April 7, 1942. A. O. ELTING 2,278,433

LAMP FIXTURE

Filed Oct. 2, 1940

Fig. 1.

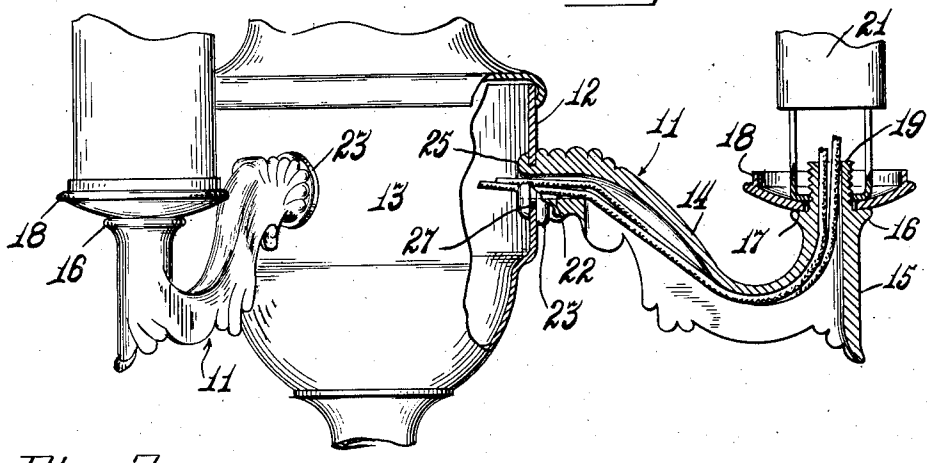


Fig. 2.

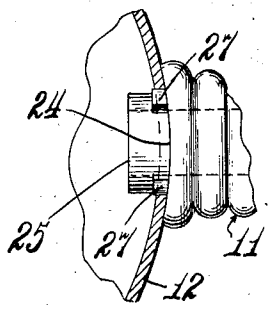


Fig. 3.

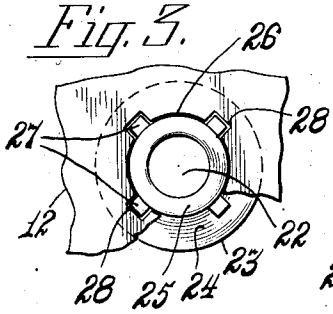


Fig. 4.

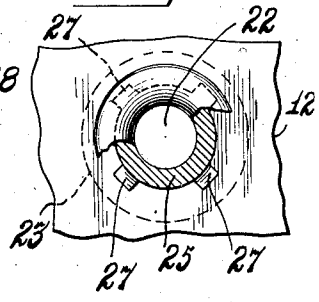


Fig. 5.

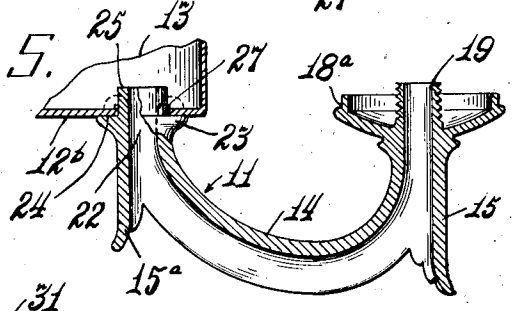
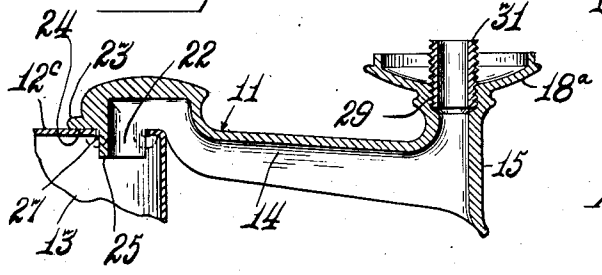


Fig. 6.



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LAMP FIXTURE

August O. Elting, Chicago, Ill.

Application October 2, 1940, Serial No. 359,300

3 Claims. (Cl. 248—344)

The invention relates to improvements in lamp fixtures and more particularly to novelly constructed electric candle support or arm and mounting.

In the manufacture of die-cast channeled fixture arms of the type herein disclosed, various means may be provided integral with one arm end to facilitate attachment of the arms to the fixture body. The various known methods of attachment frequently involve costly practices due, primarily, to difficulties of assembly and the necessity of securely attaching said arms to prevent their being turned or twisted and thus loosened in their mounting.

It is therefore an object of the invention to provide a lamp fixture with radial channeled arms, each embodying novel means integral with one arm end to fixedly secure the arm against removal or turning in the fixture body.

Another object is to provide a die-cast one piece channeled fixture arm with a deformable fitting on one arm end to co-act with an irregularly shaped opening in a fixture body wall to retain the arm in place and prevent shearing of the co-related parts.

Another object is to provide a fixture arm with integral means to facilitate its being rigidly attached to a mounting.

The foregoing and such other objects of the invention as will appear hereinafter as the description proceeds, will be more readily understood from a perusal of the following specification; in which reference is had to the accompanying drawing, wherein:

Fig. 1 is a fragmentary elevational view of a lamp fixture embodying the present invention, showing parts in section.

Fig. 2 is a fragmentary horizontal sectional view of the fixture body, showing the arm end mounted but not secured therein.

Fig. 3 is a fragmentary inside elevational view, partly broken away showing the arm end mounted.

Fig. 4 is a view similar to Fig. 3, showing the arm end securely attached to the fixture body.

Fig. 5 is a longitudinal sectional view, partly in elevation, of a modified form of arm.

Fig. 6 is a view similar to Fig. 5, showing another embodiment of the invention.

Like numerals appearing in the description of the various forms of arms identify corresponding parts in the drawing.

As best shown in Fig. 1, the invention is embodied in channel shaped arms indicated generally at 11, mounted in the circumferential wall 12 of a fixture body 13. The precise shape the arm is to take is determined by how it is to be mounted, and as shown, the arm 11 includes an intermediate body portion 14 in the form of an inverted channel having a depending end wall 15 at one end to conceal the associated channel end.

An external circumferential flange 16 is formed integral with one arm end to provide a shoulder 17 to support a candle cup 18. As shown the latter is fitted loosely over an externally threaded nipple 19 preferably formed integral with said arm end. The cup 18 may be secured to the arm end in any approved manner and is shown held in place by the mounting end of the usual lamp socket 21 threaded on to the nipple 19. The other arm end is formed tubular and has its passageway 22 communicating with the channeled body. A circumferential external flange 23 is formed thereon inwardly of its free end. When the arm is to be mounted on the circumferential wall 12 of a fixture body, as illustrated, the shoulder 24 provided by said flange is suitably concaved to conform substantially to the contour of said wall.

It will be seen upon viewing Fig. 3, that the provision of a flange 23 inwardly of the end of the arm defines a mounting nipple 25 which is inserted through an opening 26 in the fixture body wall. Obviously a smooth surfaced nipple would not prevent inadvertent turning or twisting of the arm in its mounting; consequently, suitable means is provided, preferably at the juncture of the nipple with the face of flange 24, to prevent such turning. As shown, a plurality of circumferentially spaced substantially square radial lugs 27 are formed integral with the nipple and shoulder. These lugs are arranged to pass through similar shaped recesses or notches 28 in the edge of the opening 26 and preferably are slightly greater in height than the thickness of the material forming the wall 12.

In assembly, the arm end is inserted into the opening 26 and the assembly placed in a suitable power press, or the like, whereupon the nipple 25 is rolled outwardly radially and downwardly tightly against the inside face of the wall 12. Rolling the nipple end distorts the lugs 27, primarily because of their slight projection inwardly of the face of the wall, sufficiently to spread or expand the material thereof and fill the associated recesses 28. This distortion or expansion of the lugs is important to the mounting shown primarily because machine manufacture of the parts necessarily requires that the opening 26

and its associated notches 26 be substantially larger than the outside diameter of the nipple 25 and its associated lugs.

Arms constructed as described may be made of white metal, which is exceedingly brittle, without danger of breaking during the attaching operation. This is because the nipple 25 is amply reinforced, while being rolled, by the edges of the opening 26 where the two are in substantial contact between adjacent lugs. Further, the arms are securely held against subsequent twisting and loosening by the abutment of the flat sides of the lugs and the corresponding edges of the recesses 28 which are substantially radial and consequently at right angles to the direction of the attempted rotation.

Figure 5 illustrates a one-piece channeled arm constructed substantially like that previously described but shaped to be mounted in the bottom wall 12b of the fixture body 13. In this embodiment, the candle cup 18a is formed integral with the free end of the fixture arm. The nipple 19 on said end is cast without the threads and is subsequently threaded externally. The other arm end has a depending end wall 15a to substantially conceal the associated channel end.

The channeled arm illustrated in Fig. 6, also is substantially like those previously described but in this instance is formed to be received in the top wall 12c of the fixture body 13. The free end of the arm includes an integral cupped flange 18a and has a tapped opening 29 communicating with the channel in the body to receive a threaded nipple 31.

It should be understood that although the lugs 27 have been shown and described as being slightly greater in height than the thickness of the fixture body wall, said lugs may be of substantially the same height or slightly less than the thickness of said wall without impairing the strength of the mounting. In such event, the rolling of the nipple sufficiently distorts the lugs to urge them outwardly radially against the transverse edge of the recesses and subsequently distort them so as to effect lateral spreading to contact the radial edges of said recesses.

Although exemplary forms of the improved cast arm have been illustrated and described, it is to be understood that the disclosure is not restrictive but is to embody such variations or modifications as will fall within the spirit of the invention and the scope of the appended claims.

I claim:

1. In a lamp fixture comprising, in combination, a fixture body and radial fixture arms, said arms each including a body portion providing an inverted wire receiving channel, a nipple integral with one arm end in communication with the channel, an external shoulder inwardly of the free end of the nipple, at least one lug projecting from and having its side walls disposed substantially at right angles to the face of the shoulder, the fixture body wall being provided with arm receiving openings each having a lug receiving recess, the nipples each extending through an opening with the lug fitting in a recess for keying the arm against turning, and the nipple being expanded at its free end to hold the shoulder against the outside face of the fixture body wall and prevent withdrawal of the nipple and lug from the opening.

2. In a lamp fixture comprising, in combination, a fixture body and radial fixture arms, said arms each including a body portion providing an inverted wire receiving channel, a nipple integral with one arm end in communication with the channel, an external shoulder inwardly of the free end of the nipple, a plurality of lugs on the face of the shoulder circumferentially spaced around the nipple, the fixture body wall being provided with a plurality of arm receiving openings each having lug receiving recesses, the nipples each extending through an opening with the lugs fitted into the opening recesses for keying the arm against turning, and the nipple being expanded at its free end to secure the arm to the fixture body and spread the lugs radially to substantially fill the portion of the wall openings occupied thereby.

3. An article of manufacture comprising a fixture arm including a body portion providing an inverted wire receiving channel, at least one nipple integral with a body end and communicating with the channel, and a plurality of substantially square lugs circumferentially spaced about the nipple inwardly of its free end, the lugs being adapted to be fitted into recesses in the wall of a fixture body through which the nipple is extended so that when the free end of the nipple is expanded to secure the arm to the wall the lugs key the arm against turning relative to the fixture body.

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