Jan. 16, 1951 R. G. PRESTON 2,538,655

LOADER'S EXTENSIBLE LIGHT FIXTURE

Filed May 5, 1947

Fig. 1.

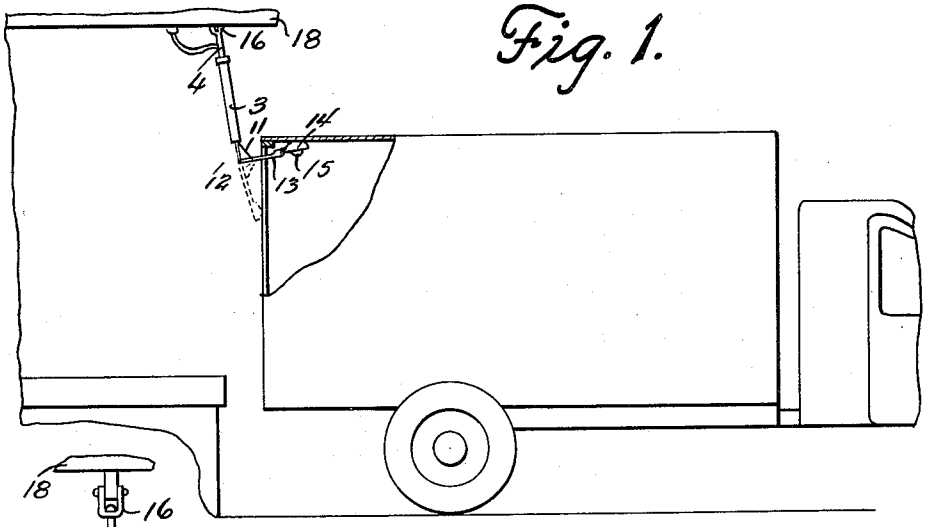


Fig. 2.

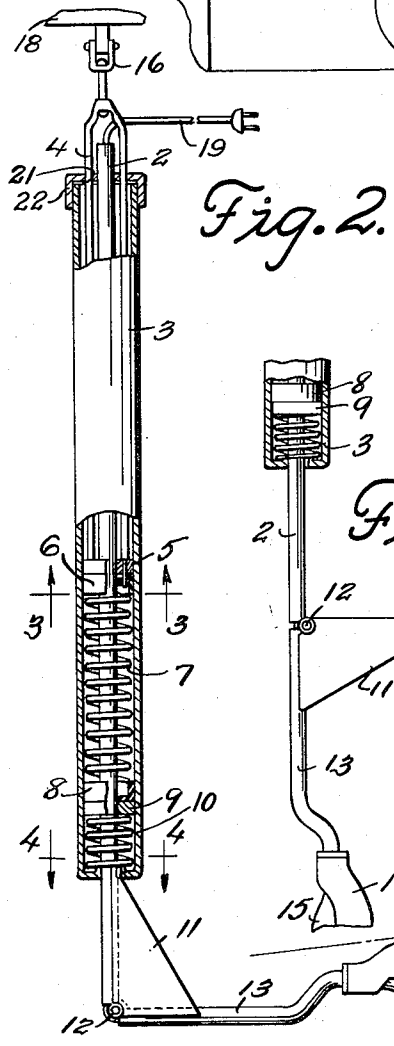


Fig. 3.

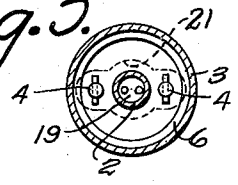


Fig. 4.

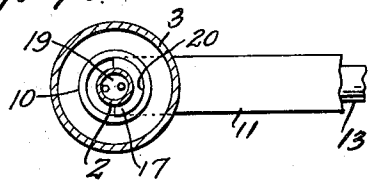


Fig. 5.

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LOADER'S EXTENSIBLE LIGHT FIXTURE

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9 Claims. (Cl. 240—52)

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This invention pertains to a device for providing good light where desired at freight, express and transfer terminals, in trucks and box cars, for the loading and unloading of freight, express and mail.

It is an object of the invention to provide a device which will enable a light to be installed as a permanent fixture where it will readily be accessible for use at all times.

A further object is the provision of a lighting device which can be placed inside of car door openings and in the ends of trucks without the use of dangling cords or special hangers, so that if the device is forgotten and the freight car or truck moves from the loading platform, the light will automatically become disengaged and return to its original position without damage to the light.

These and other objects are attained by the novel construction and arrangement of parts hereinafter described and illustrated by the accompanying drawings, forming a part hereof, and in which:

Fig. 1 is an elevational view showing an application of the lighting device.

Fig. 2 is an elevational view, partly in section, of a device embodying the invention.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 2.

Fig. 5 is a view showing the device in an out-of-the-way position.

Referring to Fig. 1 of the drawings, it will be seen that the entire unit is suspended from the canopy or roof 18 of a loading dock by means of a cable or chain or swivel joint 16 connected with the apex of the hanger, U-rod, or stirrup 4. The hanger 4 is attached to a piston comprising a backing plate or guide ring 5 and a downwardly facing cup leather 6. A tension coil spring 7 has one end secured to the piston 5, 6, while the other end thereof is secured to a similar piston comprising a backing plate 9 and an upwardly facing cup leather 8. The piston assembly 8, 9, is secured to a central tube 2 which extends through a hollow cylindrical casing 3 which is provided with a cap 22, the tube 2, as well as the hanger 4, extending through a suitable opening 21 formed in the cap 22. A coil spring 10 is compressed between the piston assembly 8, 9 and the lower end of the tubular casing 3.

An arm 13 is pivotally connected with the lower end of the tube 2 by means of a hinge 12 and its outer end has a lamp socket and reflecting

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shield 14 for an incandescent lamp 15. Current is supplied to the lamp through a two conductor cord 19 which extends through the tube 2 around or through the hinge 12 and through the arm 13 to the lamp socket.

A bracket 11 of generally triangular shape has its lower edge secured to the arm 13 and at its upper end has a latch projection 17 which, when the parts are in normal position as shown in Fig. 2, projects into a suitable opening 20 formed in the lower end wall of the casing 3.

The tension spring 7 has sufficient strength to slightly more than sustain the entire weight of the unit while the compression spring 10 has sufficient strength to maintain the latch portion 17 of the bracket 11 within the opening 20, as shown in Fig. 2, under all normal conditions of use of the unit. The distance from the top end of the tubular casing 3 to the piston assembly 5, 6, when the light is hanging free, will be approximately two and one-half to three times the length of the spring 7 when the latter is stressed merely sufficiently to sustain the weight of the fixture. This distance to which the spring 7 may be stretched comprises the operating range of the light, that is, the distance to which the lamp 14 may be moved from its normal free hanging position.

The two-conductor cord 19 is of sufficient length to provide the slack required for such full extension of the spring 7 as the tubular casing 3 and tube 2 are pulled downwardly when the lamp is to be used to illuminate the interior of a freight car, truck, or the like.

As shown in Fig. 1, the tube 2 and the casing 3 are pulled downwardly against the tension of the spring 7, and the arm 13 is hooked beneath the door frame or against the ceiling of a truck, the spring 7 retaining the fixture in this position. This places the lamp 15 inside the freight car or truck at the top of the opening through which the truck or car is being loaded or unloaded, so that it does not interfere with the loading or unloading operations and provides adequate illumination for the interior of the vehicle.

Upon completing the loading or unloading operation, the tube 2 and casing 3 may be pulled downwardly slightly, to disengage the arm 13 from contact with the vehicle, and then released. The space between the cup leathers 6 and 8 forms a dashpot chamber so that the return of the casing 3 and tube 2 to the normal position of Fig. 2 will take place at a controlled rate so as to avoid the possibility of damage to the lamp 15 and other parts from slack.

Should the fixture inadvertently be left in the position shown in Fig. 1, and the vehicle driven off, it would likely result in substantial damage to the fixture were it not for the detent latching means provided by the interengagement of the portion 17 of the latching bracket 11 and the opening at the lower end of the casing 3. The spring 10 is compressed between the lower end of the casing 3 and the backing plate 9 of the piston assembly 8, 9, which, it will be recalled, is rigidly secured to the tube 2. Thus the spring normally maintains the latch in latching position with the arm 13 generally perpendicular to the tube 2. However, when, under the conditions named, the arm 13 is pulled away from the hanger 4 a sufficient distance such that the backing plate 5 engages the upper end cap 22, a sufficient force may be exerted to compress spring 10 and permit relative movement of the tube 2 and casing 3 to withdraw the latching part 17 of the latching bracket 11 from the opening in the lower end of the tubular casing 3, so that the arm 13 may swing to the position shown in Fig. 5, and thus free itself from engagement with the vehicle. When this occurs, the piston 5, 6, together with the casing 3, operates as a dashpot to slow down the speed at which the spring 7 contracts.

The latch may readily be reset merely by pulling the bracket and tube 2 downwardly relative to the casing so as to compress the spring 10 sufficiently to reinsert the end portion 17 of the bracket within the opening at the lower end of the casing 3.

It will be seen that there has been provided a light unit which is maintained above the work without the use of special hangers or attachments. The light unit is automatically returned from wherever it is placed if pulled beyond a predetermined length, and requires no dangling cords, the unit being a permanent fixture. Plugs and receptacles are eliminated and the wiring is simplified and placed in a more accessible and dry location. All working parts of the light unit are fully enclosed and well protected.

The above description is to be considered as illustrative and not limitative of the invention of which modifications can be made without departing from the spirit and scope of the appended claims.

The invention having been described, what is claimed is:

1. In an extensible light bracket, the combination which comprises an elongated tubular casing having substantially closed ends and having centrally disposed openings in said ends, an inverted U-shaped hanger extending into the upper end of the casing, an upper piston carried by the inner end of the hanger and positioned in the casing, an electric cord carrying tube extending longitudinally through the casing and the piston and slidably positioned in the centrally disposed openings in the ends of the casing, a lower piston fixedly mounted on said cord carrying tube and spaced from the said upper piston, a tension spring in the casing positioned between the said piston and having the ends thereof connected to the pistons, respectively, a compression spring positioned between the lower piston and lower end of the casing, a light bulb carrying arm pivotally connected to the lower end of the said light cord carrying tube, and a projection on the light bulb carrying arm positioned for insertion into the opening in the lower end of the casing for temporarily retaining the light bulb carrying arm in an outwardly extended position.

2. In an extensible light bracket, the combination which comprises an elongated tubular casing having substantially closed ends and having centrally disposed openings in said ends, an inverted U-shaped hanger extending into the upper end of the casing, an upper piston carried by the inner end of the hanger and positioned in the casing, an electric cord carrying tube extended longitudinally through the casing and piston and slidably positioned in the centrally disposed openings in the ends of the casing, a lower piston fixedly mounted on said cord carrying tube and spaced from the said upper piston, a tension spring in the casing positioned between the said pistons and having the ends thereof connected to the pistons, respectively, a compression spring positioned between the lower piston and lower end of the casing, a light bulb carrying arm pivotally connected to the lower end of the said light cord carrying tube, and a bracket carried by the said light bulb carrying arm, positioned to engage the side surface of the cord carrying tube and having a projection on the end thereof positioned to extend into the opening in the lower end of the casing for temporarily retaining the said light bulb carrying arm in an outwardly extended position.

3. In a loader's light fixture, the combination of a pair of relatively telescoping members, a spring holding said members in telescoped position, a lamp-supporting arm pivotally secured to one of said members, a detent means for holding said arm perpendicular to the direction of telescoping movement of the members, said detent means including means yieldable to release the arm upon application to the arm of a predetermined force in the general direction of the telescoping movement of said members.

4. A lamp hanger, comprising a pair of telescopically movable members, a lamp-supporting arm pivotally secured to one of said members, means to hold said arm in a plane normal to the direction of telescopic movement of said telescopically movable members including locking members movable relative to each other to release the arm for pivotal movement from said normal position, yieldable means to urge said telescopically movable members to contracted position, and means yieldable in response to the application of a predetermined force to the arm in the direction of extension of said telescopically movable members to release said locking members for relative movement to inoperative position.

5. In a loader's light fixture, the combination of a pair of relatively telescoping members, means forming a dashpot between said members to damp telescopic movement thereof, a spring holding said members in telescoped position, a lamp supporting arm pivotally secured to one of said members, and means for holding said arm substantially perpendicular to the direction of telescoping movement of said telescoping members including releasable locking means and means yieldable upon the application to the arm of a predetermined force in the general direction of telescoping movement of said members to release said locking means.

6. In a loader's light fixture, the combination of a pair of relatively telescoping members, means including a piston connected with one of the members and a tubular casing connected with the other member forming a dashpot, a spring holding said members in telescoped position, a

lamp supporting arm pivotally secured to one of said members, and means for holding said arm substantially perpendicular to the direction of telescoping movement of said telescoping members including releasable locking means and means yieldable upon the application to the arm of a predetermined force in the general direction of telescoping movement of said members to release said locking means.

7. A loader's light fixture comprising, an elongated fixture supporting member, a piston secured to the lower end of the member, an elongated tube extending slidably through the piston and forming a conduit for electrical conductors, a tubular casing enclosing the piston and forming a dashpot chamber for the piston, a spring in the casing biasing the tube upward relative to the piston, a lamp carrying arm pivotally connected with the lower end of the tube, latching means on the lower end of the casing engageable with the arm normally to hold the arm generally perpendicular to the tube and releasable by downward movement of the tube relative to the casing to permit the arm to swing to a position in general alignment with the tube, a second spring biasing the tube upward relative to the casing, and means on the casing limiting downward movement of the casing relative to the piston, whereby the arm is released from the latching means by extreme extension of the tube relative to the piston.

8. A loader's light fixture comprising an elongated fixture supporting member, a piston secured to the lower end of the member, an elongated tube slidably extending through the piston and forming a conduit for electrical conductors, a tubular casing enclosing the piston and forming a dashpot chamber for the piston,

a spring in the casing biasing the tube upward relative to the piston, a lamp carrying arm pivotally connected with the lower end of the tube, cooperating means on said arm and at the lower end of the casing normally holding the arm generally perpendicular to the tube, and means yieldable in response to the application of a predetermined downward force on the arm to release the cooperating means.

9. A loader's light fixture comprising, an upper member having a hanger for supporting the fixture, a lower member, means to confine said members for relative telescoping movement including means forming a dashpot between the members, means including a spring urging the members toward each other, a lamp carrying arm pivotally connected with the lower member, latching means normally holding the arm generally perpendicular to the lower member and releasable to permit the arm to swing to a position in general alignment with the lower member, and means operable by extreme outward movement of the members to release the latching means.

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