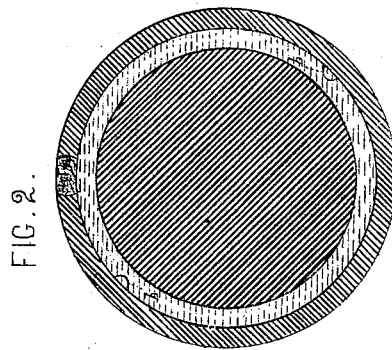
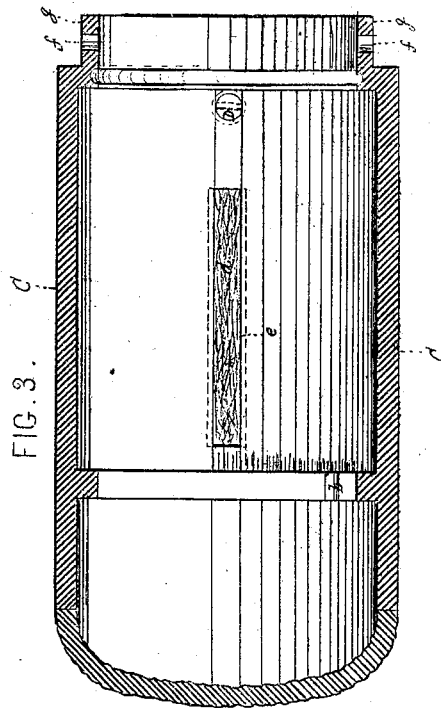
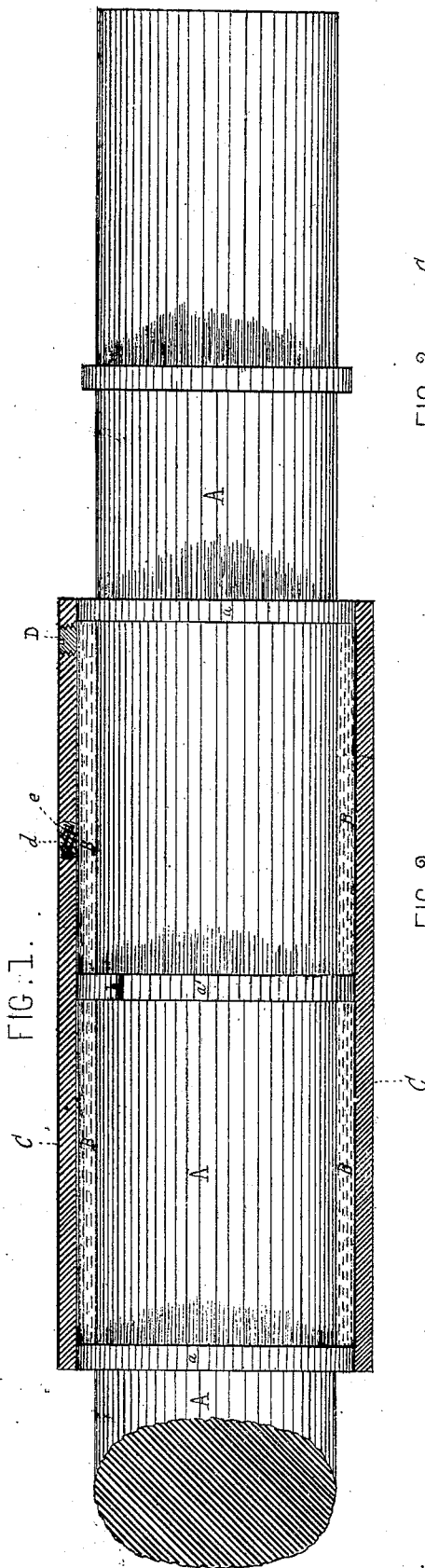


111590

STEPHEN USTICK. PATENTED FEB 7 1871  
IMPT. IN LUBRICATING LOOSE PULLEYS.



INVENTOR.

*Stephen Ustick*

WITNESSES.

*J. J. Eyers*  
*Thomas J. Dewley*

# United States Patent Office.

STEPHEN USTICK, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 111,590, dated February 7, 1871; antedated January 26, 1871.

## IMPROVEMENT IN LUBRICATORS FOR LOOSE PULLEYS.

The Schedule referred to in these Letters Patent and making part of the same.

I, STEPHEN USTICK, of the city of Philadelphia and State of Pennsylvania, have invented certain Improvements in Lubricating Loose Pulleys, of which the following is a specification.

My invention consists of an oil-chamber formed, by means of a tube closed at its ends, to the periphery of the shaft which carries the pulley, and to which the tube is permanently attached or securely fastened, the said tube having an opening for the admission of oil for the filling of the same, and is closed by means of a plug, and one or more openings for the passage of the oil to the eye of the pulley, as hereinafter described.

To enable others skilled in the art to which my improvement appertains to make and use my invention, I will now give a detailed description thereof.

In the accompanying drawing, which makes a part of this specification—

Figure 1 is a side view of one end of a shaft, A, with the improvement attached, partly in section.

Figure 2 is a cross-section of the same at the line *x x* of fig. 1.

Figure 3 is a longitudinal section of the tube C, showing a modification in the plan of constructing it, and a modification in the form of the opening *e*.

Like letters in all the figures indicate the same parts.

A is one end of a shaft.

B is an annular chamber for holding the oil for lubricating the eye of the pulley, the chamber being formed by means of the tube C, supported at its ends by the collars *a a*, which I usually shrink on the shaft.

The tube is of sufficient length to receive the hubs of both the tight and loose pulleys. It is supported in the middle by the collar *a'*, which has openings *b* communicating with the chambers B B.

The tube C may be advantageously fastened by shrinking it upon the collar, thus dispensing with the expense of boring it.

D is a screw-plug, which closes an opening for the supply of oil to the oil-chamber, the opening being

situated outside of the hub of the loose pulley so as not to interfere with pouring oil into the chamber.

If desired, the chamber may extend only to the collar *a'*.

The oil oozes through packing of fibrous or porous material, *d*, in one or more openings *e*. These openings are enlarged in the middle, as represented, so that, when the packing is pushed into place and springs outward to the surface of the holes, it will incline to the middle thereof, between the inner and outer peripheries of the tube C, and thus be held securely in place.

Instead of the openings *e* being circular, they may be of slot form, as shown in fig. 3; or there may be small perforations instead, for the passage of the oil.

Instead of forming the tube C in the manner described, it may be cast of brass or other metal, with the chamber B cored out, and then slipped onto the shaft and secured, there being screw-holes *f* in the flange *g* at its ends, for securing it to shaft, as represented in fig. 3.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The chamber or chambers B on the periphery of the shaft A, formed by means of the permanent tube C, and the shaft A, which forms a bearing for the eye of the loose pulley, and is constructed substantially in the manner and for the purpose above set forth.

2. The chamber or chambers B, formed by the periphery of the shaft A, and the interior periphery of the tube C, whose outer periphery forms the bearing for the eye of the loose pulley, the said tube being closed at its ends, where it is made fast to the shaft A, and having an opening for filling the chamber with oil, and egress-openings to the eye of the pulley, substantially as described.

In testimony that the above is my invention I have hereunto set my hand and affixed my seal this 5th day of May, 1869.

Witnesses: STEPHEN USTICK. [L. S.]

THOMAS J. BEWLEY,

J. W. HAMPTON, Jr.