Jan. 6, 1925. 1,522,457

F. H. IDEUS

SHOCK ABSORBER

Filed May 23, 1923

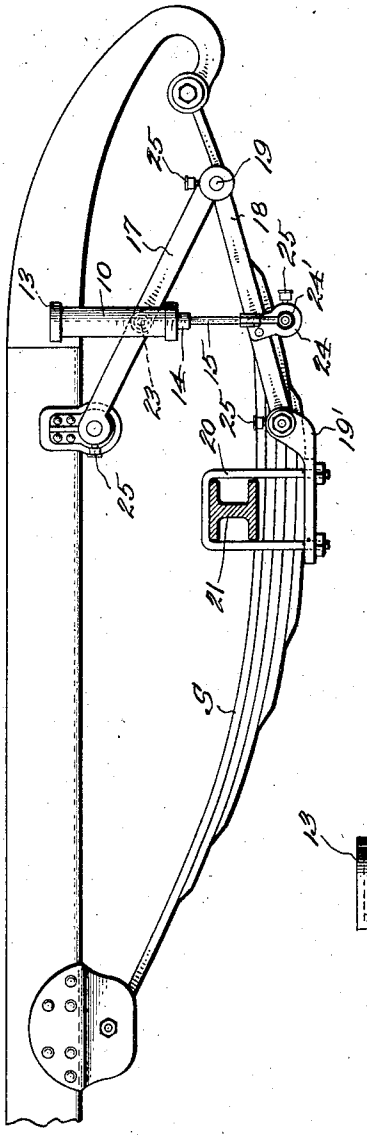


Fig. 1.

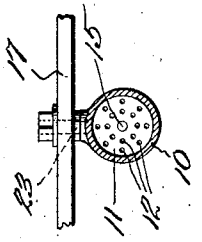


Fig. 3.

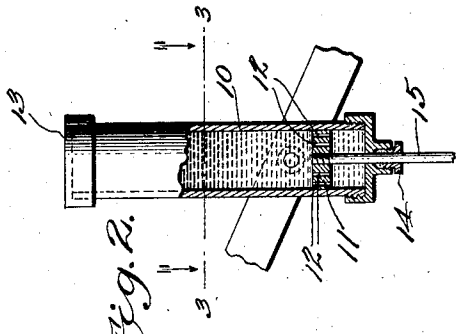


Fig. 2.

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WITNESSES

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UNITED STATES PATENT OFFICE.

FRED H. IDEUS, OF AUSTIN, TEXAS.

SHOCK ABSORBER.

Application filed May 23, 1923. Serial No. 640,970.

To all whom it may concern:

Be it known that I, FRED H. IDEUS, a citizen of the United States, residing at Austin, in the county of Travis and State of Texas, have invented new and useful Improvements in Shock Absorbers, of which the following is a specification.

The object of this invention is to provide a shock absorber for motor cars and other similar uses, the device including an oil cylinder, a plunger therein, and particularly means for mounting the elements with reference to the axle and the frame, so that shocks arising from the usual causes will be taken up and the strain on the springs avoided or greatly reduced.

A further object is to provide mounting means including a plurality of bars forming a V-structure, the converging ends being pivotally connected and the opposite ends being connected respectively with the axle and the body or frame, the movement of the bars toward and away from each other being governed by the movement of fluid in the cylinder and through ports in the plunger.

With the foregoing and other objects in view, the invention consists in the novel construction and arrangement of elements described and claimed, it being understood that modifications may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings, Figure 1 is a view in side elevation, showing the mounting of the shock absorber; Figure 2 is a view in elevation and vertical section, showing the oil cylinder and plunger; Figure 3 is a section on line 3—3 of Figure 2, showing the manner of connecting the oil cylinder with one of the pivoted bars.

The cylinder 10 has operating therein a plunger 11 having ports 12 of sufficient number and size to permit of the flow of oil from one portion of the cylinder to the other, incident to the relative movement between the plunger and the cylinder. The cylinder is provided with a filling cap 13 and a stuffing box 14 through which the piston rod 15 passes.

Bars or arms 17 and 18 are pivotally connected at 19, in V-form, and the bar 17 is to be pivotally connected with the frame of the vehicle. The bar 18 is pivotally connected with bracket 19′ secured by U-bolt 20 to axle 21, the device operating freely alongside of each spring S, and the bars being normally spaced at about the angle shown. The bar 17 is pivotally connected with the cylinder 10 in any suitable manner, as by means shown conventionally at 23. The piston rod is pivotally connected by elements 24, 24′ with the bar 18. Grease cups are shown at 25, at the various points where required.

The cylinder is supplied with oil of suitable grade, and it is obvious that relative movement between the bars 17 and 18 will be resisted by the somewhat slow movement of the oil through the ports of the plunger, so that the desired cushioning action will result.

What is claimed is:—

1. A device of the class described, comprising an oil cylinder, a perforated plunger therein, a plurality of bars, disposed at an angle with each other, means for pivotally connecting the bars at their converging ends, means for connecting the cylinder with one of the bars, at a point intermediate of the ends of the cylinder, and means for connecting the plunger with the other bar, said bars being adapted for mounting between the frame and the axle of a vehicle, with the diverging ends of the bars connected respectively with the axle and frame.

2. A device of the class described, comprising an oil cylinder, a perforated piston therein, a piston rod connected with the piston, a plurality of bars pivotally connected with each other to form a V-shaped device, devices for pivotally connecting the bars respectively with the piston rod and the cylinder, at points equally distant from the converging ends, the pivotal connection with the cylinder being at a point intermediate of the ends thereof, one end of the cylinder being free and projecting beyond the bar to which it is attached, and said bars being adapted to have their diverging ends connected respectively with the axle and the frame of a vehicle.

In testimony whereof I affix my signature.

FRED H. IDEUS.