May 27, 1924. 1,495,674

T. COCHRANE

LAMP

Filed May 12, 1923

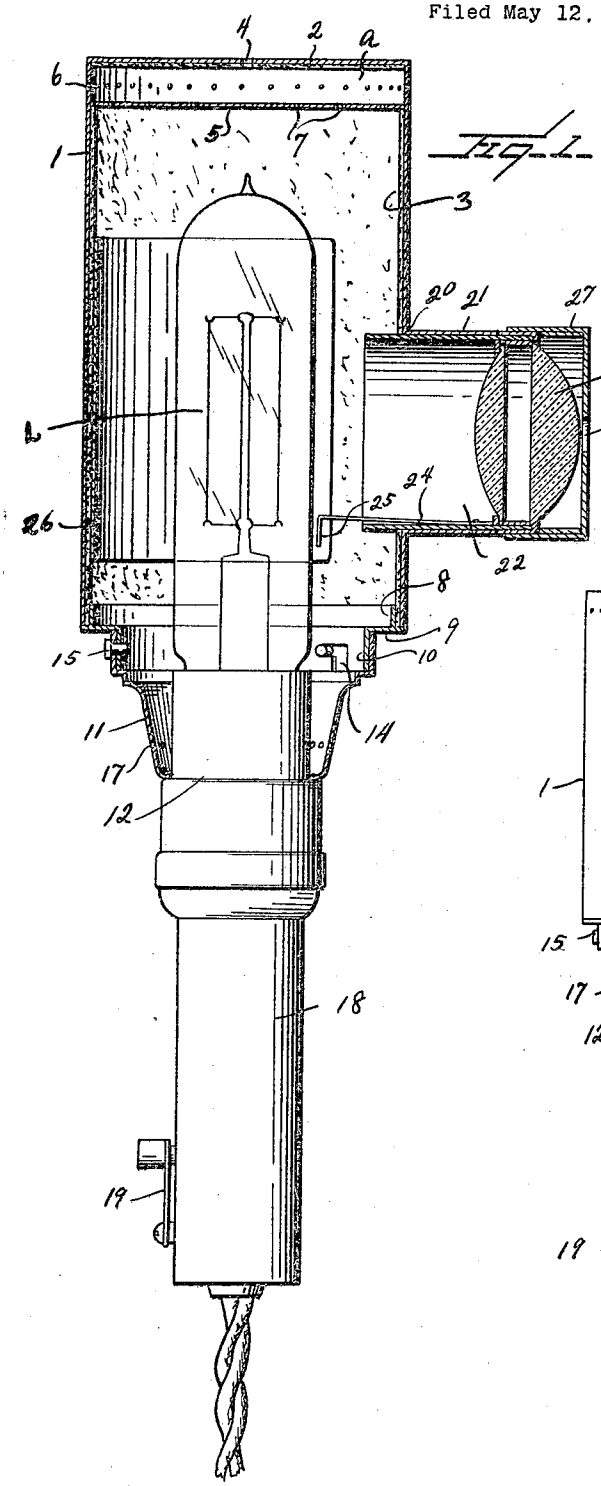


Fig. 1.

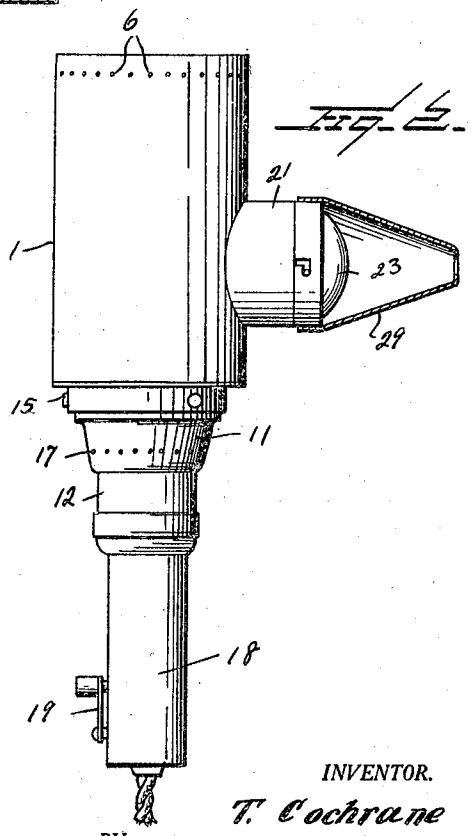


Fig. 2.

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Patented May 27, 1924. 1,495,674

UNITED STATES PATENT OFFICE.

THOMAS COCHRANE, OF BUFFALO, NEW YORK.

LAMP.

Application filed May 12, 1923. Serial No. 633,679.

To all whom it may concern:

Be it known that I, THOMAS COCHRANE, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Lamps, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in lamps and has relation more particularly to a lamp of this general character especially designed and adapted for use by physicians in examining the eyes, the mouth and the like and it is an object of the invention to provide a novel and improved device of this general character wherein an intensified light beam may be produced together with means whereby the lamp is air cooled.

It is also an object of the invention to provide a novel and improved device of this general character having means whereby the light beam may be readily and conveniently focused in accordance with the requirements of practice.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved lamp whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:—

Figure 1 is a view partly in elevation and partly in section illustrating a lamp constructed in accordance with an embodiment of my invention;

Figure 2 is a view partly in section and partly in elevation of my improved lamp showing a slightly modified construction.

As disclosed in the accompanying drawings, 1 denotes a housing preferably cylindrical and closed at one end as at 2, said housing 1 and closed end 2 having applied thereto a lining 3 of asbestos or the like. The wall of the housing 1 and the closed end 2 thereof is preferably made of metal although it is to be readily understood that any material may be employed which will comply with the requirements of practice. The closed end 2 at substantially its axial center is provided with a vent 4 which communicates with a chamber *a* provided by a partition 5 mounted within the housing 1 adjacent to but spaced from said end 2. The wall of the housing 1 has disposed entirely therearound a series of circumferentially spaced openings 6 communicating with the chamber *a*, the openings 6 together with the vent 4 being provided to assist a circulation of air through the housing 1 to effect a desired cooling action. The partition 5 is also provided with a series of perforations or relatively minute openings 7 whereby the requisite communication is had between the chamber *a* and the interior of the main portion of the housing 1.

The end portion of the housing 1 remote from the closed end 2 has fitting therein an annular member 8 the outer marginal portion of which being defined by an inwardly disposed flange 9 continued by the outwardly directed flange 10. The flange 10 telescopically engages within the outer end portions of the shell carried by the socket 12.

As herein disclosed the annular flange or member 10 is provided with a series of circumferentially and equi-distantly spaced bayonet slots 14, preferably three in number, and engaging within each of the slots 14 in a well known manner is an inwardly directed finger 15 carried by the outer portion of the shell 11 or that portion of the shell which receives the flange or member 10. The shell 11 is provided in its wall in relatively close proximity to the socket member 12 with the spaced perforations or openings 17 extending entirely therearound and which, when the shell 11 is in operative engagement with the housing 1 provides additional means to assure the desired air circulation through the housing.

The socket 12 is carried by the outer end portion of a handle member 18 which is provided with a switch 19 for controlling the operating circuit for the lamp L. The lamp L is of an incandescent type with the bulb of an elongated cylindrical form so that when the lamp proper is assembled, said bulb extends within the housing 1 substantially through the entire length of the main portion thereof.

The wall of the housing 1 at a point in relatively close proximity to the member 8

is provided with an opening 20 defined by an outstanding cylindrical sleeve 21 in which is adapted to be engaged a tube 22 carrying the lenses 23. The tube 22 carries an elongated arm 24 extending a predetermined distance beyond the inserted end of the tube 22 and terminates in an angularly disposed and outwardly directed lip 25 which provides means to limit the outward movement of the tube 22 when focusing the beam of light. Arranged within the housing 1 and secured to the inner wall thereof and opposed to the opening 20 is a reflector plate 26 of desired dimensions and which serves to assure an intensified beam being projected through the opening 20 when the lamp is burning.

When it is desired to focus the beam to a relatively small area a cap 27 is disposed over the outer end of the sleeve 21, the central portion of said cap being provided with a restricted opening 28 of desired diameter. When it is desired to focus the light beam in a manner whereby the lamp may be conveniently employed in examining the mouth or the like I find it of particular advantage to employ the tip 29, said tip being substantially conical in form with its apex open and its larger end of a size to readily engage with the outer end portion of the sleeve 21.

From the foregoing description it is thought to be obvious that a lamp constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

A lamp of the class described comprising a housing closed at one end, said closed end being provided with a vent, a partition mounted within the housing adjacent to but spaced from said closed end, the wall of the housing between said closed end and partition being provided with openings communicating with the chamber formed by said partition, said partition being also provided with openings to afford communication between said chamber and the interior of the main portion of the housing, an illuminating member extending within the housing through the open end of the housing, means for detachably holding the illuminating member in applied position, the wall of the housing being provided with a light emitting opening, a perforated shell carried by the illuminating member, an outstanding flange carried by the open end of the housing with which the shell has slip engagement, and interlocking means carried by the flange and associated portion of the lamp.

In testimony whereof I hereunto affix my signature.

THOMAS COCHRANE.