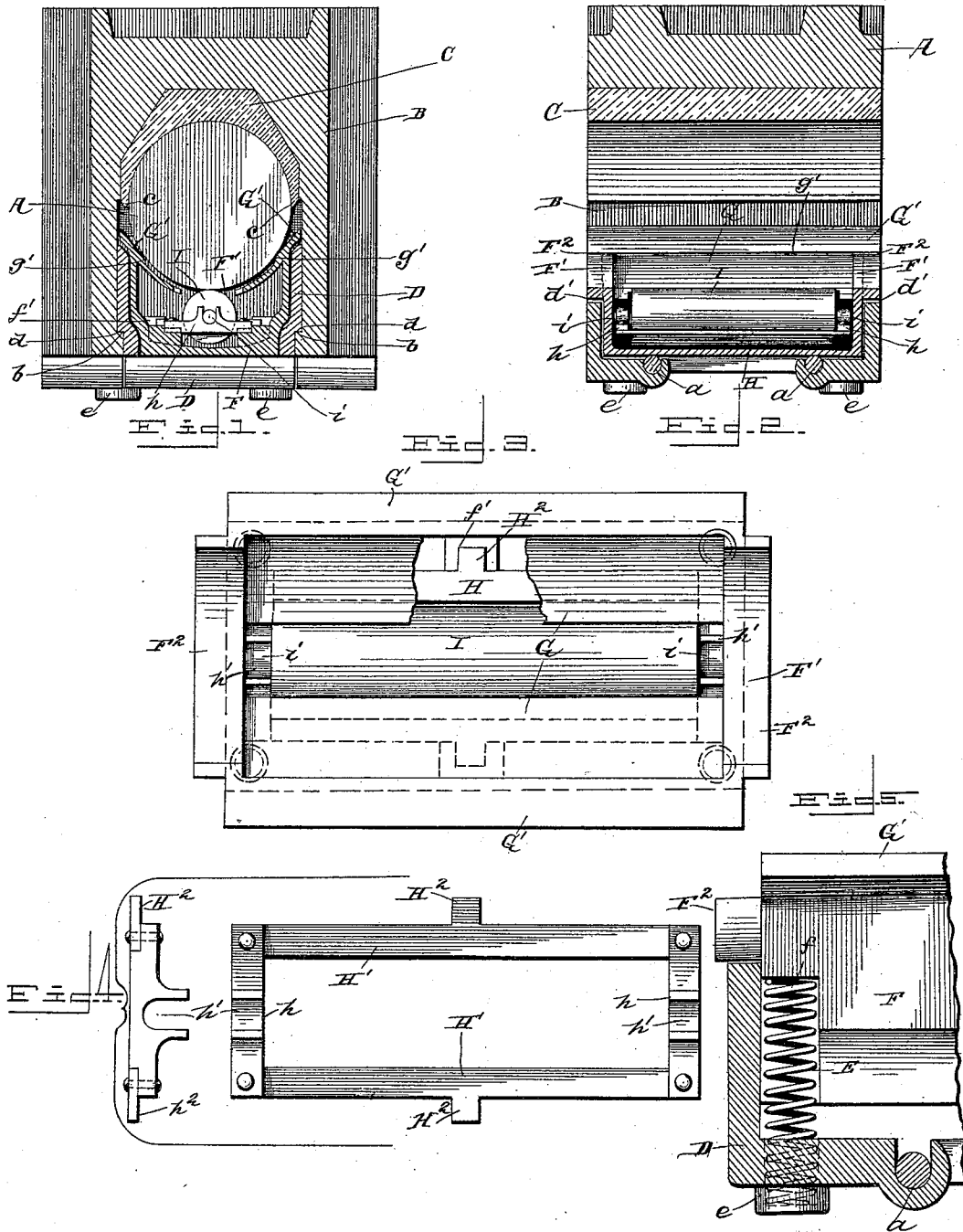


(No Model.)

J. B. GLOVER.  
CAR AXLE LUBRICATOR.

No. 420,783.

Patented Feb. 4, 1890.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JAMES BOLAN GLOVER, OF SAVANNAH, GEORGIA.

## CAR-AXLE LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 420,783, dated February 4, 1890.

Application filed October 23, 1889. Serial No. 327,945. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES BOLAN GLOVER, of Savannah, in the county of Chatham and State of Georgia, have invented certain new and useful Improvements in Car-Axle-Journal-Lubricating Devices; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a transverse vertical sectional view through an axle-box, showing my improved lubricating devices applied. Fig. 2 is a longitudinal sectional view of the lubricating devices detached. Fig. 3 is a plan view thereof. Figs. 4 and 5 are details.

This invention is an improvement in mechanical devices for supplying lubricants to the journals of car and locomotive axles; and its object is to provide a device whereby the lubricant will be thoroughly distributed or supplied to the journal and waste thereof be prevented, and wherein the operating parts will be inclosed in a casing and protected from dust, &c.; and to this end the invention consists in the novel construction and arrangement of parts of the lubricating device, which will be clearly understood from the following description and claims.

In the drawings the device is shown applied to a locomotive-axle box, but it can be readily adapted for use with common forms of car-axle boxes.

Referring to the drawings by letter, A designates the car-axle journal, and B the axle-box; C the journal-brass secured in the box, as usual.

D designates an ordinary removable hollow slide fitted in box B below the journal and forming part of said box, being supported by lateral shoulders *b*, engaging corresponding flanges *b'* on the inner faces of the sides of box B below the journal and confined by a pin *a*, passing transversely through perforated lugs on the bottom of the box B and slide, as shown. The front end of the slide is recessed at *d'* under the journal A. At the corners of slide D are hollow seats or depressions *e e*, in which are seated coiled springs E E, hereinafter referred to.

F designates a rectangular cup or vessel

fitted easily within slide D and having recesses *f f* at its corners, which receive the upper ends of springs E E when cup F is placed within the slide, as shown. The end walls of said cup are formed with recesses *F' F'*, nearly semi-cylindrical in contour and corresponding to the radius of the journal A, which lies in said recesses and forms close joints therewith to prevent escape of oil or lubricant from the cup at the ends of the journal. On the end walls of the box I have outwardly-projecting flanges *F<sup>2</sup>*, around recesses *F'*, which extend over the edges of slide D, and thus increase the bearing-surface between the cup and journal, so that there is less danger of the cup cutting the axle-journal.

G G are curved wings projecting inwardly from the upper edge of each side wall of the cup and lie close to but do not touch the journal, as they are little below the edge of recesses *F' F'*, as indicated. These wings catch any drippings of the lubricant from the journal and return them into the cup.

G' G' are flanges at the upper edges of wings G, which project laterally above and over the edges of slide B and beneath and beyond the edges of the journal-brass C, the lower edges of which are beveled inwardly and downwardly, as at *c c*, and by this construction the oil dripping from the brass is caught by flanges G' and directed onto the wings.

On the inner faces of wings G G, near the upper edges thereof, are protuberances *g' g'*, which nearly touch the periphery of the journal, leaving just space for the passage of a thin film of oil on the journal, thus preventing splashing or throwing out of the lubricant on the journal by any centrifugal action. At the center and on each side of cup F are two internal studs or lugs *f' f'*, as shown.

H designates a rectangular frame which can be laid in cup F, and which is composed of end pieces *h h* and side pieces *H' H'*, which are of spring metal and have at center outwardly-projecting ears *H<sup>2</sup> H<sup>2</sup>*, which rest upon studs *f' f'* of the cup and support the frame therein, as shown, permitting the ends thereof to be depressed against the resiliency of the spring-bars *H'*. The end pieces *H H* are provided at center with a journal-bearing *h' h'*, as shown, to receive the journals *i i* of the

lubricating-roller I, which is supported by said frame and is of such diameter that its upper edge projects slightly above the inner edges of wings G G and impinges against journal A, being yieldingly held against the same by the spring-bars H'. The springs E support cup F and maintain close joints between the end walls thereof and the journal, as is evident.

The roller I is made of any suitable material to carry the lubricant, which is held in cup F, up to the journal, being rotated by frictional contact with the axle-journal during the movement of the car, so that when the axle is turning it is being constantly lubricated. The spring-frame H insures the proper contact of the roller and journal and the lubrication of the journal, while the parts are protected from dust and dirt. The roller may be made hollow, if desired, so that more oil may be held in the cup. The springs E press cup F up toward the journal, keeping its flanged recessed ends close against the same, thereby preventing entrance of dirt or dust and also preventing the splashing out of the lubricant at the ends of the cup.

Having now described my invention, what I claim, and desire to secure by Letters Patent thereon, is—

1. The combination, in a car or locomotive axle-journal-lubricating device, of a spring-supported lubricant-holding cup placed in the box below the journal, having lateral inwardly-projecting wings G G and end walls which are recessed to fit neatly against the journal and provided with exterior projecting flanges also fitting the journal, with a lubricating-roller within said cup having journals at each end turning in spring-supported bearings within the cup, all constructed and arranged to operate substantially as described.

2. The combination of the journal-box, a

lubricant-holding cup within said box having its end walls recessed to fit closely against the journal, and having inwardly-projecting wings G G and laterally-projecting flanges G' G' at the upper edges of said wings, with the springs supporting said cup and the lubricating-roller placed in said cup, and the spring-supported journal-bearings for said roller, all substantially as described.

3. The combination of the axle-box, a cup therein having its end walls recessed and flanged to fit closely against the axle-journal, and having internally-projecting lateral wings G G, outwardly-projecting lateral flanges G' G', and the springs supporting said cup, with the lubricating-roller within said cup, and the spring-frame H, supporting said roller and composed of spring side bars H' H' and end pieces h h, having bearings for the journals of the roller, all constructed and arranged to operate substantially as and for the purpose described.

4. In a car or locomotive axle-journal-lubricating mechanism, the combination of the journal-box, a bearing or brass and a lubricant-holding cup within said box, having its end walls recessed to fit closely against the journal and exteriorly flanged around said recesses, and having inwardly-projecting wings G G and laterally-projecting flanges G' G' at the upper edges of said wings, with the springs supporting said cup, and the lubricating-roller placed therein and mounted upon spring-supported journal-bearings, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAMES BOLAN GLOVER.

Witnesses:

WM. F. AIKEN,  
J. W. DOYLE.