D. G. BLACK.

FLANGE OILER.

APPLICATION FILED DEC. 21, 1914.

1,152,593. Patented Sept. 7, 1915.

Fig. 1.

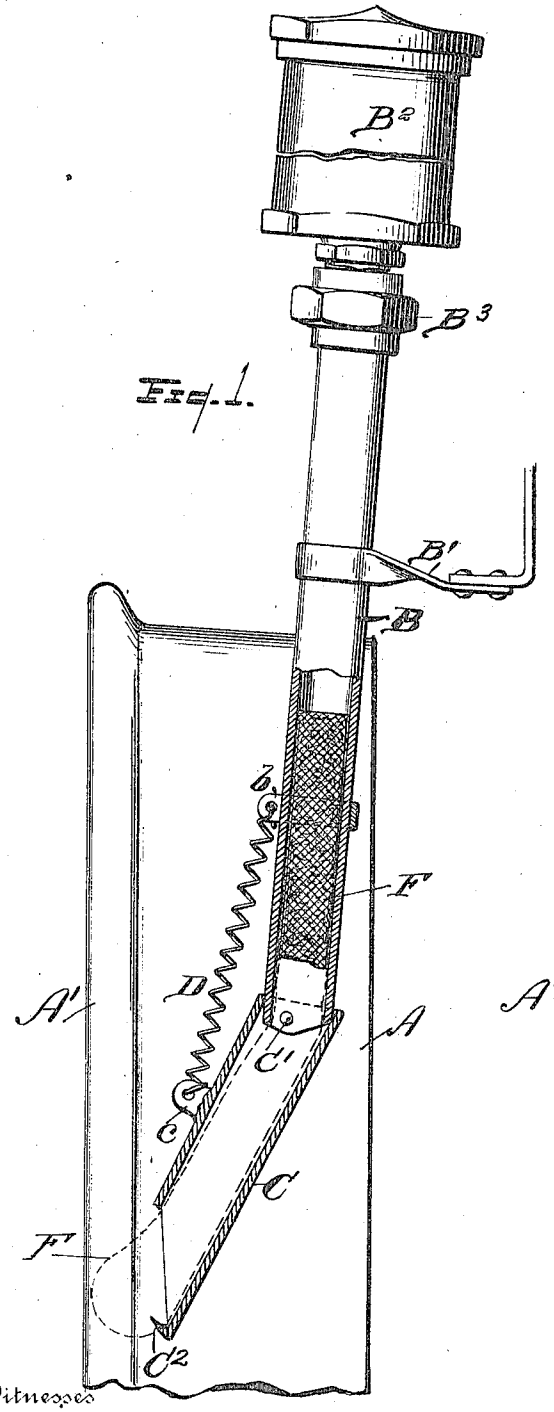
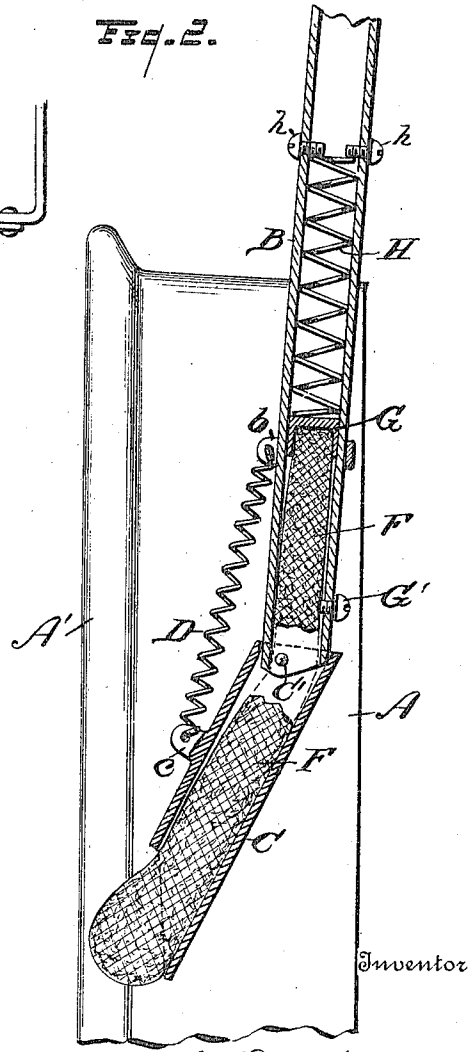


Fig. 2.



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FLANGE-OILER.

1,152,593. Specification of Letters Patent. Patented Sept. 7, 1915.

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To all whom it may concern:

Be it known that I, DANIEL G. BLACK, citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Flange-Oilers, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to a flange oiler for the traction wheels of locomotives, railroad cars and other like vehicles.

The object of my invention is to provide a device which shall be simple and inexpensive in construction adapted to apply a lubricant to the wheel flanges of rail guided vehicles, that the friction incident to the contact of the wheel flange with the track in rounding curves may be overcome.

A further object is to provide means adapted to yield under the pressure of the lateral movement of the wheels of a locomotive or car in order to avoid injuring or breaking the device.

A further object is to provide means for forcing outwardly the projecting end of the lubricating wick as it wears away through contact with the wheel flange.

Other advantages and improvements will hereafter appear.

In the drawings accompanying this specification: Figure 1, is a side elevation of the device partly in section, a portion of the wick being broken away to show the construction of the jointed supporting tubes;—indicating in dotted lines the application of the end of the wick to the flange of the wheel, a fragment of the latter being shown. Fig. 2, is a similar view of a modification in which means are provided to force the projecting end of the wick outwardly as it wears away through contact with the wheel flange.

Referring now to the letters of reference placed upon the drawings: A denotes a traction wheel, and A′ its flange.

B indicates a tubular member or pipe suitably supported by a bracket B′ secured to the frame or other convenient part of the locomotive, or car.

C, is a relatively short section of tubing hinged at C′ to the lower end of the pipe B.

D is a spring,—(one end of which engages a lug *c* formed on the tube C, the other end being connected with a lug or collar *b*,) carried by the pipe B serving as a resilient support for the tube C, the latter being directed at an angle toward the rim of the wheel.

F, is a wick respectively housed in the pipe B, and connecting tube C; its projecting end bearing against the flange of the wheel A.

C^2 indicates a stud on the end of the tube C, engaging the wick that it may not be dragged out of the tube through contact with the wheel and further to insure the wick having a sufficiently long projecting end. A suitable oil cup B^2 or oil reservoir may be mounted upon the upper end of the pipe B, or the pipe may be of suitable length itself to receive a sufficient volume of oil for lubricating purposes, in which event the end of the pipe is fitted with a closure cap.

B^3 indicates a pipe union.

In the modification shown in Fig. 2;—G, is a thimble designed to receive the end of the wick F. H, denotes a spring housed in the pipe B, its upper end bearing against the screws *h*, *h*, projecting inwardly from the wall of the pipe; its lower end bearing against the thimble G, to crowd the wick F, toward the flange of the wheel as the wick wears away. G′ is a screw abutment to limit the action of the spring.

Having indicated the several parts by reference letters, the construction and operation of the device will be readily understood.

Oil is supplied to the pipe B,—either directly or by means of an oil cup or other suitable reservoir connected with the pipe;—it passes down through the pipe and swinging tube, saturating the wick, the projecting end of which applies the lubricant directly to the flange of the wheel. It will be obvious that any lateral movement of the wheel which may cause its flange to bear directly against the swinging tube will result in forcing the tube backward, thereby relieving any undue strain upon the feed pipe which might otherwise result in damaging or breaking the device. Upon the return of the wheel to its normal position, the spring D, connected with the swinging tube

C, will serve to maintain the projecting end of the wick in its proper relation to the flange of the wheel.

Having thus described my invention what I claim is:

1. In a device of the character described, an oil conducting pipe, a swinging tube hinged to the pipe, a wick adapted to apply oil to the flange of a wheel supported by the tube and projecting from the end of the latter, resilient means for normally maintaining the tube at an angle to the pipe, and a spring adapted to act upon the wick to force it gradually beyond the end of the tube as the wick wears away.

2. In a device of the character described, an oil conducting pipe, a swinging tube hinged to the pipe, a wick adapted to apply oil to the flange of a wheel housed partially in the pipe and in the tube, resilient means for normally maintaining the tube at an angle to the pipe, and a spring housed within the pipe adapted to act upon the wick to force it gradually beyond the end of the tube as the wick wears away.

3. In a device of the character described, an oil conducting pipe, a swinging tube hinged to the pipe, a wick adapted to apply oil to the flange of a wheel housed partially in the pipe and in the tube, resilient means for normally maintaining the tube at an angle to the pipe, a spring housed within the pipe adapted to act upon the wick to force it gradually beyond the end of the tube as the wick wears away, and means for limiting the movement of the wick.

4. In a device of the character described, an oil conducting pipe, a swinging tube hinged to the pipe, a wick adapted to apply oil to the flange of a wheel housed partially in the pipe and in the tube, a thimble housed within the pipe to receive the end of the wick, resilient means for normally maintaining the tube at an angle to the pipe, a spring housed within the pipe adapted to act upon the wick to force it gradually beyond the end of the tube as the wick wears away, and means for limiting the movement of the wick.

5. In a device of the character described, an oil conducting pipe, a swinging tube hinged to the pipe, a stud integral with the lower end of the tube to engage a wick, a wick adapted to apply oil to the flange of a wheel, and a spring engaging the pipe and the tube to normally maintain the tube at an angle to the pipe.

In testimony whereof, I sign this specification in the presence of two witnesses.

DANIEL G. BLACK.

Witnesses:
SAMUEL E. THOMAS,
LENA WEIGAND.