

July 3, 1928.

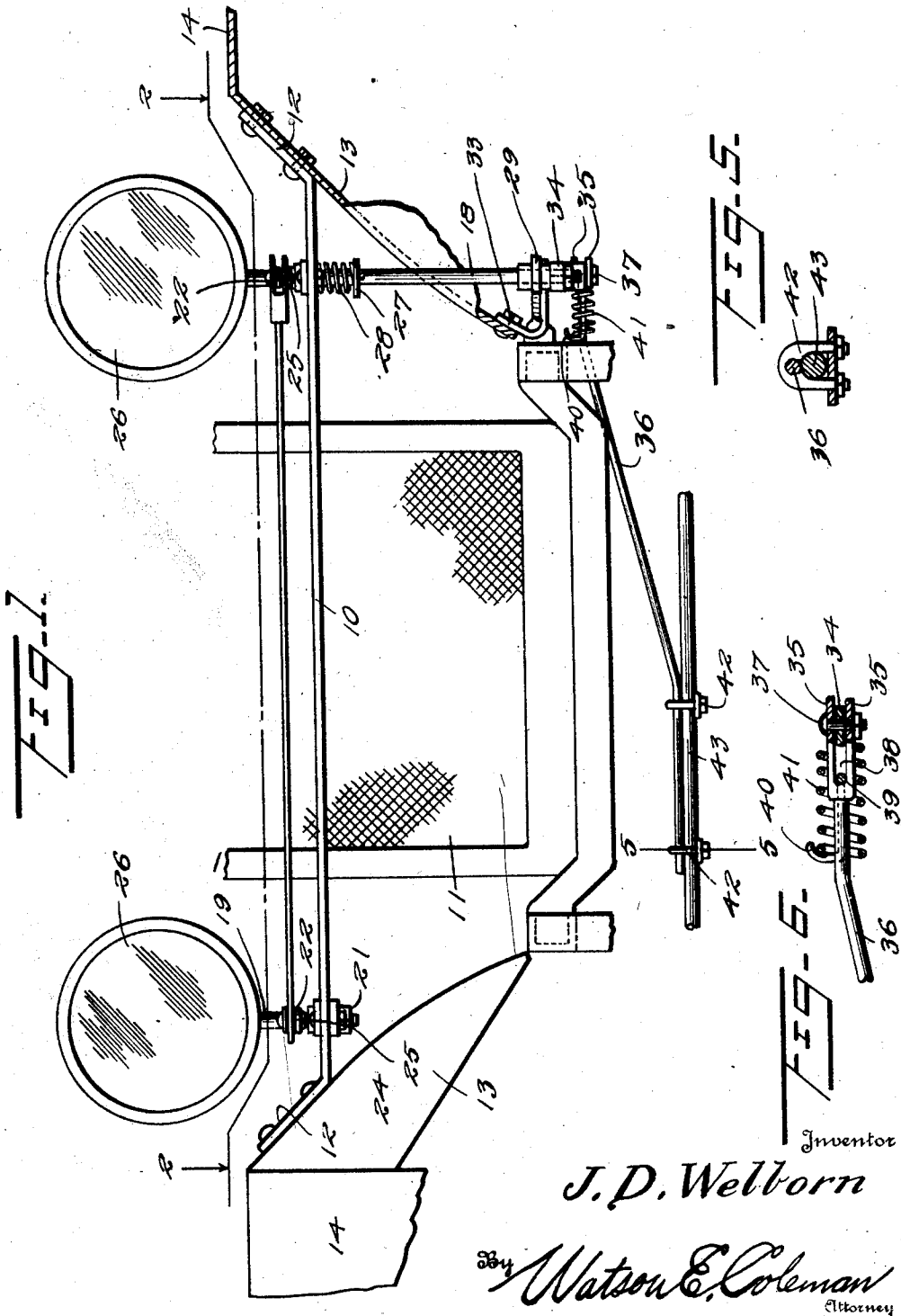
1,675,475

J. D. WELBORN

DIRIGIBLE HEADLIGHT

Filed Oct. 23, 1926

2 Sheets-Sheet 1



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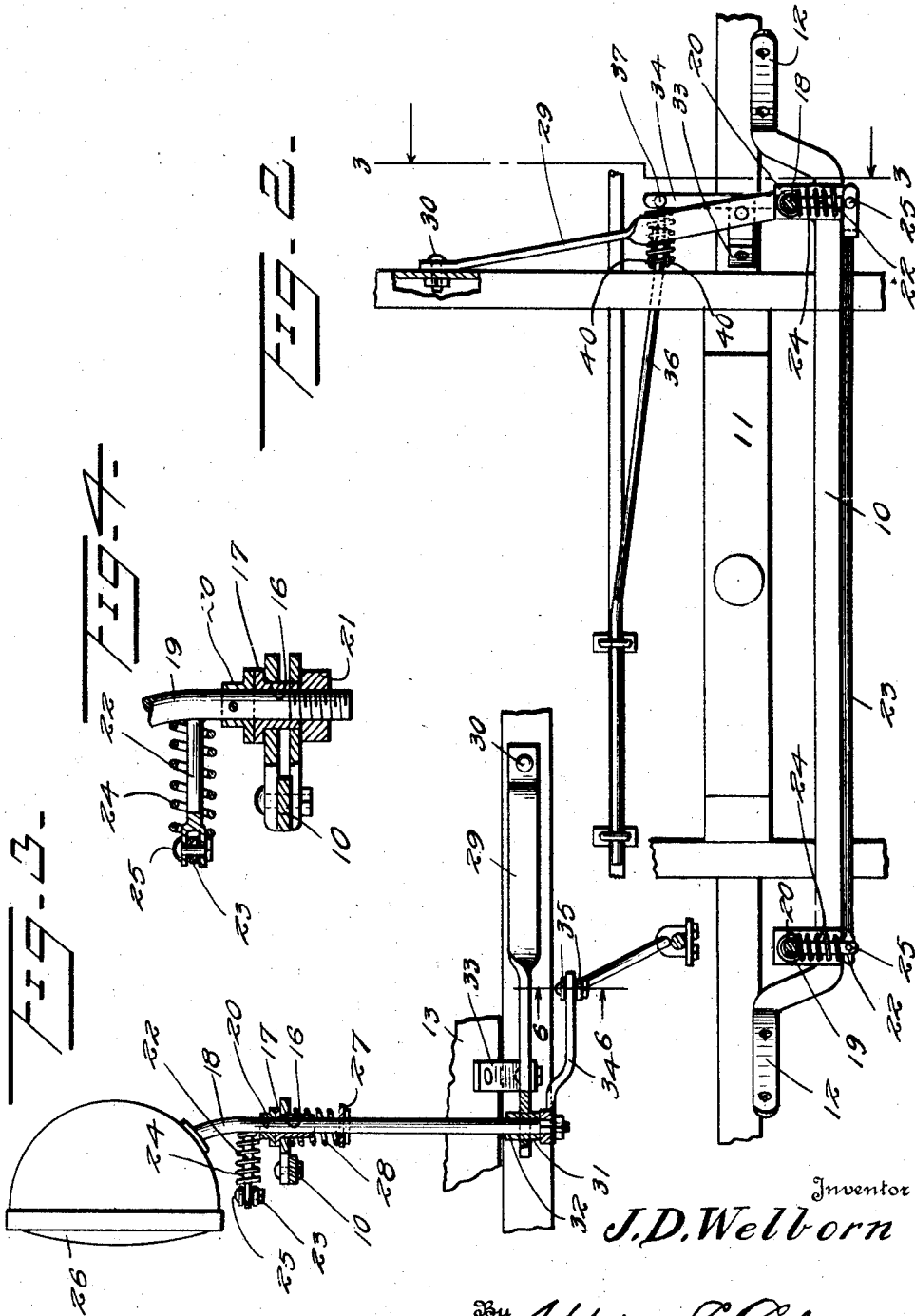
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

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DIRIGIBLE HEADLIGHT.

Application filed October 23, 1926. Serial No. 143,743.

This invention relates to dirigible headlights for automobiles.

An important object of the invention is to provide a device of this character which will be very readily applied to the vehicle and which will be durable and efficient in service.

A further object of the invention is to provide a construction of this character in which the rattling of the control elements is eliminated and a very rigid structure provided.

A still further object of the invention is to provide means preventing rattling of the elements of the headlight control device, which likewise serve to urge return of the lights to their normal position when the turning movement has been completed.

These and other objects I attain by the construction shown in the accompanying drawings, wherein for the purpose of illustration is shown a preferred embodiment of my invention and wherein:—

Figure 1 is a front elevation showing a dirigible headlight constructed in accordance with my invention applied to an automobile;

Figure 2 is a section on the line 2—2 of Figure 1;

Figure 3 is a section on the line 3—3 of Figure 2;

Figure 4 is an enlarged detail section showing the method of mounting the left-hand light standard;

Figure 5 is a section on the line 5—5 of Figure 1;

Figure 6 is a section on the line 6—6 of Figure 3.

Referring now more particularly to the drawings, the numeral 10 indicates a transversely extending bar adapted to be positioned in advance of the radiator 11 of the vehicle. The ends of the bar are provided with angular extensions 12 which abut against and are adapted to be secured to the inner faces of the aprons 13 of the vehicle fenders 14. Adjacent each end, the bar 10 has formed therethrough a vertical opening 16 within which is arranged a suitable bushing 17. Through the bushing 17 are rotatably directed vertically extending headlight standards 18 and 19, each having a flange or collar 20 to engage the upper end of the bushing and limit downward movement of the standard therethrough. The standard 19 is threaded at the under surface of the bar and has applied thereto a retaining nut

21 for preventing upward movement of the standard. Each of the standards 18 and 19 has projecting forwardly therefrom an arm 22, the outer ends of these arms being connected by a link 23, the ends of which extend slightly beyond the arm with which they coact. Surrounding each arm is a spring 24 which bears against the adjacent portion of the link 23 and against the standard 18 or 19 and accordingly is engaged and compressed by the link when the arms 24 are arranged at an angle to the longitudinal axis of the vehicle to a greater extent than the springs are compressed when the arms 22 parallel this longitudinal axis. For this reason, the springs 24, in addition to taking up any wear on the pivots 25 connecting the ends of the links with the arms, serve to constantly urge the connected structure to a position where the arms 22 parallel the longitudinal axis of the vehicle. The upper end of each standard is provided with a headlight 26 of any suitable construction, this headlight being applied thereto, so that the beam extends therefrom in the same direction as the arm 22.

The standard 18 immediately below the lower surface of the bar 10 has applied thereto a spring seat 27 shown as consisting of a pin directed through the standard. A spring 28 surrounds the standard between the lower face of the bar and this spring constantly urges the standard downwardly, thus maintaining the flange 20 thereof in engagement with the upper end of the bushing 17. At the same time, a structure is provided which will permit a vertical movement of the standard 18 to correspond to the vertical movement taking place between the body of the vehicle to which the bar is rigidly attached and the axle of the vehicle to which the lower end of the standard 18 is connected, as will hereinafter appear.

The pivotal connections 25 are sufficiently loose to prevent transmission of upward thrust from the standard 18 to the standard 19. A bar 29 is attached at one end by means of a bar 30 to the frame of the vehicle, and the other end portion of the said bar is provided with an opening 31 having a bushing 32 therein serving as a bearing for the lower portion of the standard 18. The bar 29 is further provided with an angular bracket 33 which abuts and is rigidly secured to the outer face of the apron 13. The lower end of the standard 18 has secured

thereto an arm 34, the rear end of which is directed between the arms 35 formed upon one end of a rod 36 and is pivoted thereto, as at 37. The rear end of this arm projects slightly beyond the arms 35 of the fork, for a purpose presently to appear.

In the crotch 38 of the fork is engaged the connecting member 39 of a U-shaped clip. The arms of this clip lie closely against the side faces of the rod and are provided with out-turned hooks 40 receiving the end coil of and forming a support for one end of a spring 41 which surrounds the rod 36. The opposite end of this spring abuts the arm 34 at opposite sides of the pivot thereof and accordingly tends to hold this arm in a normal position at right angles to the adjacent portion of the rod 36. The rod 36 has associated therewith clips 42 whereby it may be rigidly secured to the connecting rod 43 of the steering gear of the mechanism.

When, however, the vehicle is turned, the rod 36 which, through its connection with the rod 34, will cause a rotation of the standard 18 and thereby a rotation of the standard 19 through the link and arm connection 22 and 23. The springs 41 and 24 are compressed by this action, so that upon release of the steering mechanism, there is a tendency of the mechanism to return to straight-ahead driving position. It will be obvious that wear upon the pivots will be taken up by these springs, so that the springs, in addition to assisting in the steering operation,

likewise assist in preventing any rattling of the bar of the control mechanism.

Since the construction hereinbefore set forth is obviously capable of a certain range of change and modification and of adaptation to other vehicles than those of the type with which it has been illustrated, I accordingly do not limit myself to such specific structure except as hereinafter claimed.

I claim:—

In combination with a vehicle having the usual steering mechanism including a connecting rod moving transversely of the vehicle during steering operations, a pair of vertically rotatable standards mounted for rotation adjacent opposite sides of the vehicle, headlights carried thereby, arms projecting forwardly from the standards, a link connecting the arms, an arm secured to the lower end of one of the standards, a bar connected at one end with the connecting rod of the steering mechanism of the vehicle and engaged with the arm at a point spaced from the end thereof and a spring seat carried by the bar and with which is engaged one end of a spring, the opposite end of said spring engaging the last named arm at opposite sides of the pivotal connection of the bar thereto whereby said spring tends to maintain said arm in one position with relation to the bar.

In testimony whereof I hereunto affix my signature.

JOHN D. WELBORN.