

No. 787,752.

PATENTED APR. 18, 1905.

W. B. GRIFFEN.
LUBRICATING BLOCK.
APPLICATION FILED APR. 18, 1904.

Fig. 1.

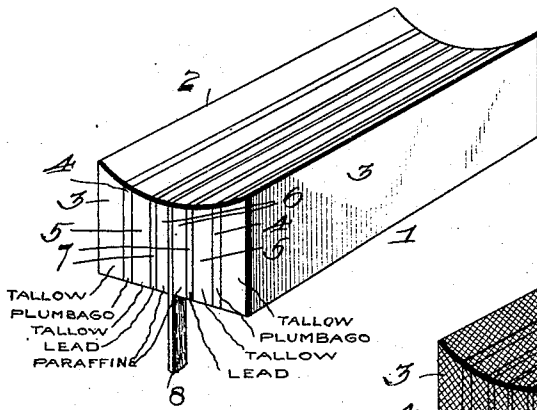


Fig. 2.

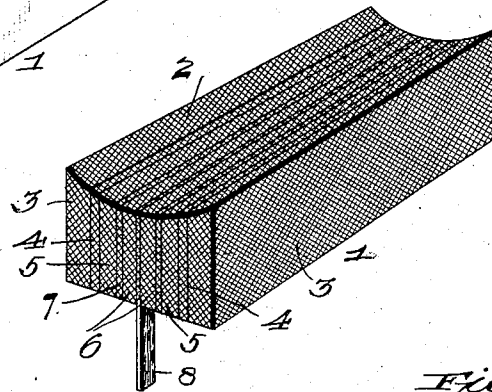


Fig. 3.

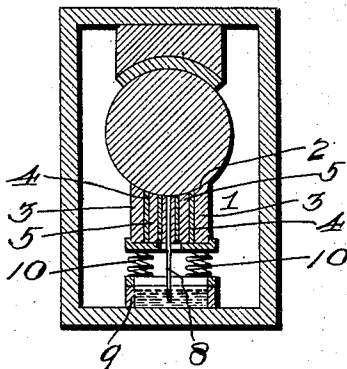


Fig. 4.

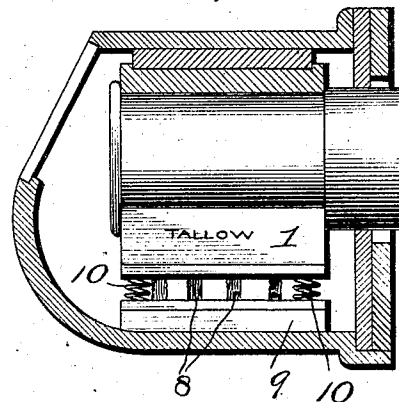
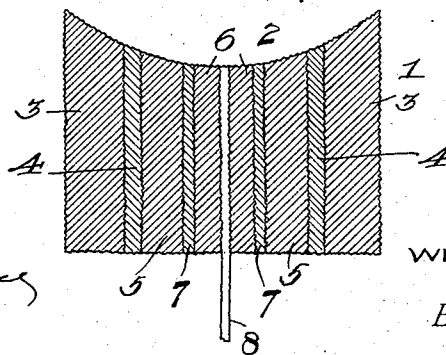


Fig. 5.



WITNESSES:

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WILLIAM B. GRIFFEN, OF FRANKLIN, PENNSYLVANIA.

LUBRICATING-BLOCK.

SPECIFICATION forming part of Letters Patent No. 787,752, dated April 18, 1905.

Application filed April 18, 1904. Serial No. 203,751.

To all whom it may concern:

Be it known that I, WILLIAM B. GRIFFEN, a citizen of the United States, residing at Franklin, in the county of Venango and State of Pennsylvania, have invented new and useful Improvements in Lubricating-Blocks, of which the following is a specification.

This invention relates to new and useful improvements in lubricating-blocks especially for lubricating car-axles.

Aside from providing a simple, cheap, and durable block it is my object to provide a block that will embody a construction of materials, lubricants in themselves or containing lubricants, that will not freeze or harden on the bearing when the machinery has been allowed to stand, thus rendering the starting of the machinery comparatively easy and one which will absolutely prevent what is commonly known as a "hot box."

The invention consists in the main of a plurality of layers or sections of different lubricating compounds or layers or sections containing different lubricating compounds properly shaped to conform to the shape of the axle and bound together by suitable means, by which means different and distinct kinds or types of lubricants are supplied to the bearing at the same time, and the action of the axle on which combines at the point of lubrication the lubricants in the several layers into a more perfect lubricant possessing the lubricating qualities and peculiarities contained in the different layers.

The invention further consists in a minor degree of an additional means for feeding oil or liquid lubricant to the concaved portion of the block and of a means for keeping the block in close contact with the axle.

Other objects and advantages resulting from the novel construction and combination of parts will become apparent in the course of the following description.

In the drawings illustrating the invention, Figure 1 is a perspective view of my improved block with the means for holding its component parts together removed. Fig. 2 is a similar view of the block covered with a covering of foraminous material, such as gauze or cheese-cloth. Fig. 3 is a transverse section of a jour-

nal-box, showing the lubricating-block in its proper relative position to the axle and a manner of conducting additional oil to the upper surface or bearing portion of the block. Fig. 4 is a longitudinal sectional view of the journal-box with the block applied. Fig. 5 is a transverse section of the modified form of the block, showing each layer covered with gauze or cloth and the whole block being bound together by a covering of the same material.

Referring to the drawings, and particularly to Fig. 1, the numeral 1 represents the block, which is substantially rectangular in shape and has its upper surface concaved at 2 to fit snugly around the under side of the axle.

In carrying out my invention I form the block of a plurality of layers or sections of lubricating material or containing lubricating material, in combination with one or more sections of soft metal, such as lead or other substance, the latter material being intended to prevent the block from wearing out too quickly by the frictional contact between the block and the axle, as will be presently described.

I desire it understood at the outset that I do not limit myself to the use of any particular well-known lubricating substance or material or combination; but those best adapted for my purpose are tallow, paraffin, and plumbago.

The numeral 3 indicates the two side sections of tallow, the numeral 4 two inner sections or layers of plumbago, and the numeral 5 indicates the two inner layers or sections of tallow.

The numeral 6 indicates a central layer of paraffin containing an excess of oil, separated from the layers 5 by narrow layers 7 of lead. Passing centrally through the central layer of paraffin may be a wick 8 with its lower end in the oil font or receptacle 9 in the journal-box.

Interposed between the bottom of the journal-box and the under side of the block are springs 10, which keep the block normally in contact with the under side of the axle.

Covering the whole block and serving to hold its parts firmly together, as well as to keep the block out of direct contact with the axle, is a covering of gauze or cheese-cloth.

Referring to the modification shown in Fig. 5, I may in addition to covering the block with cheese-cloth or other similar material also cover each layer with the material, so as to form a series of layers, each being separated by the cloth.

Wearing of the block on account of too strong springs will be retarded by the lead layers or sections, which obviously will permit the block to be moved upward by the springs to compensate for this wear only as rapidly as the lead wears away.

While I have referred to certain of the layers or sections as composed of tallow, I desire it understood that layers of any hard grease would answer the purpose which may or may not have a tallow base, and, further, it is not essential to the invention that I employ any particular number of layers or that the layers be of any particular thickness, as both the size and number of the layers would be changed according to the class of work required to be lubricated. As before suggested, different layers of different substances that are in themselves lubricants or which contain lubricants may be added to the block.

It is highly desirable that the block contain a paraffin layer which contains oil or a layer containing oil or a wick which would supply oil to the face of the block, as this oil in the layer or being supplied to the surface of the block keeps the block from freezing to the bearing. The tallow-compound layers are especially adapted for my purpose as having a tendency to prevent the bearing from becoming too hot, and the plumbago layers give to the block lubricating properties that could not be as effective where the plumbago was applied with an oil or a grease mixture, as the plumbago in such a mixture being heavy would fall away from the axle.

When the block is applied to the axle, the turning of the axle on the block combines or mixes at the point of lubrication the lubricants in the several layers or sections composing the block into a more perfect lubricant possessing the lubricating qualities and peculiarities contained in the layers, (the kind or type of lubricant in each layer if used alone not being in itself an ideal lubricant,) thus supplying two or more different and distinct

kinds or types of lubricants (oil, grease, metallic, or any combination of them) to the bearing at the same time, more or less of any particular kind of lubricant being supplied as larger or smaller layers of the particular lubricant or layers containing the particular lubricant are placed in the block.

I claim—

1. A lubricating-block composed of a plurality of layers or sections, some of the layers or sections being formed of lubricating material different from that composing some of the other layers or sections, and adapted to contact simultaneously with the axle, whereby a lubricant combining the lubricants of the different layers or sections is formed at the point of lubrication.

2. A lubricating-block composed of a plurality of layers or sections, some of the layers or sections being formed of lubricating material different from that composing some of the other layers or sections, and adapted to contact simultaneously with the axle for the purpose set forth, in combination with one or more layers or sections of non-lubricating supporting material.

3. A lubricating-block composed of a plurality of layers or sections, some of the layers or sections being formed of lubricating material different from that composing some of the other layers and adapted to contact simultaneously with the axle, in combination with a suitable wick and oil-supply whereby oil is supplied to the face of the block and to the axle in addition to the other lubricants, substantially as and for the purpose set forth.

4. A lubricating-block composed of a plurality of layers or sections, some of the layers or sections being formed of lubricating material different from that composing some of the other layers, in combination with one or more sections of supporting material, and means for holding the block in contact with the axle, substantially as and for the purpose set forth.

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

WILLIAM B. GRIFFEN.

Witnesses:

JOHN L. NESBIT,
JOHN L. MCBRIDE.