. B. WHITMORE ET AL 2,519,328

LAMP BASE AND RING THEREFOR

Original Filed Aug. 26, 1942

Fig. 2.

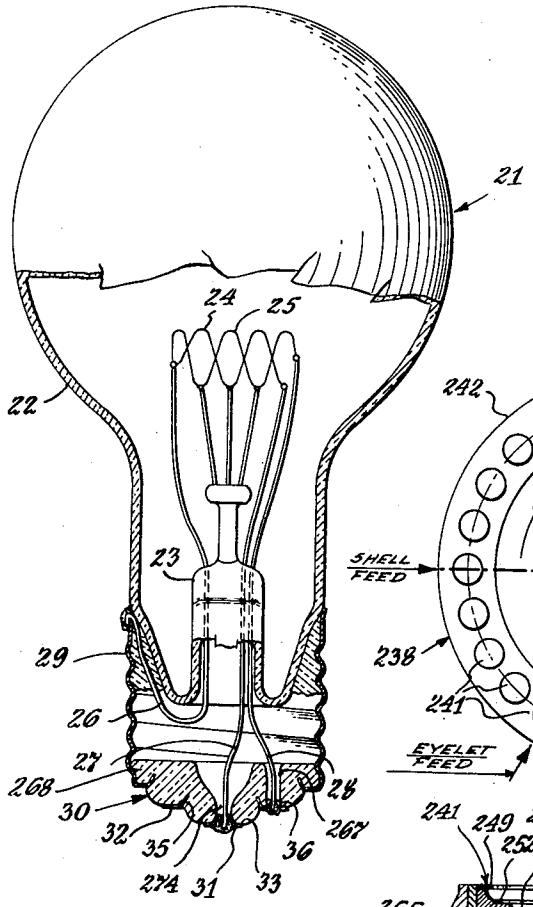


Fig. 3.

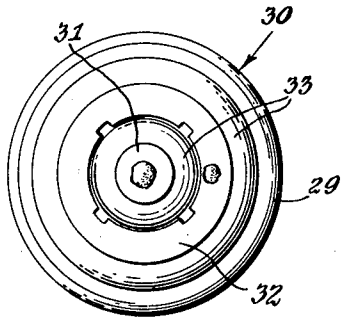


Fig. 5.

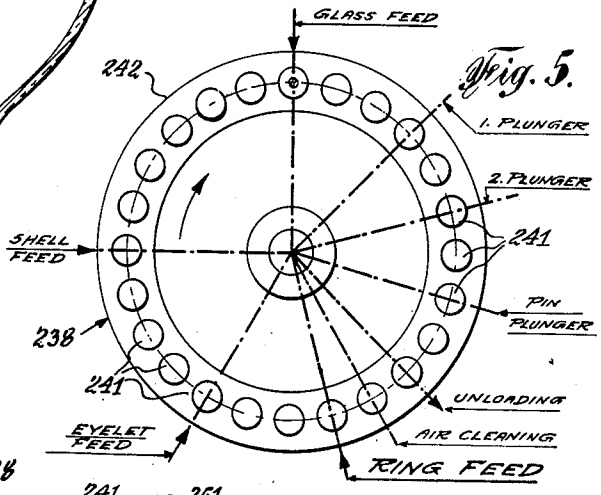


Fig. 4.

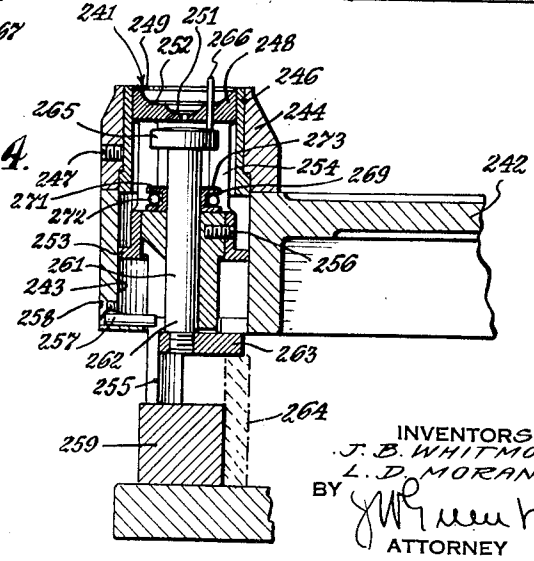
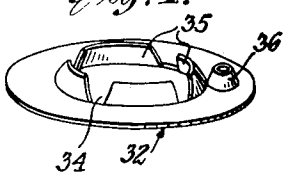


Fig. 1.



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Patented Aug. 15, 1950

2,519,328

UNITED STATES PATENT OFFICE

2,519,328

LAMP BASE AND RING THEREFOR

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Original application August 26, 1942, Serial No. 456,200. Divided and this application May 14, 1949, Serial No. 95,485

6 Claims. (Cl. 176—32)

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This application is a division of our application Serial No. 456,200, filed August 26, 1942, now Patent No. 2,486,085, dated October 25, 1949.

This invention relates to base making and, more particularly, to a base ring and base for lamps.

The principal objects of our invention, generally considered, are to provide an improved form of lamp base and base ring, adapting it to be fed automatically by machine to a base-making machine.

Another object of our invention is the provision of a novel form of ring adapted to be incorporated in the base of a "Three Lite" lamp as a contact between the base shell and center contacts.

Other objects and advantages of the invention, relating to the particular arrangement and construction of the various parts, will become apparent as the description proceeds.

Referring to the drawings:

Fig. 1 is a perspective of one of the base rings embodying our invention,

Fig. 2 is a lamp including one of the said rings as a part thereof,

Fig. 3 is a bottom plan of the base portion of the lamp shown in Fig. 2,

Fig. 4 is a vertical sectional view of one of the glass receiving dies and the actuating cams for which our ring is specially adapted, and

Fig. 5 is a diagrammatic plan of the glass receiving dies.

The mechanism shown in the drawings of the parent application, Serial No. 456,200, is designed for use with a base-making machine of the type described and claimed in the Walker et al. patents, Nos. 1,210,237 and 1,210,238, both dated December 26, 1916. Such a machine makes bases each with only a first-fed center contact, feeding thereof being specifically claimed in the first of said patents, and a thereafter-fed outer shell, feeding thereof being specifically claimed in the second of said patents, whereas the illustrated embodiment of the mechanism of the invention of said parent case is for feeding a ring or third contact ahead of the placing of the center contact in one die or shell holder after another to make bases, of the "mogul" type, with three contacts for the so-called "Three-Lite" lamp, such a lamp being illustrated in Figs. 2 and 3. The base of said lamp, therefore, instead of having only a shell and center contact, has an intermediate ring which is positioned first in each die or shell holder and embedded in the glass insulation between the shell and center contact member.

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In Figs. 2 and 3 we have designated the lamp shown by the reference character 21, as comprising a bulb 22 and a mount 23 including the filaments 24 and 25 which may be energized separately or together by means of the lead-in conductors 26, 27 and 28, the ends of which respectively connect with the shell 29 of the base 30, the center contact 31, and the ring 32, said elements being held together by glass insulation 33 formed therearound.

The ring contact element 32 is shown in perspective in Fig. 1. In the embodiment illustrated, it is desirably cut from sheet brass, or similar material, generally circular in outline with a center opening 34, from the peripheral portion defining which outstand tapering, curved, and inclined lugs 35 which in the course of manufacture become embedded in the glass insulation 33. The ring is also provided with an apertured or frusto-conical hollow boss 36 which receives the lead 28 and is soldered or otherwise connected thereto. The ring is thus of special construction, avoiding sharp angles and prongs which had been used, thereby for the first time making it suitable for automatic or machine feeding.

The molten glass which is fed to the base-making machine to form the base insulation 33, desirably passes through a die or guide of durable material, such as described and claimed in the Weller patent, No. 2,031,083 of February 18, 1936, and the Richardson Patent No. 2,190,296 of February 13, 1940, the temperature of the molten glass stream being desirably controlled in accordance with the Richardson et al. patent, No. 2,116,450 of May 3, 1938.

Briefly, the operations of the machine for feeding rings 32 to the shell supports or bottom glass dies, (it being understood that the Walker et al. patent, previously mentioned, discloses how center contacts and shells of bases are thereafter fed to such a machine) are that (1) said rings pass from a hopper to a slide, along which they are fed singly by a finger onto a special dial having a series of pockets or slots around its peripheral portion, each of which is just large enough to hold one ring. (2) The rings are preferably carried by the dial three-quarters of a revolution to a selected position where (3) each is, in turn, engaged and pushed by a plunger out of its pocket in the dial and along a ring slide on which it is, in turn, grasped by rear transfer fingers. (4) These fingers carry each ring to (5) a turning head which rises, a holding plunger comes down, the head rotates, and a locating pin enters the lead wire boss and turns the ring to the po-

sition it is to occupy in the bottom die of the base-making machine. The head then stops turning, and the rear transfer fingers move back until (6) the front fingers grasp the ring, whereupon the turning head descends, the holding plunger rises, the front fingers carry the ring over the bottom glass die, and a ring placer plunger comes down and pushes the ring from the fingers into said die without altering the subsequent eyelet or shell feed.

The base-making machine with which our rings are used is diagrammatically represented in Fig. 5 as having twenty-four heads. After unloading and cleaning each glass die assembly or head **241** at the positions indicated, such a head of the machine has its parts positioned as shown in Fig. 4 at the time of feeding a ring **32** thereto.

The spider **242** of the base-making machine **238** has a series of pockets **243** around its periphery for receiving the elements of the base dies or heads. These elements for each head comprise an upper outer die housing member **244** secured to the spider **242** in any desired manner, as by means of screws. Inside of this member **244** is a bushing **246**, secured in place as by means of a set screw **247**. Mounted for reciprocation in the bushing **246** is the die proper or base elements support **248**, presenting an upwardly opening pocket, the outer portion **249** of which is formed to support a base shell **29**, the inner portion **251** of which is shaped to receive a center contact **31**, and the intermediate portion **252** is formed to support a ring **32**.

This die proper has a bottom portion **253** connected to the top or base supporting portion by columns **254** and normally connected to an interior cam-actuated member **255** by means of a set screw **256**. Turning of the cam-actuated member **255** and the associated die proper **248** is prevented by pin **257** held in place by set screw **258**.

The member **255**, by action of the cam **259**, holds the die proper **248** in uppermost position, as shown in Fig. 4. After application of the ring **32** and center contact **31**, the die proper **248** is lowered for reception of the shell **29**, so that during the glass filling operation, the shell **29** is supported within the bushing **246** and housing **244**.

In order to prevent a ring **32**, after reception by the die **241**, from turning from the proper position for receiving the molten glass, a plunger member **261** has its stem **262** reciprocatingly mounted with respect to the member **255** and carrying a cam-actuated member **263**, so that it may be moved from the uppermost position illustrated in Fig. 4 to the lower position (not shown), the push-up cam being designated by the reference character **264**.

The head **265** of the plunger **261** carries a pin **266**, receivable in a corresponding aperture in the die proper **248**, and which passes through the apertures boss **36** of a ring **32** when the latter is fed thereto, thereby holding said ring in the desired position while the base parts are being filled with molten glass and being retracted by a pull-down cam (not shown), which engages the upper face of the part **263** at the proper time, so as to withdraw the pin **266** from the die proper to form the opening **267** through the glass insulation **33** of the base **30** being formed, to allow for passage of the lead-in conductor **28**, as shown most clearly in Fig. 2.

In order to prevent undesired movement of the plunger member **261** with respect to the member **255**, as because of its stem **262** becoming loose from wear, a friction collar **269**, consisting of a plurality of annular members **271** held together about the stem **262** by a coil spring **272**, is provided. Movement of the collar **269** to above the position illustrated in Fig. 4 is prevented by overlying shoulders **273**. Turning of the stem **262** with respect to the cam-actuated member **255** is prevented by engagement between shoulders on the latter and cooperating shoulders on the member **263**.

It will, therefore, be seen that after a die **241** has been cleaned by air, at which place the cam **259** and the push-up cam **264** operate to move the die proper **248** and the plunger **261** up to the position illustrated in Fig. 4, a ring **32** is fed thereto at the place indicated by "ring feed" in Fig. 5 when the parts are still positioned as shown in Fig. 4. The cam **264** acts only momentarily, the plunger **261** staying in place by frictional action of the collar **269**. The spider **242** then moves on until the die reaches the position designated "eyelet feed" in Fig. 5, where the eyelet member **31** is positioned, as in accordance with the Walker et al. patents above referred to.

The cam **259** then allows the die proper **248** and frictionally-held plunger member **261** to descend so that when the die **241** reaches the position designated "shell feed" the die proper is at the bottom of its permitted movement, and the bushing **246** and die proper **248** provides a pocket with walls of substantial height for holding the shell **29** in place during the time the molten glass is fed thereto in the position designated "glass feed," also as in accordance with said Walker et al. patents.

After the shell **29**, center contact **31** and ring **32** in the head **241** have received the desired charge of molten glass and said glass has had time to harden to some extent, said glass is acted upon by one or more upper shaping plungers, designated **1** and **2** in Fig. 5. The plunger **261** and its associated pin **266** is then lowered with respect to the die proper **248** by means of the pull-down cam (not shown) leaving the base aperture **267**, and a pin plunger descends at the position indicated in Fig. 5 to form the aperture **274** which receives the lead-in conductor **27** for connection with the center contact **31**. The die **241** is then unloaded and cleaned, and the operation may be repeated.

From the foregoing, it will be seen that our base rings **32** are especially formed for handling by a machine which acts in synchronization with the base-making machine to accurately place them, as third contacts of bases to be formed, in one die after another of a base-making machine, the other contacts, that is, the shell and center contact of each base, being placed in accordance with the Walker et al. patents, 1,210,237 and 1,210,238, previously referred to.

Although a preferred embodiment of our invention has been disclosed, it will be understood that modifications may be made within the spirit and scope of the appended claims.

We claim:

1. A ring for a lamp base comprising a metal plate with a generally circular periphery and a center aperture outlined by a plurality of outstanding inclined lugs, and another lug disposed intermediate the periphery and center aperture of said ring and formed generally hollow frustoconical for the reception of a lead-in conductor.

2. A ring for a lamp base comprising a metal plate with a generally circular periphery and a center aperture outlined by inclined lug means,

and an aperture disposed intermediate the periphery and center aperture of the ring for the reception of a lead-in conductor.

3. A ring for a lamp base comprising a metal plate with a generally circular periphery and a center aperture outlined by a plurality of outstanding inclined lugs, and a hollow lug disposed intermediate the periphery and center aperture of said ring for the reception of a lead-in conductor.

4. A ring for a lamp base comprising a metal plate with a generally circular periphery and a center aperture outlined by lug means, and an aperture disposed adjacent the periphery of the ring for the reception of a lead-in conductor.

5. A lamp base including a shell, a center contact, and an intermediate metal plate, all of the said elements being joined together by glass poured molten into place while assembled in a die, said plate being of a form particularly adapted for machine operation and for that purpose having a generally circular periphery, a center aperture outlined by a plurality of lugs embedded in said glass, and another embedded lug disposed intermediate the periphery and center aperture of said ring and formed generally hollow frusto-conical, said glass having an aperture in line with said lug aperture for the reception of a lead-in conductor.

6. A lamp base including a shell, a center contact, and an intermediate metal plate, all of said elements being joined together by glass poured molten into place while assembled in a die, said plate having a generally circular periphery, a center aperture outlined by a plurality of lugs embedded in said glass, and another embedded lug disposed intermediate the periphery and center aperture of said ring and formed hollow.

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REFERENCES CITED

The following references are of record in the file of this patent:

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Number	Name	Date
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