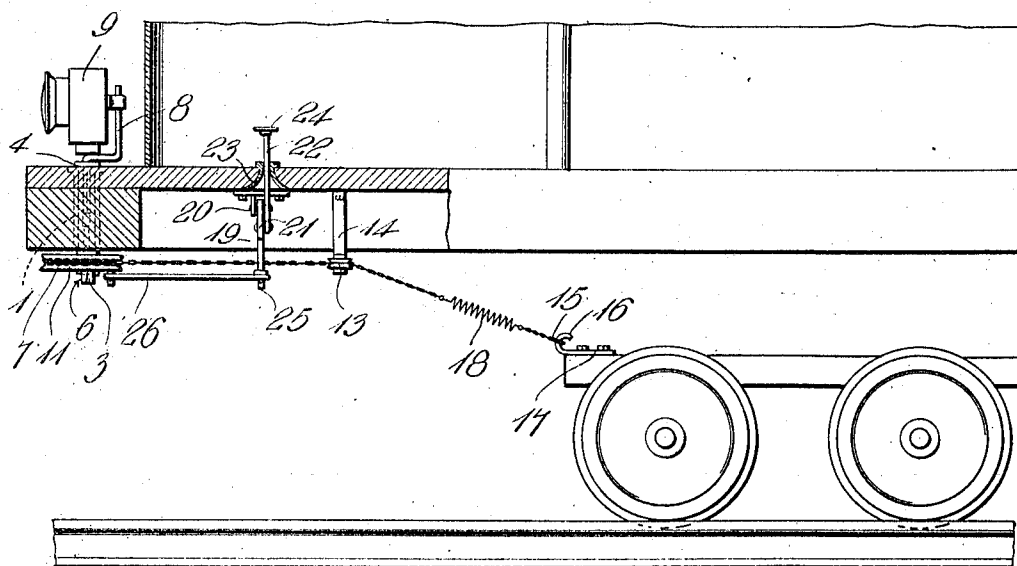
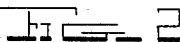


APPLICATION FILED MAR. 23, 1911. RENEWED MAR. 7, 1912.

Patented Oct. 15, 1912.

2 SHEETS-SHEET 1.



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HEADLIGHT FOR CARS.

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1,041,183.

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2 SHEETS-SHEET 2.

FIG. 3

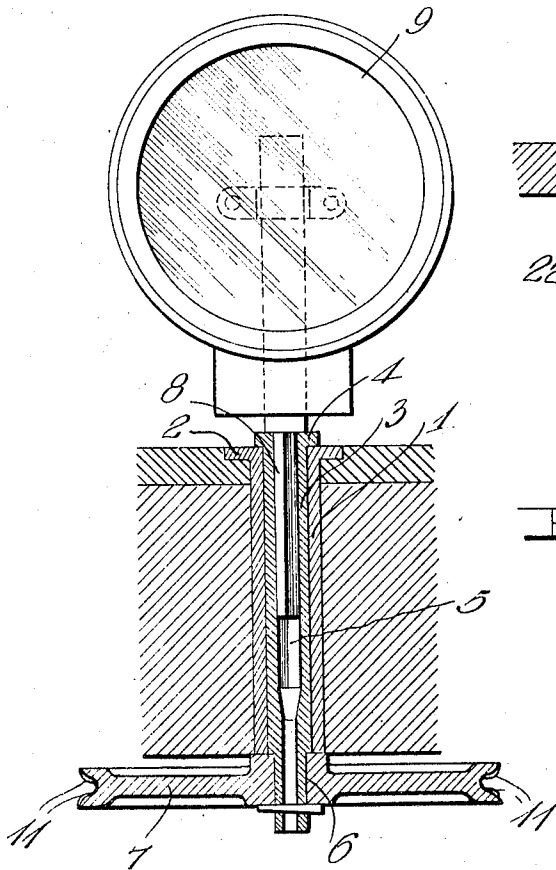


FIG. 4

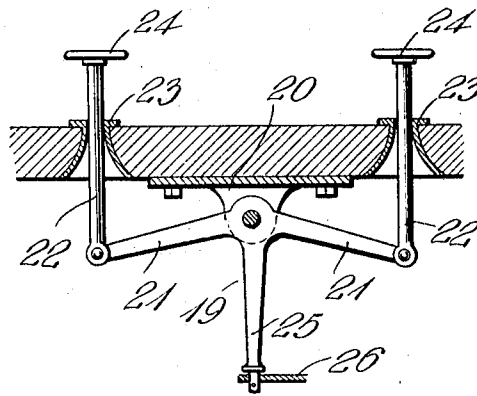


FIG. 5

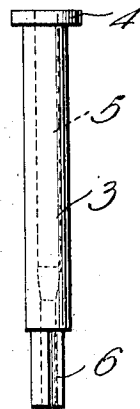


FIG. 6

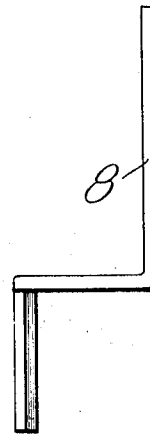
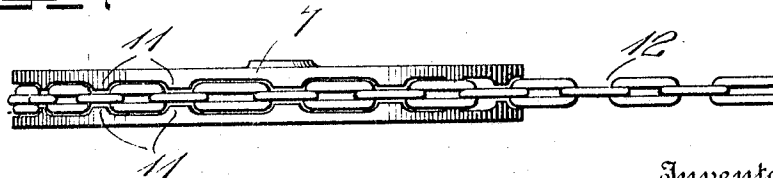


FIG. 7



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UNITED STATES PATENT OFFICE.

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HEADLIGHT FOR CARS.

1,041,183.

Specification of Letters Patent.

Patented Oct. 15, 1912.

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To all whom it may concern:

Be it known that I, CHARLES EDWIN SLACK, a citizen of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Headlights for Cars; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in head lights for cars.

One object of the invention is to provide a head light for cars having an improved construction of operating mechanism whereby the same will be automatically turned by the front truck of the car when the latter turns in passing around curves and which is adapted to be adjusted to increase or decrease the angle to which the light is turned.

Another object is to provide a head light having means whereby the same may be operated by the motorman, independently of its automatic operating mechanism.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a bottom plan view of the front end of a car showing the application of the invention; Fig. 2 is a vertical longitudinal sectional view of the same; Fig. 3 is an enlarged vertical sectional view of the front end of the car showing the manner in which the light is pivotally mounted therein; Fig. 4 is an enlarged detail sectional view on the line 3—3 of Fig. 1; Fig. 5 is a side elevation of the lamp operating bolt or shaft; Fig. 6 is a side view of the lamp supporting bar; Fig. 7 is an enlarged side view of the operating wheel for the lamp and a portion of the operating chain.

In the embodiment of the invention I provide a bushing 1 the length of which corresponds to the thickness of the car floor or the platform. On the upper end of the bushing is formed an annular flange 2 which engages the upper surface of the platform and holds the bushing in place, said flange

forming a bearing for the lamp supporting and operating bolt or shaft hereinafter described.

In the bushing 1 is revolvably mounted a lamp operating bolt or shaft 3 having on its upper end a flanged head 4 which is adapted to engage the flange 2 on the upper end of the bushing 1. Through the bolt or shaft is formed a rectangular passage 5. The lower end of the bolt or shaft projects beyond the lower end of the bushing 1 and is squared as at 6 to receive the operating wheel 7 of the lamp. The wheel 7 is secured on the squared portion 6 of the bolt by a cotter pin or other suitable fastening means which is engaged with the projecting lower end of the bolt as shown. Adapted to be engaged with the passage 5 in the upper end of the bolt or shaft 3 is a lamp supporting bar 8 said bar being bent at right angles midway between its ends whereby said ends are offset as shown to form a seat for the lamp 9 which engages said offset portion and is secured to the projecting upper end of the bar in any suitable manner.

In the rim of the wheel 7 is formed an annular groove in which is formed a series of lugs 11 with which are engaged alternate links of an operating chain 12 the ends of which extend back and are engaged with guide pulleys 13 mounted in suitable bearing brackets 14 secured to the bottom of the car. The ends of the chains 12 are connected to rings 15 which are engaged with hooks 16 formed on attaching plates 17 bolted or otherwise connected to the front truck of the car. In the chains 12 are arranged coiled springs 18 by means of which the vibrations of the truck are prevented from being imparted to the lamp. By thus connecting the lamp with the truck it will be readily seen that when the latter turns in one direction or the other as the car passes around curves that the lamp will also be turned in the same direction thereby continuously keeping the light thrown on the center of the tracks.

By connecting the attaching plates 17 and hooks 16 to the truck at a greater or less distance apart a greater or less movement will be imparted to the lamp and the latter thus turned to a greater or less angle.

In addition to the automatically operated mechanism herebefore described I also

provide means whereby the lamp may be turned or controlled by the motorman, said means comprising a double bell crank lever 19 which is pivotally mounted in a suitable supporting bracket 20 secured to the under side of the car. To the outer ends of the oppositely extending upper arms 21 of the bell crank lever are connected the lower ends of push bars 22 which project upwardly through suitable bushings 23 arranged in the bottom of the car and which are provided on their upper ends with treadles 24 whereby the same may be engaged by the foot of the motorman and the bell crank lever thus rocked in one direction or the other. To the lower end of the downwardly projecting arm 25 of the bell crank lever is connected the rear end of a pitman rod 26 the forward end of which is eccentrically connected to the operating wheel 7 on the lower end of the lamp operating bolt or shaft 3. By means of the bell crank lever and treadles 24 and the pitman rod 26, the operating wheel 7 may be turned by the motorman in either direction thus throwing the light to any desired angle. The springs 18 in the operating chain 12 are not stiff enough to prevent the stretching of the same by the bell crank lever when operated by the motorman so that said springs will not interfere with the operation of the light in the manner described.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of

the invention as defined in the appended claims.

Having thus described my invention, what I claim is:

1. A headlight for cars comprising a revoluble vertical lamp carrying shaft, a triple armed lever pivotally connected to the underside of the car platform, two arms thereof extending substantially horizontally in opposite directions from the pivot and the third depending vertically therefrom, two treadles above the platform pivotally connected respectively to the opposite horizontal arms, and means connecting the shaft with the lower free end of the depending arm whereby the depression of the treadles oscillates the shaft.

2. A dirigible head light for cars comprising a revolubly mounted lamp supporting and operating shaft, a lamp secured to the upper end thereof, an operating wheel secured to the lower end of said shaft, a double bell crank lever pivotally connected to the under side of the car platform, push bars connected to the opposite ends of the upper arms of said lever, said bars projecting up through the platform of the car, bushings arranged in said platform to guide said push bars, treadles arranged on the upper ends of the bars and a pitman rod connected at one end to the lower arm of the lever and having its opposite end eccentrically connected to said operating wheel.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES EDWIN SLACK.

Witnesses:

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H. A. ANDERSON.