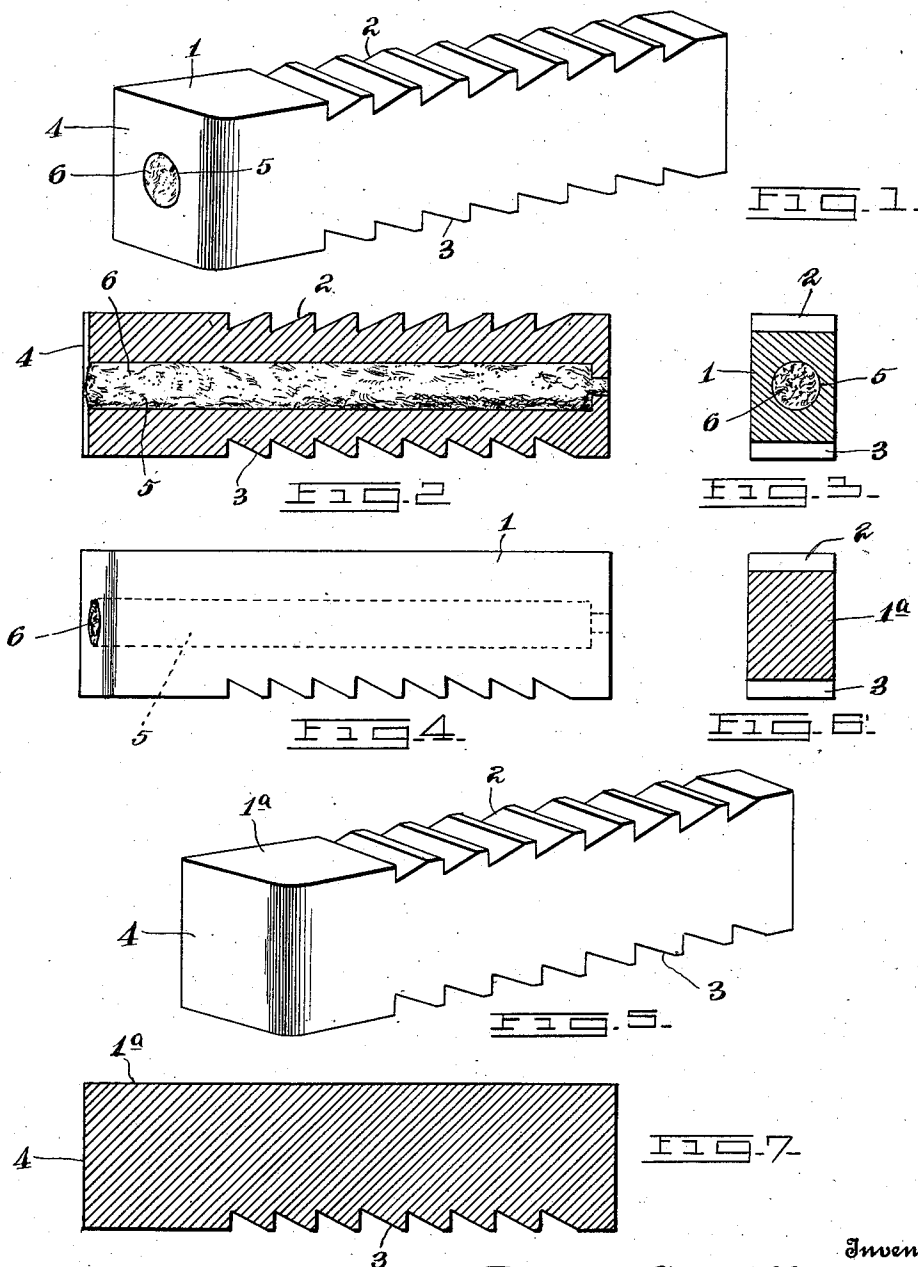


P. CONNIFF.
LUBRICATING STICK OR BAR.
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1,010,237.

Patented Nov. 28, 1911.



Philip Conniff

Inventor:

Witnesses:

Thos. F. Knox,

C. C. Hines.

By *Victor J. Evans*

Attorney

UNITED STATES PATENT OFFICE.

PHILIP CONNIFF, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE COLLINS METALLIC PACKING COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION.

LUBRICATING STICK OR BAR.

1,010,237.

Specification of Letters Patent. Patented Nov. 28, 1911.

Application filed October 29, 1910. Serial No. 589,741.

To all whom it may concern:

Be it known that I, PHILIP CONNIFF, a citizen of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in Lubricating Sticks or Bars, of which the following is a specification.

This invention relates to a lubricating stick or bar especially designed for use in connection with a holder and feeder of the type disclosed in my prior Patent, No. 990,034, dated April 18, 1911, for lubricating the flanges of locomotive driving wheels, tender wheels and car wheels of all kinds provided with flanges.

The main object of the invention is the production of a solid bar of lubricant which will be rigid or self-sustaining under its own weight—sufficiently so to maintain its shape and prevent a too rapid wearing away of its material and yet which will be soft or malleable enough to lubricate the surface of the flange without liability of breaking or chipping under the induced pressure.

A further object of the invention is to provide a lubricating stick or bar having ratchet teeth whereby an intermittent feed motion may be directly imparted thereto from a feed element, such ratchet teeth being molded integrally with the bar, thus securing simplicity of construction and economy of production.

A still further object of the invention is to provide a lubricating stick or bar carrying a soft grease or lubricant adapted to be applied to the surface of the flange with the harder lubricating material of the bar, by which a more efficient lubrication of the flange may be effected.

The invention consists of the features of construction, combination and arrangement of parts, hereinafter fully described and claimed, reference being had to the accompanying drawing, in which:—

Figure 1 is a perspective view of a lubricating stick embodying my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a vertical transverse section through the stick. Fig. 4 is a side elevation of the form of stick shown in Figs. 1, 2 and 3, with one set of the ratchet teeth omitted. Fig. 5 is a view similar to Fig. 1 of a solid stick of lubricant, *i. e.*, a stick of lubricant without the soft core. Fig. 6 is a cross sec-

tional view of the same. Fig. 7 is a vertical longitudinal section of the type of bar shown in Figs. 5 and 6, but having only a single set of ratchet teeth.

Referring particularly to Figs. 1, 2 and 3 of the drawing, 1 designates a bar or stick of lubricating material, such as a suitable animal or mineral grease or fat (preferably paraffin) and graphite, and clay, if desired, such bar being molded or otherwise formed and baked at a suitable temperature. The bar is preferably of oblong rectangular shape and sufficiently rigid to maintain its form and prevent a too rapid wearing away or disintegration of its materials, and at the same time soft and ductile enough to prevent it from breaking or chipping under any ordinary service strains and to allow a sufficient amount of the material to wear away and coat the surface of the wheel flange to effectually lubricate the same. To these ends, the grease or fat and graphite and clay, if desired, are combined in proper relative proportions, the graphite being in excess to secure the requisite amount of solidity and rigidity. A combination of graphite, 80%; paraffin, 15%; and clay 5% has been found efficient, the clay imparting the proper amount of hardness in the baking operation.

The bar is provided along its upper and lower edges with longitudinal series or sets of ratchet teeth 2 and 3, respectively, either one of which may be employed in conjunction with the feed device of the holder or feeder to automatically feed the bar forwardly as it is gradually worn away and maintain the forward end 4 of the bar in contact with the surface of the flange. By the use of two sets of ratchet teeth arranged as described, the bar may be inserted within the holder and feeder with either its top or bottom side uppermost for coöperation with the feed element, thus permitting of its ready, quick and convenient application. If a tooth of either set of ratchet teeth should be broken away, the bar may be disposed for the coaction of the intact set with the feed element, thus obviating the necessity of discarding an imperfect bar under such conditions.

The bar is intended to be fed forward by the action of a feeder having a limited automatic feed motion, by which the end 4 of

the bar is maintained in engagement with the wheel flange, and when such limit of motion is reached with the feed device in engagement with any certain ratchet tooth, said device is adjusted to engage another ratchet tooth in rear thereof and such feed motions and adjustments are continued until the bar is entirely worn away or consumed. A feed device having a comparatively short feed motion may be efficiently employed by extending the teeth the greater portion of the length of the bar.

If desired, the bar may be provided with a central longitudinal bore or channel within which is contained a core or filling 6 of a soft grease which is exposed at the forward end of the bar and applied therewith to the surface of the flange, by which means a mixture of hard and soft lubricants may be supplied with advantageous results. This soft grease or lubricant is firm enough to prevent it from melting or running under ordinary atmospheric temperatures and the heat of the flange of the wheel.

Many modifications in the construction of the stick or bar may be made as different contingencies of service may require. For instance, as shown in Fig. 4, the upper set of ratchet teeth may be omitted from the type of bar shown in Figs. 1, 2 and 3. I may also, as shown in Figs. 5 and 6, make a bar 1^a of a solid lubricant throughout by dispensing with the bore 5 and soft lubricating core 6. The top set of ratchet teeth may further be omitted from the solid type of bar, as shown in Fig. 7. Either form of bar may also be made without ratchet teeth and the

bar fed by suitable means. These and other modifications may be made at will within the spirit and scope of the invention, as defined by the appended claims.

Having thus described my invention, I claim:—

1. A molded solid bar of lubricating material having ratchet teeth molded inherently therewith.

2. A lubricating bar provided with a longitudinal series of projections for coöperation with an automatic feeder.

3. A lubricating bar or stick composed of solid and fatty substances and provided with a longitudinal series of ratchet teeth.

4. A lubricating bar or stick composed of solid and fatty substances and provided upon diametrically opposite sides with longitudinal series of ratchet teeth.

5. A lubricant bar or stick formed of solid and fatty material and provided with a fatty core and with ratchet teeth upon one of its surfaces.

6. A lubricant bar or stick molded from solid and fatty materials and provided upon one of its surfaces with ratchet teeth.

7. A lubricant bar or stick molded from a suitable grease or fat and graphite, and provided upon one of its surfaces with ratchet teeth molded integrally therewith.

In testimony whereof I affix my signature in presence of two witnesses.

PHILIP CONNIFF.

Witnesses:

C. C. HINES,
BENNETT S. JONES.