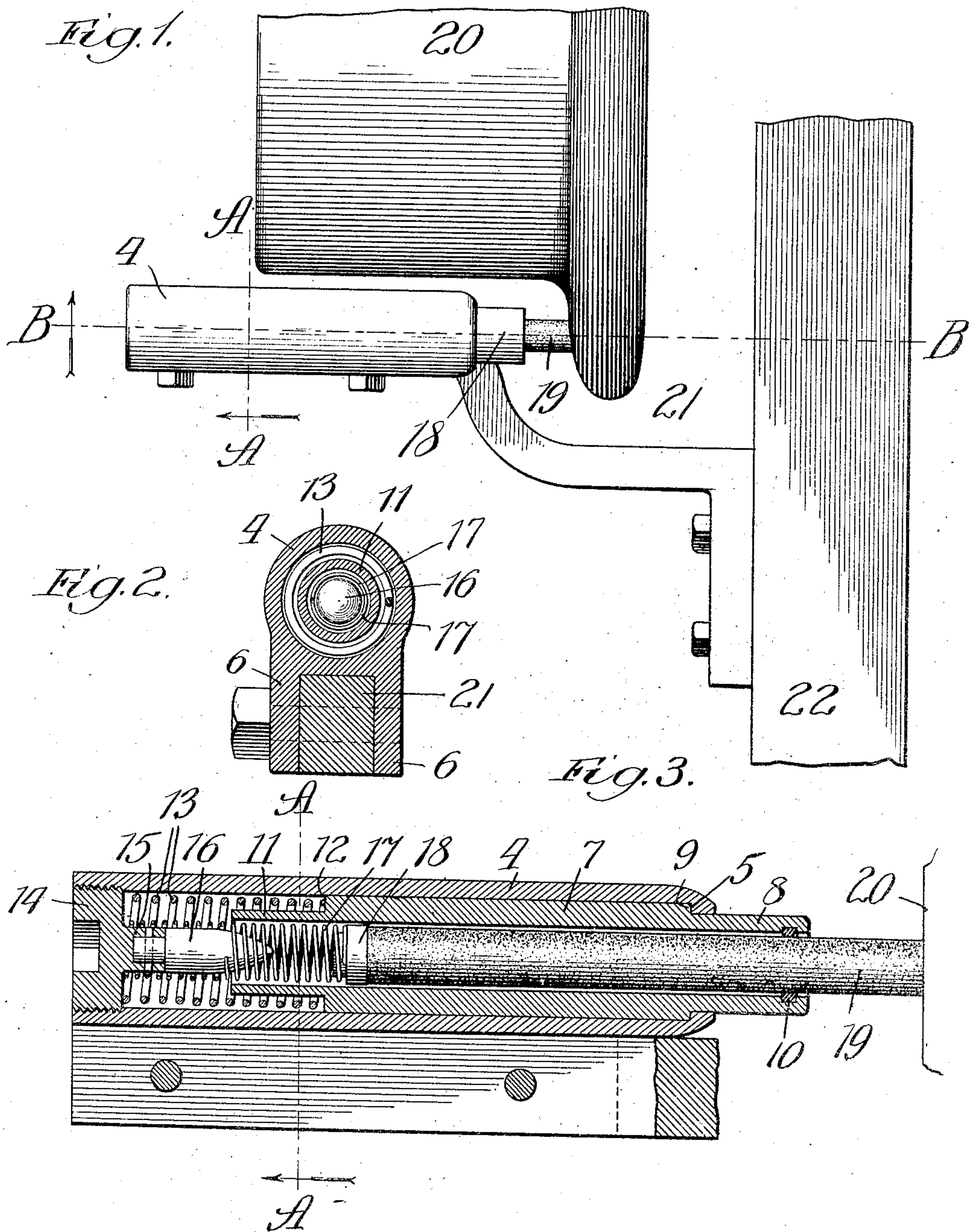


G. H. DAWSON.
FLANGE LUBRICATING DEVICE.
APPLICATION FILED JULY 28, 1910.

990,637.

Patented Apr. 25, 1911.



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UNITED STATES PATENT OFFICE.

GEORGE H. DAWSON, OF FORT MADISON, IOWA.

FLANGE-LUBRICATING DEVICE.

990,637.

Specification of Letters Patent.

Patented Apr. 25, 1911.

Application filed July 28, 1910. Serial No. 574,225.

To all whom it may concern:

Be it known that I, GEORGE H. DAWSON, a citizen of the United States, residing at Fort Madison, in the county of Lee and State of Iowa, have invented a new and useful Flange-Lubricating Device, of which the following is a specification.

My invention relates to an improvement in the class of devices used on locomotives and cars for lubricating the flanges of the wheels to decrease their friction upon the inner sides of the rail-heads against which they ride and accordingly diminish the wear on the flanges and the rails.

In the accompanying drawing, Figure 1 shows my improved device in elevation operatively applied to a wheel-flange; Fig. 2 is a section taken on line A—A, Fig. 1; and enlarged, or on line A—A, Fig. 3; and Fig. 3 is an enlarged longitudinal section on line B—B, Fig. 1.

A cylindrical casing 4, formed preferably of metal, open at both ends, with an internal shoulder 5 near its forward end, which is shown tapering, is adapted to be fixedly secured in operative position, as through the medium of parallel wings 6 extending from it. Fitting within the case to reciprocate longitudinally therein, is a tube 7, shown of massive construction, having a reduced forward-end portion 8 forming a shoulder 9 to normally engage, as a stop, with the shoulder 5, and containing, by preference, near its outer extremity, a packing-ring 10; and the rear end of the sleeve is also reduced in diameter, as shown at 11, to present a shoulder 12, against which a relatively strong spiral spring 13 is confined, as by a plug 14 screwing into the rear end of the casing. This plug has a stud 15 extending from it centrally into the casing, with a tapering tip 16 projecting from it and shown as entering the stud, though it may be an integral part thereof. About this stud is confined at its rear end a relatively light spiral spring 17 terminating at its forward end in a seating-head 18 for a pencil 19 of graphite, or other suitable lubricating material, which is reciprocatingly confined in the tube 7 against the spring-head.

While the lubricating medium is described as a pencil, it may be a pencil of tubular form, for containing the lubricant, as the core, in liquid or other condition.

The device may be operatively applied to a wheel 20, as that of a locomotive, by se-

curing a bracket 21 in suitable position on the truck-frame, indicated at 22 in Fig. 1, and having the end-portion of the bracket, bent to extend horizontally, as represented or at a suitable angle to the flange of the wheel, inserted between the wings 6 and bolted thereto. With the device in position, the end of the pencil 19 bears against the outer face of the wheel-flange to lubricate it; and as the pencil wears away the expansion of the spring 17 protrudes it to maintain its contact with the flange. More or less slight swerving of the wheel on its track is compensated for by the yield of the spring 17, which will permit such swerving to force the pencil inwardly until its advance-end is flush with that of the tube 7, when it will still perform its lubricating function. To prevent excessive swerving of the wheel, as in rounding a curve, from encountering a rigid part of the device, which would tend to break it, the spring-pressed tube 7 is provided to yield under the strain and thus prevent such injury.

The washer 10 serves as a guard against dust and other foreign matter entering the device and impairing its action.

What I claim as new and desire to secure by Letters Patent is—

1. In a flange-lubricating device, the combination of a spring-pressed reciprocating tube; and a spring-pressed head confined to reciprocate in the tube and having a seat for a lubricating pencil to maintain the advance end thereof in contact with the flange of a locomotive or car wheel adjacent to which said device is supported.

2. In a flange-lubricating device, the combination of a case adapted to be supported relative to the flange of a wheel on a locomotive or car, a spring-pressed tube reciprocably confined in the case, and a spring-pressed lubricating-pencil reciprocably confined in the tube, for the purpose set forth.

3. In a flange-lubricating device, the combination of a case adapted to be supported relative to the flange of a wheel on a locomotive or car, a tube in the case, a relatively strong spring in the case, against which the tube is confined to render it longitudinally reciprocating, a head in the tube forming a lubricating-pencil seat, and a relatively weak spring confined in the case and carrying said head, for the purpose set forth.

4. In a flange-lubricating device, the combination of a case open at its ends and adapt-

- ed to be supported relative to the flange of a wheel on a locomotive or car, a spring-pressed tube reciprocably confined in the case, a plug closing the rear end of the case and having a stud extending from it, and a relatively light spring confined in the case about said stud and provided in the tube with a head forming a lubricating-pencil seat, for the purpose set forth.
- 10 5. A flange-lubricating device comprising, in combination, a tubular case open at its forward end wherein it is provided with an annular shoulder, a tube having diametrically-reduced end-portions confined in the case to engage said shoulder, a plug closing the rear end of the case, a relatively-strong spring confined in the case between the closed end thereof and the tube, a stud extending into the case from its closed end, a relatively-weak spring confined about said stud in the case, and a head on the forward end of the weaker spring forming a lubricating-pencil seat, for the purpose set forth.

GEORGE H. DAWSON.

In presence of—

R. A. RAYMOND,
R. A. SCHAEFER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
