No. 776,262. PATENTED NOV. 29, 1904.

V. ROYLE.

OIL CUP.

APPLICATION FILED APR. 14, 1904.

NO MODEL.

Fig. 1.

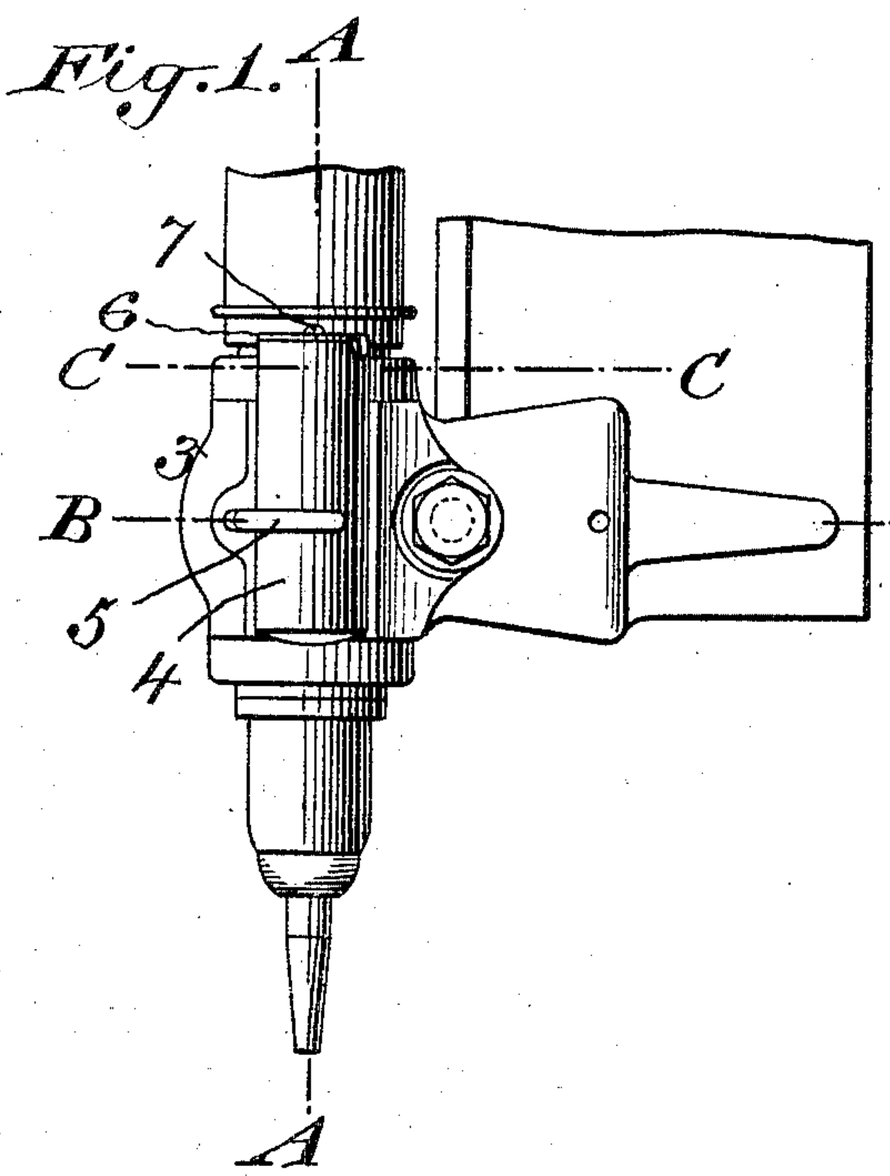


Fig. 2

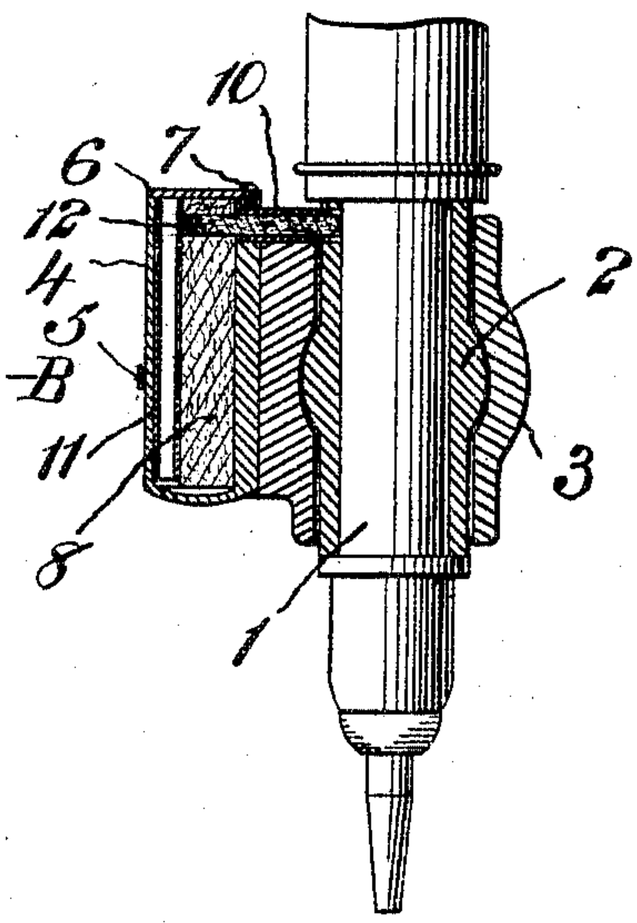


Fig. 3.

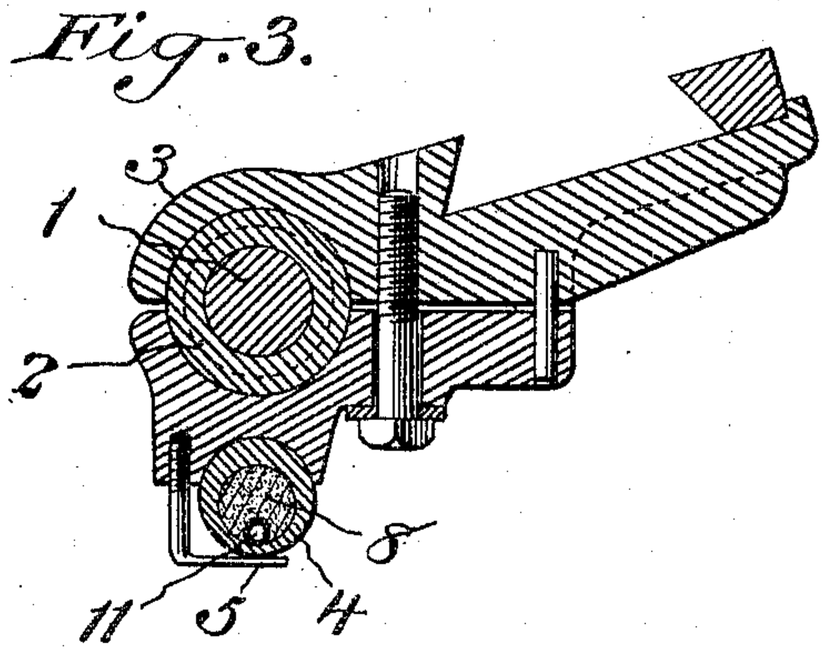


Fig. 4.

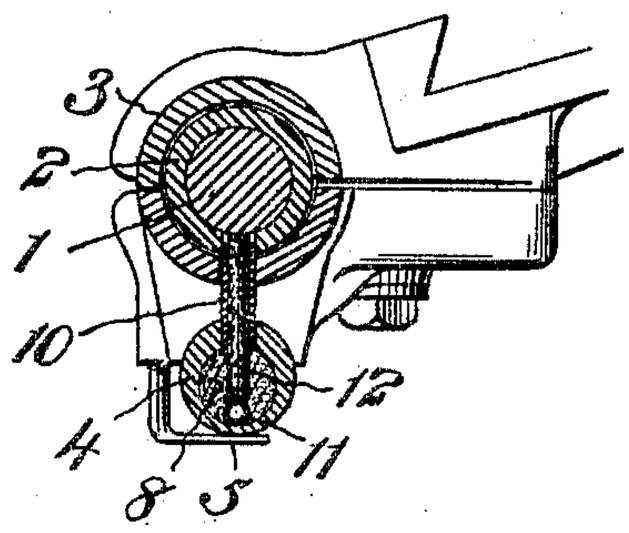


Fig. 5.

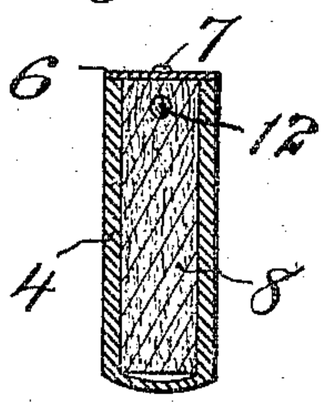


Fig. 6.

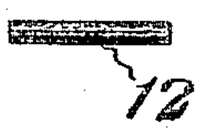
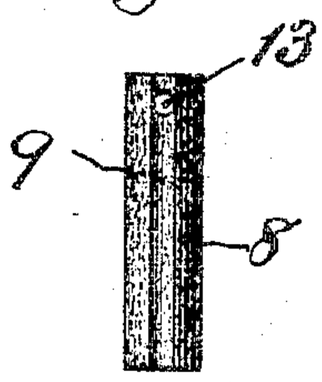


Fig. 7.



Witnesses:-
F. George Barry.
Henry Thieme.

Inventor:-
Vernon Royle
By Bowers Seward
his Attorneys

No. 776,262. Patented November 29, 1904.

UNITED STATES PATENT OFFICE.

VERNON ROYLE, OF PATERSON, NEW JERSEY.

OIL-CUP.

SPECIFICATION forming part of Letters Patent No. 776,262, dated November 29, 1904.

Application filed April 14, 1904. Serial No. 203,219. (No model.)

To all whom it may concern:

Be it known that I, VERNON ROYLE, a citizen of the United States, and a resident of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Oil-Cup, of which the following is a specification.

My invention relates to oil-cups, and more particularly to a cup for distributing oil in a predetermined quantity to a spindle running at a high speed.

By careful and extended experiment I have discovered that a spindle running at a high speed—as, for instance, a router-spindle—will become heated in a comparatively short time if the supply of oil is too free, while the same spindle may be run at the same speed without any annoyance from overheating if the supply of oil be limited.

My invention provides for accurately limiting the supply of oil supplied to a given spindle for a determined length of time; and it consists, broadly, in combining with a body of absorbent material a measure of predetermined capacity and in communication with the body of absorbent material.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view in side elevation of the oil-cup as it appears when applied to a routing-spindle. Fig. 2 is a longitudinal section in the plane of the line A A of Fig. 1. Fig. 3 is a transverse section in the plane of the line B B of Fig. 1. Fig. 4 is a transverse section in the plane of the line C C of Fig. 1. Fig. 5 is a longitudinal central section of the oil-cup in a plane at right angles to that in which Fig. 2 is taken. Fig. 6 is a view in detail of the rod of absorbent material; and Fig. 7 is a view in elevation of the body of absorbent material, showing the groove for the reception of the oil-measure.

It is to be understood that the parts which support the spindle-bearing and spindle form in themselves no part of my present invention, except so far as they form a suitable support for the oil-cup which I have chosen to illustrate my invention and which is adapted to feed oil to the spindle of a routing-machine.

The said spindle is denoted by 1, the box in which it rotates by 2, and the bearing which supports the box by 3.

The oil-cup is denoted by 4 and is here shown as cylindrical in form and adapted to be held clasped to the bearing 3 by means of a spring-arm 5, which may be swung into and out of engagement with the cup-casing 4 to lock and release it.

The cup 4 has a swinging cover 6 pivotally secured to the casing at 7 so that it may be swung laterally to expose the body of absorbent material 8 within the cup. This body of absorbent material 8 is preferably made to fit and substantially fill the interior of the cup-casing 4, with the exception of a groove or perforation 9 extending longitudinally of the body, in the present instance at one side of the body and preferably at that side farthest from the outlet 10, through which the oil is conducted from the absorbent material 8 to the spindle. The perforation or groove 9 is intended to receive a measure 11, which may consist of a small metallic tube open at top and bottom or in any event in communication at its bottom with the body of absorbent material within the casing 4.

The capacity of the tube 11 is predetermined and is made of such dimensions as to hold the quantity of lubricant which is found to be most satisfactory for lubricating the spindle for a predetermined length of time during its operation. For example, if it be found that one drop of lubricant will be sufficient to lubricate the spindle for a period of ten hours' run and it be desired to replenish the supply after each day's run, then the measure 11 would have a capacity of one drop and all that would be required to replenish the oil-cup would be to quickly fill the measure 11 before an opportunity is given for the oil to be absorbed by the absorbent body. The charge of oil as soon as the cup is closed will be gradually picked up by the body of absorbent material within the cup and will be gradually transmitted to the spindle by means of

a rod 12 of absorbent material which is intended to pass from contact with the spindle 1 through the tubular outlet 10 and through a perforation 13, extending transversely through the body of absorbent material 8.

By locating the measure 11 at the farther side of the body of absorbent material within the cup I am enabled to secure an extended bearing of the rod of absorbent material 12 with the body of absorbent material 8, and so transmit the oil more readily and evenly to the spindle. It is obvious, however, that the groove or perforation 9 for the reception of the measure might be located in other positions than that shown, if so desired and if the contact of the body of absorbent material with the transmitting-rod of absorbent material be found sufficient.

What I claim is—

1. The combination with a suitable casing, of a body of absorbent material fitted to the interior of the casing and provided with an opening for the reception of a charge of lubricant of predetermined size.

2. The combination with an oil-cup, of a body of absorbent material located therein, a rod of absorbent material leading outwardly through the cup from the body of absorbent material therein and a measure located in proximity to the body of absorbent material and in open communication with the body of absorbent material, the said measure being arranged to momentarily hold a charge of lubricant separated for the most part from the body of absorbent material.

3. An oil-cup comprising a suitable casing, a body of absorbent material fitted within the casing, a rod of absorbent material leading from the body of absorbent material through the casing and a measure for determining the extent of an oil charge, the said measure being embedded in the body of absorbent material and having an open end exposed for charging it with lubricant.

4. An oil-cup comprising a suitable casing, a body of absorbent material fitted within the casing, and a rod of absorbent material leading from the body of absorbent material through the casing, the said body of absorbent material being provided with a groove or perforation for the reception of a charge of lubricant of predetermined size.

5. An oil-cup comprising a suitable casing, a body of absorbent material fitted within and surrounded by the casing and a rod of absorbent material leading from the body of absorbent material through the casing for conducting the lubricant to the part to be lubricated, the said body of absorbent material being provided with a hole in its side within which the said rod of absorbent material may be inserted.

6. An oil-cup comprising a suitable casing, a body of absorbent material fitted within the casing and a rod of absorbent material leading from the body of absorbent material through the casing, the said body of absorbent material being provided with a groove or perforation for the reception of a charge of lubricant of predetermined size and with a hole in its side for the reception of the said rod of absorbent material.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 10th day of March, 1904.

VERNON ROYLE.

Witnesses:
FREDK. HAYNES,
HENRY THIEME.