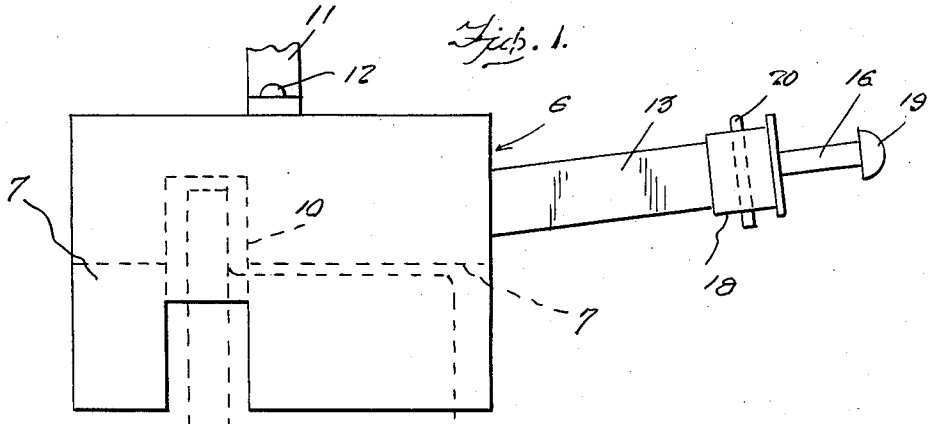
Nov. 8, 1932. W. B. CASEY 1,887,450

WHEEL FLANGE LUBRICATOR

Filed Aug. 5, 1930 2 Sheets-Sheet 1

Fig. 1.



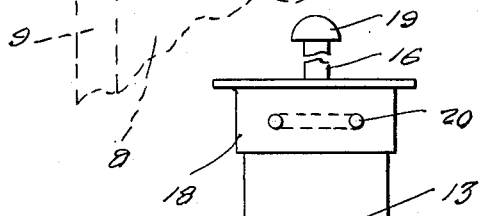
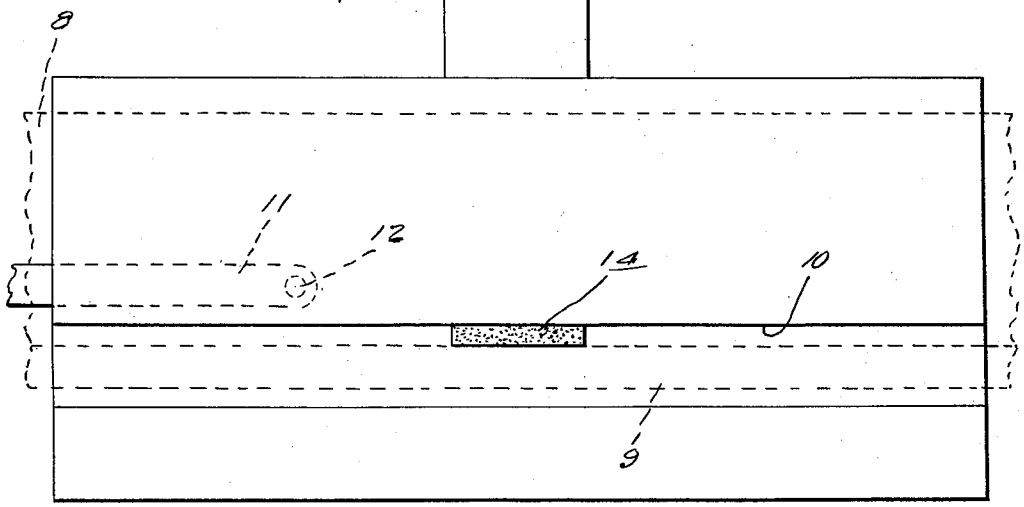


Fig. 2.



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Nov. 8, 1932. W. B. CASEY 1,887,450

WHEEL FLANGE LUBRICATOR

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Fig. 3.

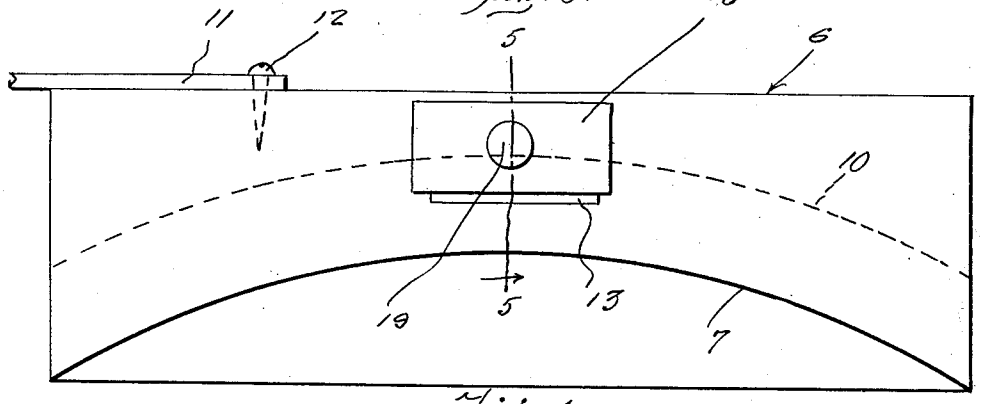


Fig. 4.

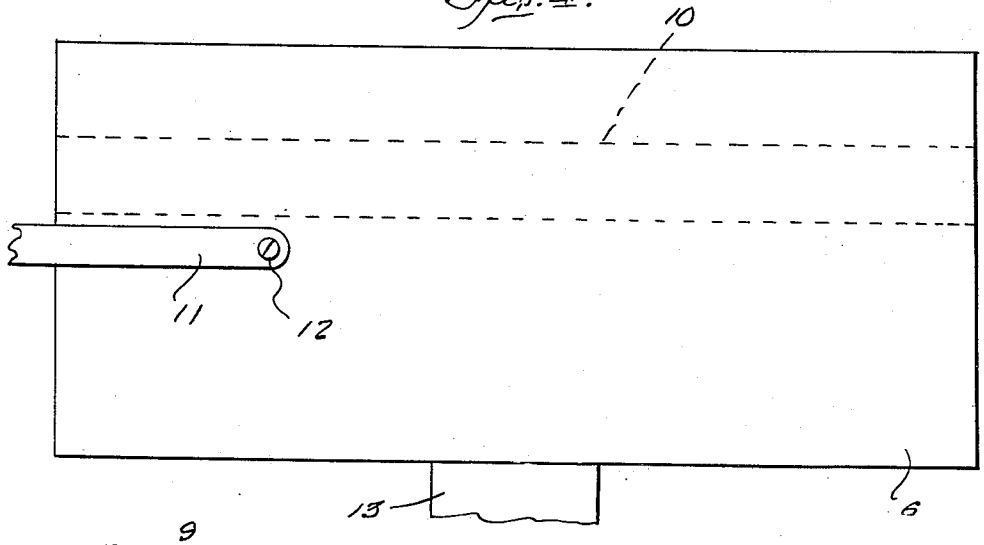
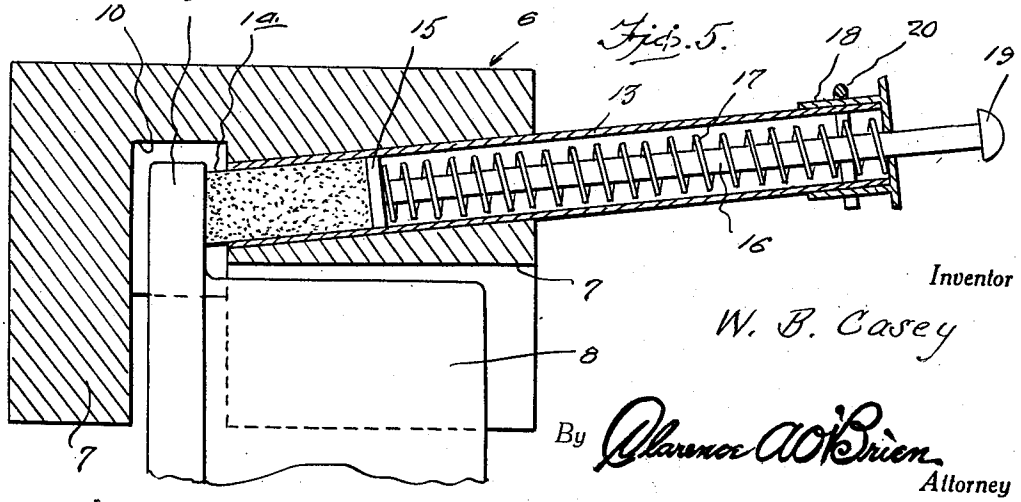


Fig. 5.



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UNITED STATES PATENT OFFICE

WILLIAM B. CASEY, OF LAKE FOREST PARK, WASHINGTON, ASSIGNOR OF ONE-SIXTH TO FRED E. CASEY AND ONE-SIXTH TO HENRY T. IVERS, BOTH OF SEATTLE, WASHINGTON

WHEEL FLANGE LUBRICATOR

Application filed August 5, 1930. Serial No. 473,191.

This invention relates to an improved lubricating device for wheel flanges and it has more particular reference to an appliance of this class which is primarily designed for use and association with flanged wheels such as is used on railway rolling stock.

The purpose of the invention is to apply a lubricant to the inner surface of the wheel flange of any vehicle operating over a steel rail or track without transferring the lubricant to the tread of the wheels or to the rails. The lubricant thus supplied is designed to lubricate the existing surfaces between the rail and the inner surface of the flange to prevent friction, to prevent the wheel from climbing and leaving the rail because of excessive friction, and to give longer life to the wheels themselves.

Otherwise stated, I have evolved and produced a simple and economical attachment including novel lubricating means designed to obviate the necessity of greasing rails at curves, and to permit a few of the lubricators to be employed on a relatively long train of cars so as to apply sufficient lubricant to the rails to accommodate a number of sets of the wheels behind the lubricator equipped wheels.

In carrying the invention conception into practice, I have evolved and produced a structure which is susceptible of self-adjusting application to the frame of the vehicle within the vicinity of the flanged wheels, whereby to permit the requisite play to be provided to compensate for the relative movement between the vehicle frame and the wheels.

My primary aim is to generally improve upon devices of this class by providing a structure which is comparatively simple in construction, more effective in its application of grease, and otherwise constructed to better fulfil the requirements of a device of this class than known patented and marketed devices with which I am familiar.

In the accompanying drawings, in which like numerals are designated to employ like parts throughout the same:

Figure 1 is an end view of a lubricator constructed in accordance with the present invention.

Figure 2 is a bottom plan view thereof.

Figure 3 is an outside elevational view.

Figure 4 is a top plan view.

Figure 5 is a central vertical section on the line 5—5 of Figure 3.

In carrying the invention into practice, I utilize a suitable body generally represented by the numeral 6 and it has been found that this may well be of wood or equivalent light weight material. The block is here shown as of general rectangular configuration and has its bottom cut away as at 7 in Figure 5 to form an arcuate recess whose radius is substantially equal to the radius of the tread 8 of the wheel.

The flange of the wheel is distinguished by the numeral 9 and has its peripheral portion projecting into a counter groove 10 forming an arcuate channel. The numeral 11 designates a resilient metal suspension strap which is rather loosely fastened to one end portion of the block as indicated at 12. This strap has its opposite ends secured to the frame (not shown) of the vehicle which carries the device.

The numeral 13 designates a rectangular open ended tube which constitutes a casing for a spring pressed plunger and grease feeder. It will be noted that the block is formed with a passage which permits approximately one-half of the tube to extend therethrough, the inner ends of the tube terminating in substantially flush relationship with the outermost wall of the flange channel 10.

The numeral 14 designates the block of grease and this is forced into contact with the inner surface of the wheel flange as represented in Figure 5 through the medium of the plunger head 15. This head is confined slidably in the tubular casing 13 and is carried by the stem 16 of the plunger. Incidently, a spring 17 of an expansion coiled type embraces the stem and bears at one end against the head 15 and at its opposite end against a removable closing cap 18. The stem extends outwardly through an opening in the cap where it terminates in a knob 19. The cap is removably held in place by a re-

taining staple 20 in the manner represented in Figure 5.

Particularly do I wish to emphasize the practicability of the device characterized by the properly notched block 6 suitably suspended through the medium of a resilient hanger or suspension strap 11, thus providing the desired floating action for the block to compensate for the relative movement of the car wheels and body, of the car.

Thus, the device conforms to the variations of the wheel and its flange irrespective of excessive play in the journal box. By having the device suspended in resilient close proximity to the flange, it is permissible to arrange the grease block in close proximity and to permit only a slight end portion thereof to project into the channel 10. This prevents breaking off of the block of grease as frequently happens in other devices where the block is allowed to project a comparatively great distance.

The utilization of a rectangular tubular casing as a container for the grease block permits a relatively thick block of grease to be employed to correspond approximately to the complete width of the flange 9. This insures uniform and effective application and distribution of the grease on the flange.

The flush relationship of the inner end of the tubular casing 13 with the wall of the channel 10 prevents the metal of the casing from coming into direct contact with the wheel flange. The inclination of the casing 13 together with the spring pressed action of the plunger insures constant yieldable pressure of the block of grease against the flange.

The adaptability of the device with the removable cap 18 which facilitates replenishing is important.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Minor changes in shape, size, and rearrangement of parts coming within the field of invention claimed may be resorted to in actual practice if desired.

I claim:

A device for lubricating the flange of a car wheel comprising an elongated block having its body part formed with an arcuate wheel tread receiving recess, an arcuate counter groove therein opening out into the inner and closed end of the recess, said groove receiving a portion of the flange of the wheel, a resilient horizontally arranged supporting bar having a part extending over one end of the upper face of the block with the extremity of the bar pivotally connected to the block an appreciable distance from the said end thereof, said block having an opening therein sloping downwardly from the outer wall of the block through the outer wall of the groove and located at the center of the block, a rectangular casing having one end located in the opening with its inner end flush with the outer wall of said groove and its outer end projecting from the block, a block of grease slidably arranged in the casing and a spring plunger carried by the casing for pressing the block against the flange of the wheel.

In testimony whereof I affix my signature.

WILLIAM B. CASEY.