Nov. 25, 1930. J. A. PAISLEY 1,783,136

MINING LAMP

Filed July 11, 1929

Fig. 1.

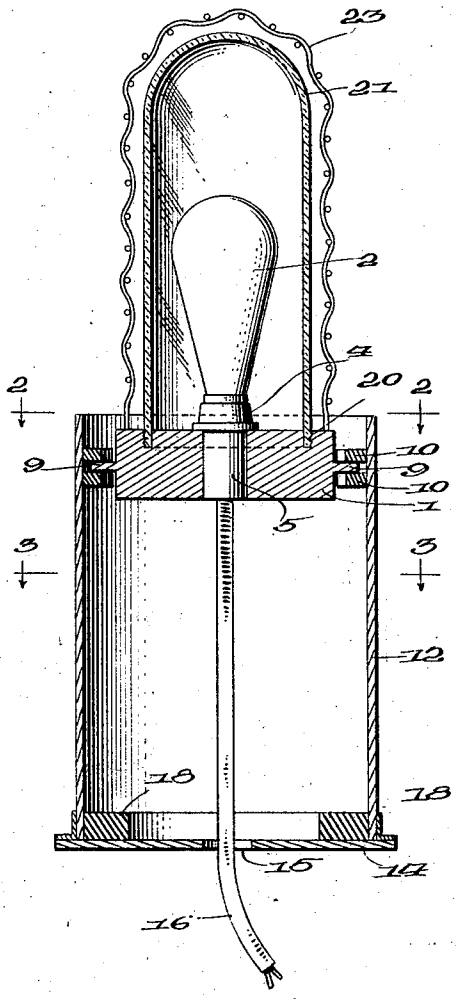


Fig. 2.

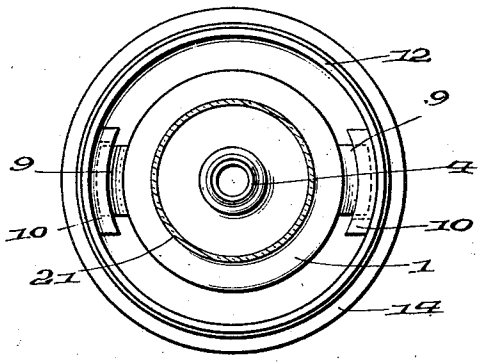
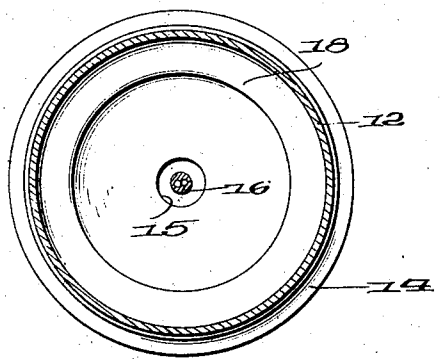


Fig. 3.



Inventor

James A. Paisley,

By Mason & Mason,

Attorneys.

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UNITED STATES PATENT OFFICE

JAMES A. PAISLEY, OF CLEVELAND, OHIO, ASSIGNOR TO THE VALLEY CAMP COAL COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF PENNSYLVANIA

MINING LAMP

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This invention relates to lamps adapted for use in mining machinery or for other purposes.

An important object of the invention is to provide a lamp for use in situations where the machinery, or other object to be illuminated, is movable or is subject to rough usage, such as heavy jars or excessive vibrations, or where the lamp might be struck by some object and destroyed. With this object in view, an important feature of the invention comprises a lamp having a protecting casing, which also acts as a stand for the lamp when the latter is exposed for use. The lamp preferably is arranged to be telescopically enclosed within the casing to prevent damage to the lamp, during the moving of the machinery to which it is attached, or such lamp may be projected without the casing, and sustained in an exposed position, when the danger of damage has been reduced, as where the machinery is stationary, and not being moved from place to place.

Another object of the invention is to provide a lamp of the character referred to with sustaining means that is capable of holding the lamp in an exposed position, when desired, and also has the capacity of permitting the lamp to be quickly housed within its protecting casing by a simple manipulation thereof.

The foregoing, and other objects and advantages of the invention will be more apparent from the following description and accompanying drawings and the novel elements will be pointed out in the appended claims.

In the drawings:

Fig. 1 is a view in vertical section illustrating one form of the invention; Fig. 2 is a horizontal section on the line 2—2 Fig. 1 and Fig. 3 is a horizontal section on the line 3—3 Fig. 1.

An ordinary electric lamp, 2, is seated in a socket 4, which has a tubular extension, 5, fitting a bore within a circular base 1. The base is provided with diametrically opposite lugs 9, which are arranged to fit within a guideway formed by spaced lugs 10, the latter being secured at diametrically opposite points within the enclosing protecting casing 12.

The casing 12 is preferably formed cylindrical, and is provided with a base 14 having a central aperture 15 through which passes the cable 16, containing wires for conducting the current to the lamp 2.

A cushioning washer 18, herein shown in the form of an annulus, rests upon the bottom 14 of the casing, and this washer is in position to sustain the lamp base 1 if the same be suddenly dropped within its casing, and to cushion the light bulb against sudden jars.

The lamp base 1 is shown as provided with an annular recess 20, internally threaded to receive an externally threaded portion of a glass cover 21, which acts as a protector, to a certain extent, of the lamp bulb 2, and as a further means of protection against flying objects or an accidental blow, a metal guard 23 surrounds the glass cover 21, such metal guard being supported by the lamp base 1.

The lamp is primarily intended for use in connection with mining machinery, but of course may be employed wherever desirable. When used on mining machinery such as conveyors for coal and like, which are portable in nature, when the conveying apparatus is in operation for delivery and loading coal upon mine cars, the lamp, together with its base, cover 21, and guard 23, is supported in the position as shown in Fig. 1, by the lugs 9 on the lugs 10, each of said lugs 9 being enclosed between a pair of strips. When the machinery in the conveyor or other mining machinery is moved, as from one mine room to another, the jars incidental to the removal of the loading conveyor, or "buggy" on which the lamp may be supported, are such as to require protection of the lamp from

injury, and to this end the lamp together with its base, cover and guard, are turned slightly to the left, for example, until the lugs 9, pass out from between the lugs 10 and the lamp and its parts are dropped down within the casing 12, the base 1 resting upon the cushioning washer 18. In this position of the parts the lamp will be fully protected against accidental injury in transportation, or from flying pieces of coal, or the like. When the conveyor has reached a new position, and its operation is started again, the lamp is withdrawn from the casing 12, until the lugs 9 are opposite the openings between the lugs 10, when by a slight turn the movable lugs 9 will pass between the guiding lugs, and the lamp may be supported thereby in the position shown in Fig. 1. Changes may be made in the arrangement of the several parts shown or to some extent in their detail construction without departing from the spirit of the invention, provided such changes or variations do not depart from the scope of the following claims.

I claim:

1. In a lamp of the character described, the combination of a base for supporting a lamp, an enclosing casing for the lamp and base, and means whereby the lamp may be supported in an exposed position at the upper end of the casing, or may be released from such position by a turning movement of the lamp and base and permitted to drop by gravity while in an upright position, and without removal from the casing to a protected position within the casing.

2. In a device of the class described, the combination of a casing having lamp supporting lugs at the upper interior portion thereof, a lamp, a base for supporting said lamp, and lugs carried by said base for engaging the supporting lugs in the casing, whereby the lamp may be sustained by the base in exposed position, or the lamp and base may be turned to cause the lugs on the base to disengage the lugs in the casing and permit the lamp to drop within the casing while in upright position and without reversal.

3. In a device of the class described, the combination of a casing provided at its upper end portion interiorly with diametrically opposite pairs of spaced lugs, of a lamp base having diametrically opposed lugs arranged for cooperation with said first-mentioned lugs, to support the lamp in upright position, and a lamp supported by said base and arranged with said base to drop by gravity into and below the upper edge of said casing while in upright position and without reversal.

4. In a device of the class described, the combination of a protecting lamp casing having within its upper interior portion opposite pairs of diametrically related spaced guiding lugs, a lamp base fitting within and spaced from said casing and having lugs for cooperating with said guiding lugs, a lamp on said base, said lamp and base arranged to drop by gravity in upright position wholly within said casing, a current carrying cable passing through an aperture in the bottom portion of said casing, and having connection with said lamp, a transparent cover for said lamp and a metallic guard arranged outside of said cover and sustained by the lamp base.

In testimony whereof I have hereunto set my hand this 6th day of July, A. D. 1929.

JAMES A. PAISLEY.