

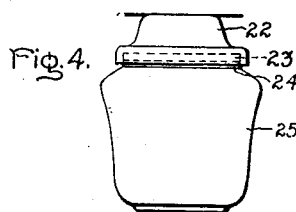
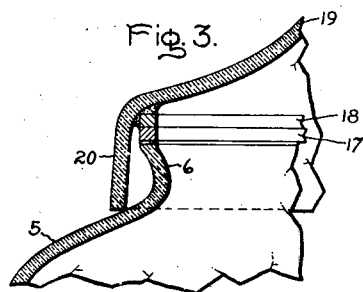
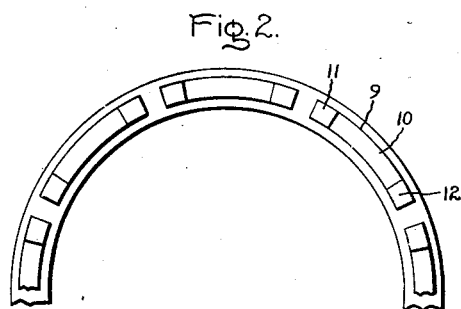
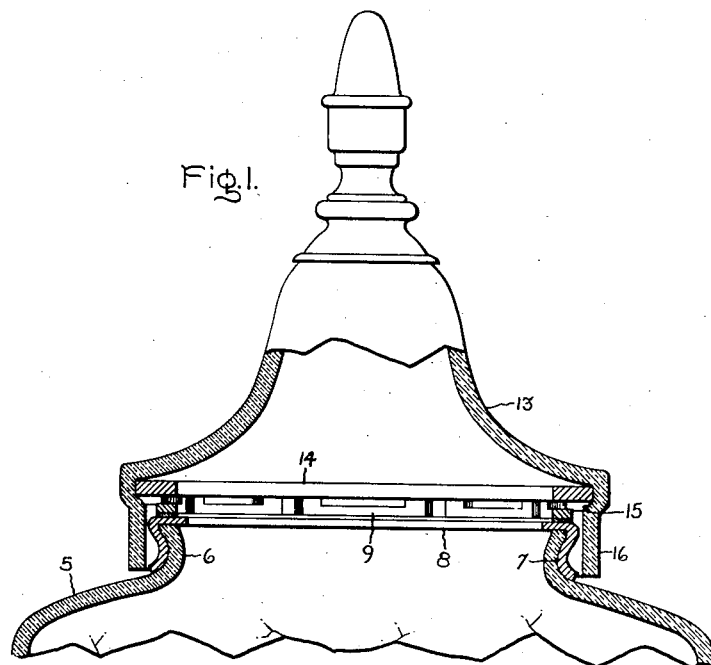
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LUMINAIRE

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## UNITED STATES PATENT OFFICE

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## LUMINAIRE

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3 Claims. (Cl. 240—128)

My invention relates to luminaires, particularly to luminaires in which the light source is surrounded by a translucent enclosure consisting of several parts, and more particularly to a device for holding these parts in juxtaposed position.

One object of my invention is to provide an improved fastening device between parts of luminaire enclosures, whereby the parts are normally held together with a sufficiently large force to overcome the force of wind, but which device will permit a quick separation and reassembly of the parts for relamping or cleaning purposes.

Another object of my invention is to provide a simple fastening device between a receptacle and its cover.

For a better understanding of my invention, together with other and further objects thereof, reference is had to the following description taken in connection with the accompanying drawing, and its scope will be pointed out in the appended claims.

In the accompanying drawing, Fig. 1 is a front elevation in section of a portion of a luminaire provided with an improved fastening means built in accordance with my invention, Fig. 2 is a plan view of the fastening means, Fig. 3 is a fragmentary sectional view of a luminaire provided with a modification of my improved device, and Fig. 4 illustrates an application of my improved device to another form of luminaire.

Referring to the drawing in detail, Fig. 1 illustrates a fragment, in section, of the top of a globe 5. This type of globe is normally used for street lighting luminaires, and is provided with a grooved neck portion 6, over which, in accordance with my invention, a spring collar 7 is sprung into engagement with the neck portion. This collar is provided with a horizontal flange 8 projecting over the end of the neck portion 6 of the globe, and carries a series of magnets 9, a plan view of which is shown in Fig. 2. The magnets 9 are a modification of the well-known horse shoe type of magnet, designed especially to be mounted upon the horizontal flange 8 of the collar 7. The magnets comprise an arc shaped horizontal bar portion 10, the ends of which are turned up to form the pole members 11 and 12. Several of the magnets are cemented to the horizontal flange 8 of the collar 7 or may be cemented in some instances directly to the edge of the neck portion of the globe.

The globe 5 is closed by a canopy 13, which carries a magnetic ring 14, sprung into a groove 15 on the inside of the canopy and above a vertical flange 16, having a diameter greater than

that of the collar 7. When the globe and canopy are assembled, the canopy is merely placed over the neck portion 6 of the globe, and moves downwardly until the ring 14 engages the magnets 9. The magnets 9 attract the ring and, when the ring contacts the ends of the vertical pole members 11 and 12, exert sufficient force to hold the canopy in place against any normal force exerted by wind pressures. On the other hand, if the canopy need be removed for cleaning purposes, or for the purpose of placing new lamps into the globe, the canopy may easily be removed by exerting a greater pull than is encountered during the normal conditions. The advantage of this means of fastening the two parts of a glass enclosure to each other, is that there is a minimum of shadows cast upon the glass by the fastening means, yet sufficient force is exerted to hold the parts in their proper relationship. Furthermore, fastening devices heretofore used for this purpose were provided with screws which engage the surfaces of the glass to hold the rings, or other devices, to the globe. These screws had to be loosened whenever the canopy was removed from the globe, and due to the carelessness of operators, and the varying expansion of glass due to changes in temperatures, caused a high percentage of breakage. In accordance with my invention, this breakage is completely eliminated, besides saving considerable time of the operators when cleaning and relamping the luminaires.

In Fig. 3, I have illustrated a fragmentary sectional view of a modified form of my improved device. In this modification, a magnetized ring 17 is cemented to the top surface of the neck portion 6 of the globe 5. The ring 17, and the magnets 9 in Fig. 1, may be made advantageously of an alloy of iron, nickel, aluminum and cobalt as set forth in U. S. Patent 1,968,569. This alloy has the property of retaining indefinitely its magnetization, and also of being capable of magnetization to a much greater density than alloys hitherto known. The ring 17 is given a thickness and width substantially equal to the thickness of the glass of the globe. In view of the ability of this alloy to retain its magnetization, and also to assume a magnetization of greater density than ordinary permanent magnet steels, a ring of the dimensions illustrated can develop sufficient force to hold the canopy in place against normally encountered forces. A second ring 18 of a magnetic material such as soft steel, for example, is cemented to the inner surface of the canopy 13 at the juncture of its annular flange 26 and the body portion of the canopy. When 55

the ring 18 is brought into contact with the magnetized ring 17, the flange 20 covers the neck portion of the globe, and the canopy is in its proper relation to the globe. The advantage of this modified form of my improved device is that it eliminates the use of the supporting ring 7, and thereby interferes less with the projection of light through the globe than the device of Fig. 1.

In Fig. 4 I have illustrated an application of my invention to a modified form of luminaire in which a metal canopy 22 is suspended from a ceiling. Canopies of this type are usually made of a non-magnetic metal, such as brass, and screws are provided projecting radially from the flange to engage a groove, or holes, in the globes. In applying my invention to this type of luminaire, I substitute a magnetized ring 23 similar to the ring 17, for the above mentioned screws and attach a magnetic ring 24, preferably made of soft steel, to the edge of a globe 25. When the magnetic ring 24 is brought into contact with the permanently magnetized member 23 which may be a ring such as ring 17 or a series of magnets, such as magnets 9, attached to the canopy, the globe 25 is held in position just as securely as though the well-known screw type of globe holder were used. The removal of the globe 25 and its replacement, are however greatly facilitated since no time is consumed in turning screws.

Although I have illustrated my invention as applied to glass enclosures of two different types of luminaires, it will be apparent to those skilled in the art that it is equally adaptable to other forms of luminaires and is also adaptable to any receptacle provided with a cover, which it is desired to hold in closed position by a force greater than that of gravity.

The magnetized member such as the ring 17 of Fig. 3 or the magnets 9 of Figs. 1 and 2 may be readily built into, and made a part of the cover, or of the receptacle itself. The receptacle and cover need not necessarily be made of glass, but may be made of other materials such as, for example, any of the synthetic resin materials sold under the trade-marks of "Glyptal" or "Bake-

lite" or others. The magnetic and magnetized member need not necessarily be separate elements of the cover or of the receptacle, since the entire cover, or the receptacle itself may be made of a magnetic material, and may constitute the magnetic element of the device. It may not be practical to make the magnetized part of the device as a cover or as a receptacle, but such construction is not outside of the scope of my invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. In a luminaire, the combination of a globe and canopy therefor, a plurality of magnetized elements attached to one of said members and a magnetic element attached to the other of said members, said magnetic element being contiguous to said permanently magnetized elements when said globe and canopy are in assembled relation with each other.

2. In a street lighting luminaire, the combination of a globe and canopy therefor, and means for holding said canopy to said globe comprising a metal ring attached to said globe, a plurality of magnets attached to said ring, and a magnetic ring attached to said canopy and placed contiguous to said magnets when said canopy is in assembled relation with said globe.

3. In a luminaire the combination of a globe provided with an opening at the top, said opening being surrounded by a collar projecting upwardly from the globe surface, a canopy for said globe provided with a flange extending downwardly from said canopy and arranged to fit over said collar, a magnetic ring attached to said canopy at the base of said flange and a permanently magnetized member attached to the end surface of said collar whereby upon assembling said canopy and said globe, said flange guides said magnetic ring into engagement with said permanently magnetized member and when said ring and member are in juxtaposed position forms a cover therefor.

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