

UNITED STATES PATENT OFFICE.

FRANK PINCH, OF SIDNEY, ASSIGNOR OF THREE-FOURTHS TO WINFIELD S. COOK, OF OTISVILLE, AND LINDLEY E. HOYT AND JOHN TREGURTHA, OF WALTON, NEW YORK.

LUBRICATING PACKING-CASE FOR PISTON OR OTHER RODS.

SPECIFICATION forming part of Letters Patent No. 460,400, dated September 29, 1891.

Application filed January 24, 1891. Serial No. 378,918. (No model.)

To all whom it may concern:

Be it known that I, FRANK PINCH, of Sidney, in the county of Delaware and State of New York, have invented certain new and useful Improvements in Lubricating Packing-Cases for Piston or other Rods, of which the following is a specification, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to a lubricating-chamber formed within the casing or gland, leading to a lubricating device exterior thereof; and it consists in the constructions and combinations hereinafter pointed out in the claim.

In the accompanying drawings, Figure 1 is a front or face view, partly broken away and partly in section, of a packing-casing embodying my invention, especially constructed for a locomotive piston-rod. Fig. 2 is a vertical longitudinal section. Fig. 3 is a vertical transverse section on the line xx of Fig. 2. Fig. 4 is a perspective view. Fig. 5 shows a detached detail.

Similar letters of reference indicate similar parts in the respective figures.

A is the casing, which, except as hereinafter pointed out, may be of any approved and well-known construction. Within the chamber a of the casing is placed any suitable metallic or other packing b , (not forming part of my present invention,) said packing surrounding the piston-rod c . Parts d and e of the casing are removed for sake of lightness. At the top of the casing is formed the oil-chamber B, preferably shaped, as shown, so as to leave a solid lug or bearing f , in which is formed the hole f' for the passage through it of the stud, by means of which the casing is secured to the engine cylinder-head. A copper wire a' is interposed between the casing A and the cylinder-head for the purpose of making a tight joint. The chamber B, it will be seen, consists of upper and lower spaces e' and f'' , the latter extending under the lug or bearing f , so as to allow the lubricant to pass under said lug. The front face of the casing A is perforated at g a short distance below the stud-hole f' , and in said perforation is placed the plug g' of a lubricating device C. The

lubricating device C (see particularly Fig. 5) consists of a plate, the upper portion of which is bored so as to surround the stud. The lower part of the lubricating device C is pointed, as shown at h , the point when in position reaching to the surface of the piston-rod. The plug g' is provided centrally with a minute aperture g^2 , which extends into the space f'' below the lug or bearing f , and the lower portion of the outer face of the lubricating device C from its point up to the center of the plug g' is grooved, as shown at i . A gasket l surrounds the plug g , and on being compressed between the casing and lubricating device forms a tight joint.

The top of the oil-chamber B is closed by a cover or lid D, which consists, preferably, of a plate of steel or iron provided at each side with a slot k , through which passes a screw or other retaining device k' , tapped into the side of the casing. The cover or lid D is provided with a handle k^2 , by means of which it may be slid back and forth a distance equal to the length of the slots. When the upper portion of the oil-chamber B is closed by the cover, dust, cinders, and other extraneous matter are effectually excluded from the lubricant.

In operation, the waste or other matter, saturated with the lubricant is placed in the chamber B, and the lubricant, finding its way to the aperture g^2 in the plug g' , will reach the exterior surface of the lubricating device C and pass down the groove i to the piston-rod.

By my invention an oil-cup is entirely dispensed with, thereby saving expense, and the lubrication is carried on by gravity in an automatic manner. It is found that this device is efficient and can be readily kept in working order, for should any stoppage of the aperture g^2 occur it may be easily freed by running a needle or other instrument through it.

This invention is applicable to engines of all classes, whether locomotive, stationary, or marine, and to rods of all descriptions needing lubrication and requiring a packing casing or gland.

While I have described and shown my invention as applied to a casing standing in a vertical line, it is apparent that it might be equally well adapted to one standing hori-

zontally, in which case the raising or thick-
ening of the casing above the piston-rod would
be necessary in order to make room for the
chamber and admit of the application of the
5 lubricating device, which change would in no
wise affect the nature of my invention.

I claim—

10 A casing serving the double purpose of a
stuffing-box gland and receptacle for a lubri-
cant, said casing having a lubricating-cham-
ber formed therein and provided with a lug
or bearing perforated to receive a stud, said
chamber extending under said lug or bearing,

combined with an exterior lubricating device
having a plug perforated to communicate 15
with the interior of the lubricating-chamber,
and a groove leading from the perforated plug
to the rod to be lubricated, substantially as
set forth.

In testimony whereof I hereto set my hand 20
and seal.

FRANK PINCH. [L. S.]

Witnesses:

JOSEPH ROY,
EDWIN CRUSE.