J. McKENZIE.

Pitman-Lubricators for Saw-Mills.

No. 140,152. Patented June 24. 1873

Fig. 1.

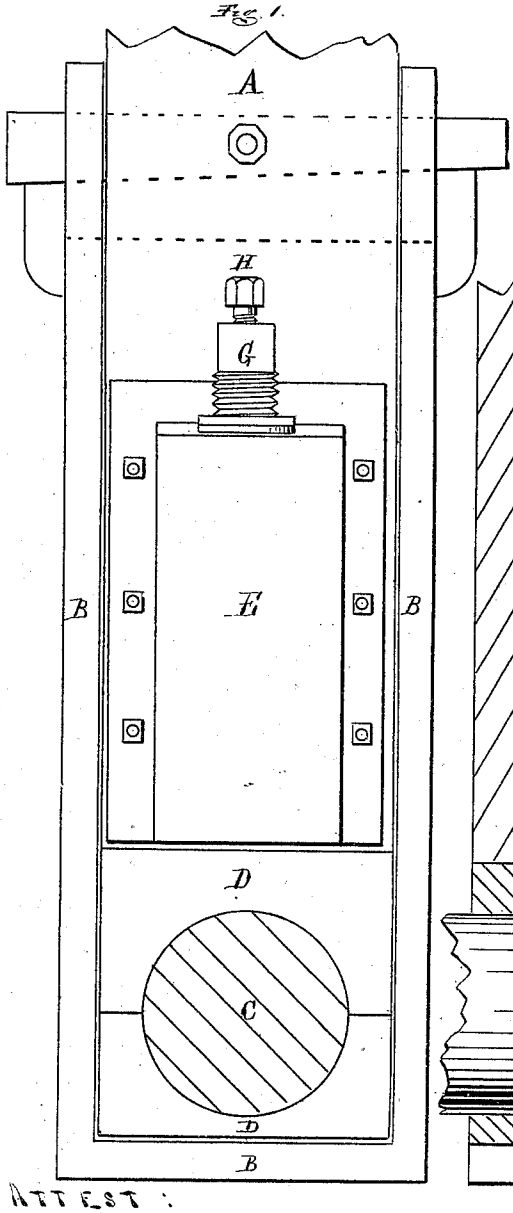
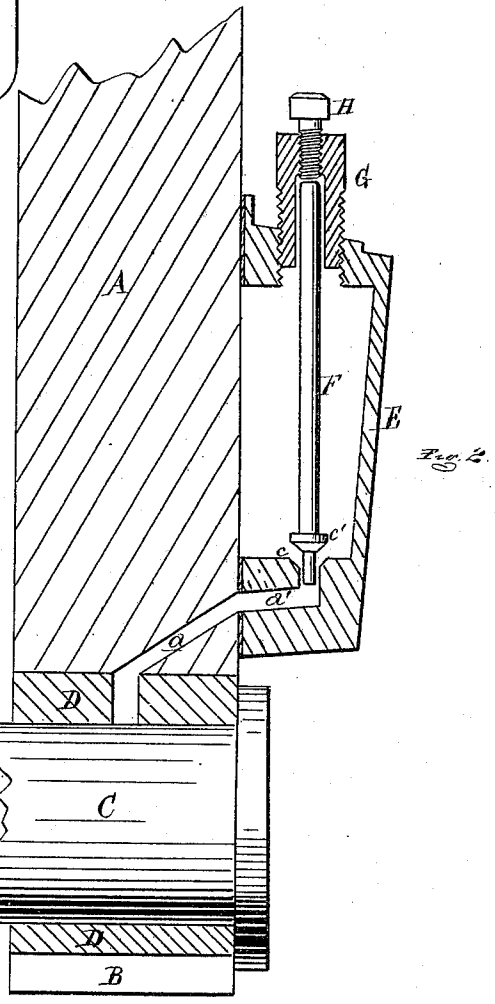


Fig. 2.



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JOHN McKENZIE, OF ST. CLAIR, MICHIGAN.

IMPROVEMENT IN PITMAN-LUBRICATORS FOR SAW-MILLS.

Specification forming part of Letters Patent No. **140,152**, dated June 24, 1873; application filed March 8, 1873.

To all whom it may concern:

Be it known that I, JOHN McKENZIE, of St. Clair, in the county of St. Clair and State of Michigan, have invented a new and useful Improvement in a Pitman-Lubricator for Saw-Mills; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is an elavation of my lubricator as applied to the stub-end of a saw-gang pitman, and Fig. 2 is a cross-section on *x x* in Fig. 1. Like letters refer to like parts in both figures.

This invention has for its object to provide the pitman of a muley or a gang saw-mill with an oil-box, which will automatically and continually lubricate the wrist of the crank, to which the lower end of said pitman is strapped, in such a manner that the flow of the lubricant can be regulated to the requirements of the bearing. The invention consists in a metallic box bolted to the outer face of the stub of the pitman, with a curved or angular oil-passage, leading from the bottom of the box to the inner face thereof, where it communicates with the oil-passage leading through the stub and top brass to the crank-pin; at the top of the opening in the box is formed a seat, on which rests a valve at the lower part of a spindle, whose upper end plays in a hollow-filling-nut at the top of the box, in which is tapped a set-screw which regulates the play of said spindle, and through it the flow of the lubricant.

One of the greatest difficulties to contend with in the running of reciprocating saw-mills, especially the large and heavy gangs, has been the tendency of the crank-pin to heat, either from the imperfect and insufficient flow of oil to the bearing from the oil-boxes in common use, which were liable to clog at any moment, or by the rapid flow to empty the boxes, and thus let the bearing run dry before discovering the fact. The heating of the crank-pin and its boxes resulting from either of these causes, entails a wasteful expenditure of time in cooling; hence mill-owners have preferred to expend from one to two gallons, or even more, of oil per day to insure the perfect lubrication of the crank-pin, rather than risk the loss of time in cooling a heated bearing in an attempt to economize the expenditure of oil.

With my improvement, the crank-pins of the heaviest gangs can be lubricated with absolute certainty, at an expenditure of less than one pint of oil per day for each bearing, as has been demonstrated in practice.

In the drawing, A represents the stub at the lower end of a saw-pitman secured by a strap, B, to the boxes D, in which the wrist C of the crank revolves. *a* is the oil-passage drilled from the outer face of the stub through the top-brass of the box, in the usual manner. To the outer face of the stub I secure a cast-iron box, E, by means of bolts *b* passing through its flange into the stub. The inner face of said box, being open, is closed by the stub, while a suitable gasket is interposed between the latter and the flange of the box. An angular oil-passage, *a'*, is drilled from the bottom of the box through the inner face thereof, and the box is so located on the stub as to bring this passage coincident with the passage *a* in the latter. The upper end of the passage *a'* is formed into a valve-seat, *c*. F is a spindle, whose lower end plays loosely in the top of the passage *a'*, while it also carries a valve, *c'*, which closes the passage when seated at its top. The upper end of the stem plays in a hollow screw-plug, G, tapped in the top of the oil-box. In the plug is tapped a set-screw, H, which governs the lift of the valve-stem, which, in the revolution of the crank as it passes down from the upper center lifts, from the sudden change of direction, and allows a modicum of oil to flow through the passage to the crank-pin. The volume of oil which thus escapes at each reciprocation of the steam is readily and easily regulated by adjusting the play of the stem through the set-screw.

To fill the oil-box the attendant has but to remove the plug G, and pour in the oil, and reinsert the plug after the box is full.

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

The loose spindle F, having a valve, *c*, in combination with the oil-box E, constructed substantially as described, the spindle being adapted to change position when the pitman changes the direction of its movement, substantially as and for the purpose described.

JOHN McKENZIE.

Witnesses:
H. F. EBERTS,
THEO. S. DAY.