

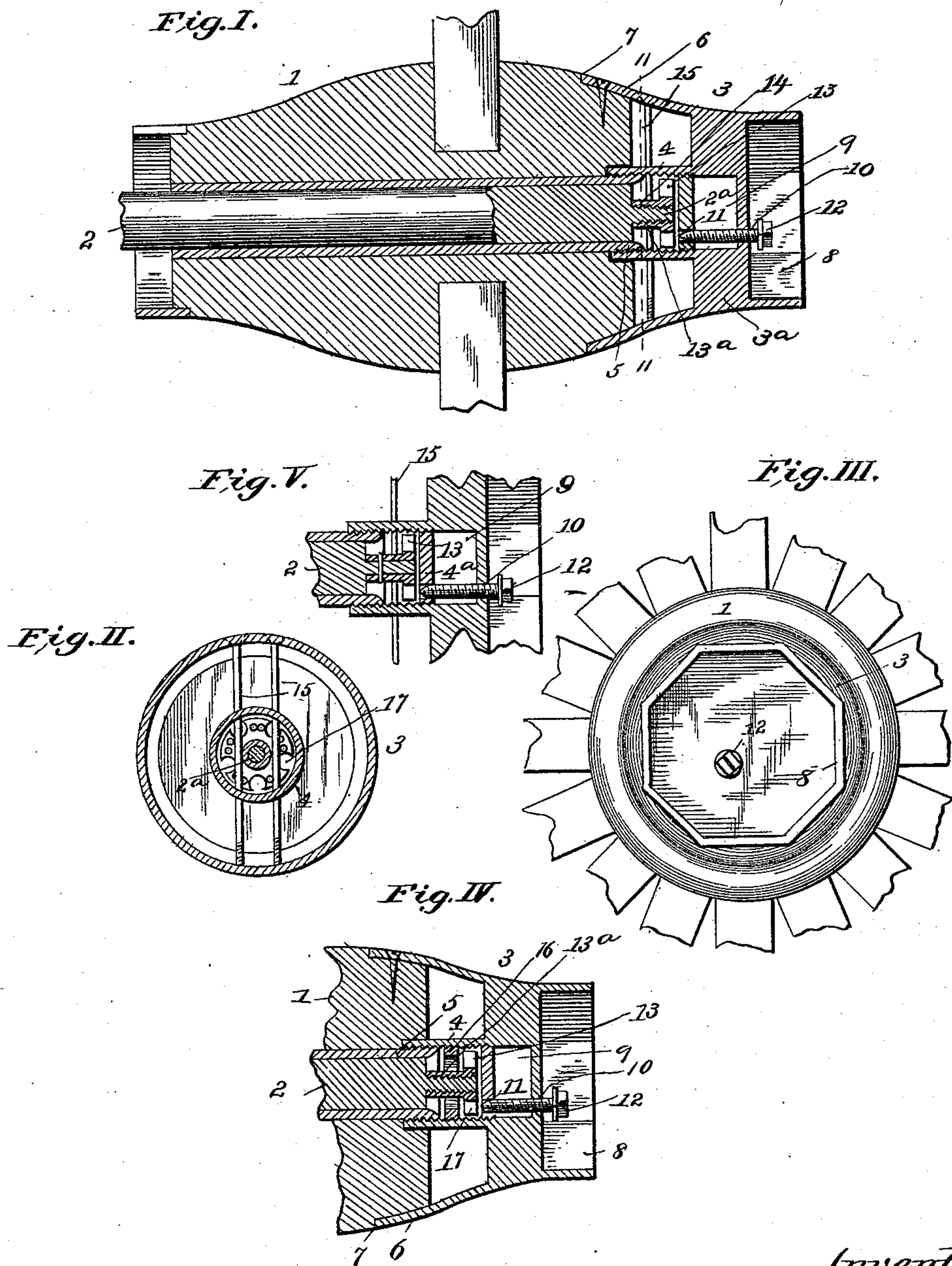
(No Model.)

L. FARIS.

COMBINED HUB ATTACHER AND LUBRICATOR.

No. 455,188.

Patented June 30, 1891.



Attest:  
Harry S. Rohrer.  
S. Latton

Inventor:  
Lafayette Paris.  
By Knight Bros.  
Attorneys.



# UNITED STATES PATENT OFFICE.

LAFAYETTE FARIS, OF PRICETOWN, OHIO.

## COMBINED HUB ATTACHER AND LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 455,188, dated June 30, 1891.

Application filed January 20, 1891. Serial No. 378,500. (No model.)

*To all whom it may concern:*

Be it known that I, LAFAYETTE FARIS, a citizen of the United States, residing at Pricetown, Highland county, Ohio, have invented a new and useful Combined Hub Attaching and Lubricating Device, of which the following is a specification.

My present invention relates to a simple means for attaching a hub to an ordinary spindle and having in combination therewith a reservoir for lubricating the spindle.

My invention consists in features of novelty, to be hereinafter particularly pointed out in the claims, being first fully described with reference to the accompanying drawings, in which—

Figure I is an axial section of a hub embodying my invention. Fig. II is a transverse section on the line II II, Fig. I. Fig. III is a front view. Fig. IV is an axial section of the front part of the hub, illustrating a modification in the means for securing the wheel on the axle; and Fig. V is a detached view illustrating a modification in the manner of securing the spindle-head to the spindle.

1 represents the hub, 2 the spindle, and 3 the box, which has a transverse flange 19, and is secured on the front end of the hub by means of the screw-threaded sleeve 4, which screws over the exteriorly-threaded end of axle-box 5. In order to make a more rigid bearing the box 3 is provided with a flange 6, fitted to a hub at 7. The box may be further provided with the usual flange 8, which I prefer to make polygonal in form for a purpose hereinafter specified.

9 represents the reservoir formed by transverse flanges 3<sup>a</sup>, longitudinal sleeve 4, and screw-threaded disk 4<sup>a</sup>, and having an inlet 10 on the outside and an outlet 11 on the inside, said outlet and inlet being closed by a single screw 12.

13 represents the axle-head, which fits within the sleeve 4, and is adapted to be withdrawn with the axle through the axle-box 5. In order to secure the wheel on the spindle two pins 15 are passed transversely through the box 3 and sleeve 4 directly behind the spindle-head and in such close proximity to the neck 14 as to engage said head.

These transverse pins are preferably threaded into the periphery of the box 3. In Fig. V, I have shown a more convenient form of the means for securing the wheel on the axle. The head 13 is formed by a screw-threaded sleeve 13<sup>a</sup>, and is screwed onto a correspondingly-threaded nib 2<sup>a</sup> of the axle 2. A threaded washer 16, inserted in the sleeve 4, engages around the outer portion of the axle-head and secures it from passing through said sleeve 4, which in effect keeps the wheel from coming off.

In order to remove the wheel the screw 12 is adapted to penetrate sufficiently far beyond the inner wall of the reservoir to engage in a perforation 17, formed in the screw-threaded head of the axle. It will now be observed that if the box or wheel is turned backward while said screw engages the axle-head, said head will be unscrewed from the nib 2<sup>a</sup> and permit the wheel to be removed from the axle. The screw fitting tightly in the perforation of the head will serve to hold the nut or head rigidly against the screw-washer and retain it in the proper position relatively to the hub, so that it will engage the screw-head when the wheel is replaced. After the wheel is replaced the screw 12 is withdrawn to its normal position in the openings of the reservoir.

As shown in Fig. I, I prefer to use the screw-thread as a means for securing the head upon the nib, and in the construction shown in Fig. I it is obvious that the wheel may be removed from the axle in the manner described with reference to Fig. IV and without the necessity for removing the transverse pins 15 or the safety-screws 18, which are preferably inserted in the flange 6 of the box and in the hub.

If desired, the screw 12 may be so set with relation to the outlet 11 as to permit a limited flow of oil constantly onto the axle, and may also be used to allow a supply of oil to pass into the axle-box at will. The oil-outlet being on one side of the reservoir almost the entire quantity of oil will pass out into the axle-box.

In forming the box which fits upon the hub and carries the mechanism to which my present invention relates, the same may be turned or cast with the outer periphery of proper form, the transverse flange 4<sup>a</sup> forming the outer wall of the reservoir, the longitudinal



sleeve forming the periphery or cylindrical wall of the reservoir and the means of attachment to the axle-box and the screw-threaded disk 4<sup>a</sup> constituting the inner wall of the oil-reservoir. It would obviously be within the spirit of my invention however if the reservoir were made larger in diameter than shown, or if the sleeve 4 contained the whole reservoir and were inserted in the box in any suitable manner.

In securing the box on the hub by means of a screw-thread, and having the outlet to one side of the reservoir, it is obvious that a certain quantity of oil can be discharged each time by withdrawing the stopper from the outlet and turning the box on the hub or the whole wheel a part of a revolution, so as to change the height of the outlet relatively to the reservoir.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The combination of the hub having the axle-box 5 and the box 3, surrounding the end of the hub and having the longitudinal sleeve 4 screwed to the axle-box, said sleeve being provided with means, substantially as described, for engagement with the axle-head, substantially as set forth.

2. The combination of the axle, the head screwed to said axle, the hub adapted to fit upon said axle, the oil-reservoir in the hub having the inlet and outlet eccentric to the screw-threaded head, and the stopper for said inlet and outlet adapted to engage the nut, substantially as and for the purpose set forth.

3. The combination of the axle, the head formed on the axle, the hub having means for engaging the head to retain the hub upon the axle, and the oil-reservoir located in the outer end of the hub, substantially as and for the purpose set forth.

4. The combination of the axle, the hub, and the box secured on the end of the hub and having located within it the oil-reservoir, and means for securing the hub to the axle.

5. The combination of the axle, the recessed head screwed upon the axle, the hub, and the axle-box, said axle-box having the transverse flange, the longitudinal sleeve extending from said flange and adapted to screw to the axle-box, the disk 5<sup>a</sup> in said sleeve forming the wall of the reservoir, and the annular washer 16, all substantially as and for the purpose set forth.

6. The combination of the hub having the axle-box, the box 3, fitting the end of said hub, the transverse flange in said box 3, the longitudinal sleeve carried by said transverse flange, the screw-threaded disk 42 in said sleeve and forming with it and the transverse flange the reservoir, the said flange and disk having inlet and outlet, respectively, and the screw-threaded plug adapted to close said inlet and outlet, substantially as and for the purpose set forth.

7. The combination of the hub and the box 3, secured to the end of said hub and having the transverse flange 19, which carries the oil-reservoir, substantially as and for the purpose set forth.

8. The combination, with the hub, of the box adapted to screw thereon, said box carrying the oil-reservoir, and said oil-reservoir having its outlet located on one side, whereby the box may be turned on the hub to alter the height of the outlet relatively to the reservoir and regulate the flow of oil therefrom, substantially in the manner explained.

LAFAYETTE FARIS.

Witnesses:

HERVEY T. KNIGHT,  
GEO. E. CRUSE.