J. B. STEARNS.

LUBRICATING PACKING.

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915,804.

Patented Mar. 23, 1909.

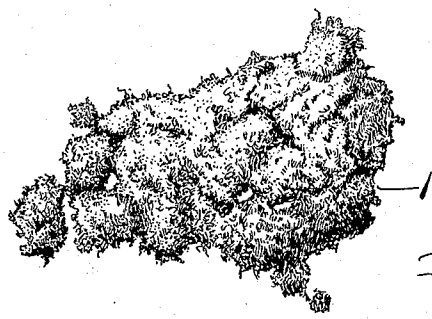


Fig. 1.

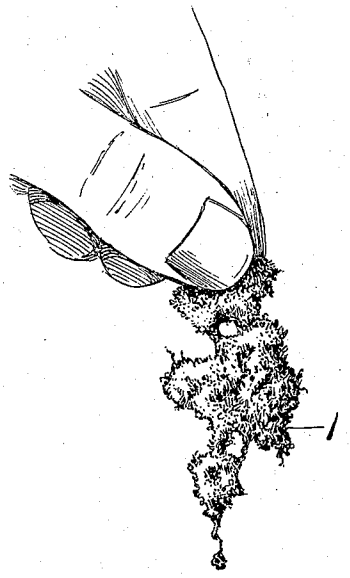


Fig. 2.



Witnesses:

Arthur F. Randall.

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Inventor:

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UNITED STATES PATENT OFFICE.

JOSHUA B. STEARNS, OF LYNN, MASSACHUSETTS.

LUBRICATING-PACKING.

No. 915,804. Specification of Letters Patent. Patented March 23, 1909.

Application filed December 21, 1906. Serial No. 348,838.

To all whom it may concern:

Be it known that I, JOSHUA B. STEARNS, a citizen of the United States, and resident of Lynn, in the county of Essex and State of Massachusetts, have invented an Improvement in Lubricating-Packing, of which the following is a specification.

In many situations especially efficient and long-lived lubricating medium in the form of packing is desirable, as for instance for gears and gearings, journals or axles, shaftings, etc., the running gear of locomotives, tenders, passenger and freight cars, and in fact all other kinds of cars, particularly when especially heavy as in the case of parlor and sleeping cars, electric cars, etc.

My invention is particularly adapted to the above exacting requirements, although capable of use in packing anything that requires lubrication.

While it is exceedingly difficult to represent fairly and adequately in a line-drawing the appearance and condition of my article of manufacture, I have shown in the drawings, in Figure 1 a mass of the article and in Fig. 2, I have undertaken to indicate graphically the fluffy, soft, and open woolly or fibrous character of the packing by showing a portion thereof held between the thumb and forefinger, showing that it is not sufficiently coherent to cling *en masse* in a large quantity, and yet will cling to a greater or less extent. Both of said figures are front elevations showing the packing.

The packing is indicated at 1, and Fig. 2 represents a portion of the mass as having fallen on the table 2 by its own weight away from the rest of the mass which was originally lifted, and yet the woolly or fibrous hair-like or fibrilliform condition of the leather is such that a considerable portion of the mass still clings together, although only grasped at its extreme edge by the thumb and forefinger, as shown in Fig. 2.

I have found that ground or shredded and pulverized leather, or at least leather in sufficiently flexible and moldable condition for the purpose, saturated with animal or vegetable oils or greases produces surprisingly efficient results. The porous, fibrous leather holds the lubricating matter in perfect suspension, so that even though fully saturated with lubricant, the latter cannot settle at the bottom of the journal box or other holding means, but is retained by the capillary action of the leather ready for use at the very surface of the mass. Preferably I grind, shred or otherwise reduce the leather to a light, fluffy condition, avoiding, however, reducing the leather to a powder, or such fine form as to destroy or injure the fibrous nature of the leather, and yet reducing the leather to a sufficiently subdivided condition to enable it to become readily and thoroughly saturated with a minimum amount of liquid lubricant, and also to enable it to conform automatically closely and accurately to the bearing surface which it is to lubricate.

A fluffy mass prepared as above explained has no tendency to cling or wrap around the axle or spindle of the article, large or small, which it is lubricating, and does not tend to grind or cut the surface, readily keeps it clean and maintains substantially perfect and uniform lubrication. Also the compound can be readily mixed with wool waste, or any fibrous substance, as the leather, if comminuted, readily filters in, and beds itself among the fibers of the wool waste or the like, carrying at the same time its load of animal or vegetable grease or oil or graphite or the like. It is exceedingly light, soft, open, fluffy and readily separable, in its normal condition as an article of manufacture, and is capable of being divided and sub-divided with extreme accuracy into exactly the amounts required, being in this respect quite different from the wool waste and the like which tends to cling to itself in large masses.

While I do not wish to be limited to any particular manner or method of preparing the fibrous or comminuted leather, and while, as already intimated, it may be prepared in various ways, one convenient way of producing it is by means of a hand-card, whose teeth are sharp-pointed, stiff and close together. Drawing such a card rapidly across the surface of the leather will soon separate the leather into its fibers and form the fibrous leather desired, it being understood that the leather, separated into its individual fibers, forms a fluffy, fleecy, or sort of woolly mass of light fibrous, porous character. The desired fibrilliform leather, however, is usually produced from scrap or refuse leather by machinery, as already intimated.

I wish it understood that I am not limited to any particular lubricant or kind of leather, although I prefer a liquid lubricant, and thick, comparatively dense leather, such as

is used for the heavy parts of shoes, saddlery and the like. The leather may be used in thin, flexible and rather large pieces, saturated as explained, and packed into the journal box or the like, to advantage, the leather retaining and evenly distributing the lubricant until worn out, both wearing away together evenly.

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

1. A lubricating packing, consisting of comminuted leather ground to a light fibrous condition, soaked with lubricant, and maintained, in its finished form as an article of manufacture, in a soft open fluffy condition.

2. As an article of manufacture, a lubricating packing, consisting of comminuted leather saturated with a liquid lubricant, and normally in a soft, fluffy condition.

3. As an article of manufacture, the herein described fibrilliform lubricating packing, consisting of leather reduced to a light, fibrous, fibrilliform condition in which the fibers of the leather are separated into filaments having sufficient length and fineness to present a woolly appearance and be capable of clinging to each other in a mass and sustaining the mass in a light, fluffy condition, and a lubricant mixed therewith.

4. A lubricating packing, consisting of porous, flexible leather having its fibers loaded with lubricating material, and, when in its finished, final condition ready for use, maintained in a light, fluffy, readily separable fibrilliform condition.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

JOSHUA B. STEARNS.

Witnesses:
GEO. H. MAXWELL,
WM. J. PIKE.