

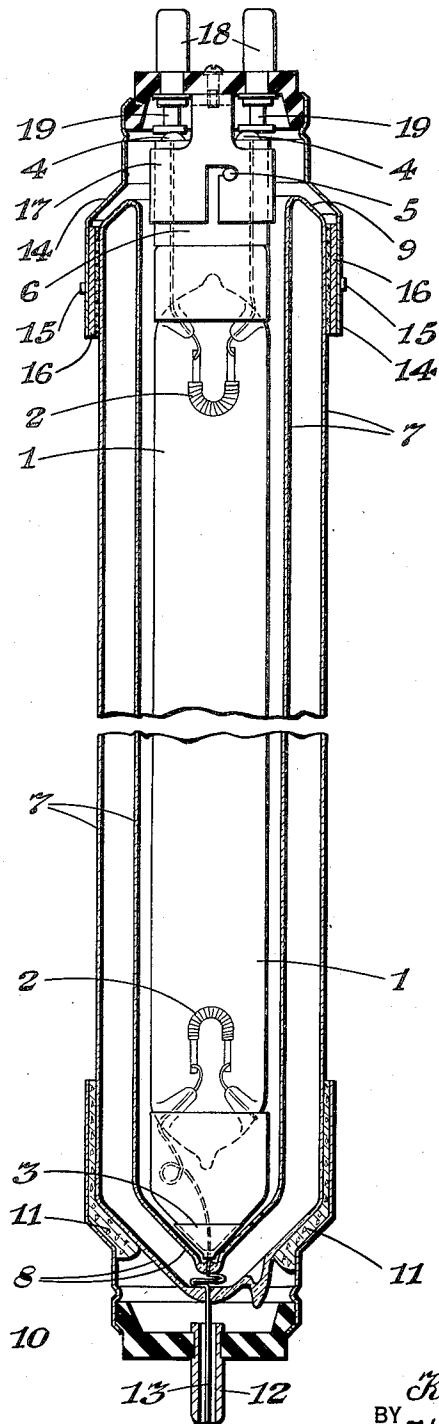
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ELECTRIC LAMP UNIT

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ELECTRIC LAMP UNIT

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1 Claim. (Cl. 240—11.4)

The present invention relates to electric lamp units generally and more particularly the invention relates to lamp units comprising a gaseous electric discharge lamp device and a heat conservator for said lamp device.

The object of the invention is to provide an efficient lamp unit of the above type which is of simple structure and which is easily assembled. Still further objects and advantages attaching to the device and to its use and operation will be apparent to those skilled in the art from the following particular description.

In accordance with this object the invention comprises an elongated, tubular, double walled glass vessel, closed at one end thereof and open at the other end thereof and in which the gaseous electric discharge lamp device is mounted. The double-walled glass vessel is a heat conservator for said lamp device. Said lamp device is an elongated tubular one having electrodes mounted at the respective ends thereof and the diameter thereof closely approaches the diameter of the inner wall of said heat conservator. A removable base is provided for and closes the open end of said heat conservator and said base accommodates and supports one end of said lamp device. An electrical contact for the other end of said lamp is provided in the closed end of said conservator. The lamp, the conservator and the removable base are easily assembled into a lamp unit.

In the drawing accompanying and forming part of this specification an embodiment of the invention is shown in a front elevational, partly sectional view.

Referring to the drawing the new and novel lamp unit comprises a gaseous electric discharge lamp device having an elongated tubular container 1. Said container 1 has a gaseous atmosphere therein, such as a mixture of a rare, starting gas, such as neon, and a metal vapor, such as sodium vapor. An electrode 2 is sealed into each end of said container 1. Said electrodes 2 consists of a U-shaped bar of electron emitting material, such as barium oxide, and a filament, such as a tungsten or a nickel filament, wrapped around said bar. Said electrodes 2 are electron emitting when heated. Said container 1 has a conical, single pole base 3 fastened to one end thereof and at the other end thereof a two-pole, bayonet base 6. Said base 6 has a pair of contacts 4 and a pair of pins 5 thereon.

The heat conservator of the new and novel lamp unit consists of two concentric tubes 7, each of which tapers conically at one end there-

of, and which are fused together at the opposite end thereof to form a ring welt 9. The heat conservator is thus open at one end and closed at the other end. The space between the walls of said conservator is evacuated when desired or filled with a gas having poor heat conductivity characteristics. Said conservator reduces the heat losses from the lamp which operates at a higher temperature, a higher vapor pressure and greater efficiency than it would without said heat conservator. A base 10 having a contact pin 12 is fastened to the conical end 8 of the outer tube of the heat conservator by a body of cement 11. A current lead 13 is fastened to said contact pin 12 and is fused into the end of heat conservator 7, terminating in a contact in the interior of the closed end of the heat conservator.

The open end of said heat conservator 7 is closed by the base 14 which is removably attached to the conservator 7 by a slot in said base 14 accommodating the pin 15 of the ring 16 which ring 16 is cemented to the outer surface of the outer wall of the heat conservator 7. The base 14 has a slotted sleeve 17 in which the bayonet base 6 of the container 1, is fastened by the pins 5 thereof. The base 14 has two outwardly projecting contact pins 18 which are connected to the inwardly projecting spring contacts 19. When the lamp unit is assembled the pegs 19 press against the contacts 4 of the base 6 of said lamp device.

When the above described lamp unit is to be assembled the base 6 of the lamp is inserted into the sleeve 17 of the base 14, the pins 5 fitting into the slots in said sleeve 17, the lamp is rotated slightly to lock said base 14 and said lamp together. The lamp is then inserted into the heat conservator until conical base 3 comes into contact with the inner end of lead 13. The pins 15 on the ring 16 of the heat conservator 7 fit into slots in the base 14 and the base 14 is locked on said heat conservator by a slight rotation of these members and the assembly of the lamp unit is completed. The lamp unit is easily taken apart, when desired. The base 14 closes off the space between the inner wall 7 and the lamp container 1 from the outside atmosphere.

While I have shown and described the above lamp unit in conjunction with a sodium vapor lamp it will be understood of course that I contemplate the use of other types of lamps, such as mercury vapor lamps, or gas lamps in the lamp unit. The general effectiveness of a lamp unit comprising a sodium vapor lamp is increased by making the inner wall of the heat conservator 55

of yellow glass, or by applying a yellow coating thereto.

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

5 A lamp unit comprising an elongated gaseous electric discharge lamp device having electrodes and electrode leads sealed into the respective ends thereof, a heat conservator therefor, and a
10 common base for said lamp and said conservator, said conservator being a double walled vessel open

at one end and having a current lead at the closed end thereof, said base having an electrical contact thereon, said base being removably attached to said lamp and said conservator and supporting said lamp in said conservator, said base closing the end of said conservator, the contacts on said base and in said conservator being in contact with the current leads at the respective ends of said lamp. 5

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