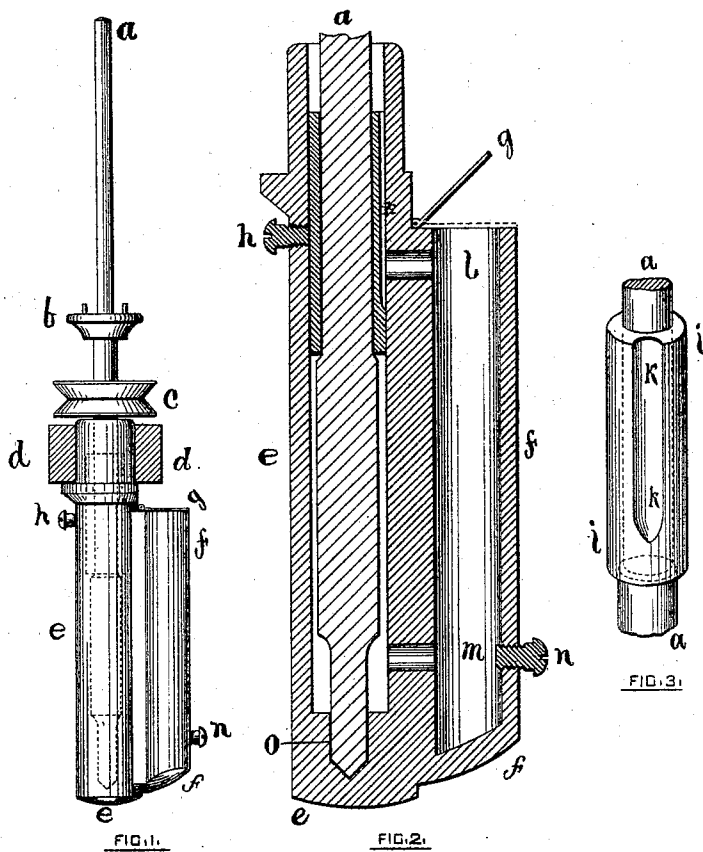


J. & C. C. WILSON.
Lubricating Spindles.

No. 147,537.

Patented Feb. 17, 1874.



WITNESSES,

John P. Gregory
Thos. P. Barfield

INVENTORS,

James Wilson
Charles C. Wilson

UNITED STATES PATENT OFFICE.

JAMES WILSON AND CHARLES C. WILSON, OF PAWTUCKET, RHODE ISLAND.

IMPROVEMENT IN LUBRICATING SPINDLES.

Specification forming part of Letters Patent No. 147,537, dated February 17, 1874; application filed January 22, 1874.

To all whom it may concern:

Be it known that we, JAMES WILSON and CHARLES C. WILSON, of Pawtucket, in the county of Providence and State of Rhode Island, have invented certain Improvements in Mechanism for Oiling Bolsters and Spindles, of which the following is a specification:

Our said invention relates to a self-acting mechanism for oiling the bolsters and spindles of spinning-frames, &c.; and consists of a reservoir attachment connected with a cylinder, in the latter of which the spindle and bolster are placed. The interiors of said reservoir and cylinder are connected by the proper inlets and outlets, as hereinafter described.

The accompanying drawing is hereby made a part of this specification, the indicating letters thereon referring to the same parts when repeated.

Figure 1 is an exterior view of the device herein described, the dotted lines showing the position of the spindle and bolster inside the cylinder aforesaid. Fig. 2 is a vertical section of Fig. 1, somewhat enlarged, the part above the bolster-rail being omitted. Fig. 3 is a detached view of the bolster, and a part of the spindle, showing the groove in the outside of said bolster, hereinafter described.

a is the spindle; *b*, the bobbin-rest; *c*, the whirl; *d*, a section of the bolster-rail; *e*, the cylinder aforesaid; *f*, the reservoir; *g*, a cap or cover for the top of said reservoir; *h*, a screw, which, being turned down upon the bolster, holds the same firmly in place. *i*, is the bolster, and *k* a groove in the outside of said bolster. *l* and *m* are passages from the interior of the cylinder to the interior of the reservoir. *n* is a screw or plug, which is used to fill the hole that leads from the outside of said reservoir, at or near the bottom thereof, said hole being made to facilitate the clearing out, and the removal of extraneous substances from the interior of said reservoir, if either or both should become necessary. *o* is a hollowed place or rest in the bottom of the cylinder for the reception of the lower end of the spindle.

The operation of our said device is substantially as follows: The cylinder is placed in the bolster-rail, substantially as shown in Fig. 1, but the step-rail that is generally used is dispensed with. The spindle and bolster are inserted in the cylinder, substantially as seen in Fig. 2, the conical end or bottom part of said spindle being fitted into the corresponding hollow or rest *o*, which serves as a step therefor. It is intended that the bolster shall be so placed in said cylinder that the groove *k* shall be immediately in front of the passage *l*, and the lower end of said groove nearly or quite on a level therewith.

The spindle and bolster being thus adjusted in said cylinder the screw *h* is tightened, and the bolster is thereby held firmly in place. The reservoir *f* is then filled with oil nearly up to the passage *l*. The oil in the reservoir passes through the passage *m* into the cylinder, fills the step or hollow *o*, entirely surrounds the spindle, and enters between said spindle and the bolster. The device is now ready for use.

The revolutions of the spindle naturally work or carry the oil upward between said spindle and the bolster, and when the oil reaches the top of the bolster it passes into and down the groove *k*, through the passage *l*, and returns to the reservoir, whence it may be used again and again, substantially as aforesaid. It will be seen, therefore, that the spindle is actually surrounded by and run in oil, but that the means or device prevents any loss or waste of the oil.

It is intended that the cap or cover *g*, except when raised to fill the reservoir, shall be constantly kept loosely closed. Closed to keep out dirt and other foreign matter, but loosely to allow the entrance of necessary air. If, however, extraneous substances should accidentally, or otherwise, get into the reservoir, they may be removed either by way of the top or through the aperture filled by the screw or plug *n*. The reservoir and cylinder with their connecting passages may be cast together as a whole, and in any desired metal. Between the top of the bolster and the upper end of the cylinder is a small chamber to re-

ceive the oil as it is worked upward by the revolutions of the spindle, but it is intended that the groove *k* on the outside of the bolster shall be sufficiently large to return the oil to the reservoir as fast as it is received into this chamber.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The elongated reservoir *f*, cast solid with the cylinder *e*, and communicating with said cylinder by the passages *l* and *m*, constructed

in the manner and used for the purposes substantially as set forth.

2. The groove *k* in the outside of the bolster *i*, and its connection with the upper passage *l*, for the purpose of returning the escaped oil to the reservoir *f*, all substantially as described and shown.

JAMES WILSON.

Witnesses: CHARLES C. WILSON.

THOS. P. BARNEFIELD,

JOHN P. GREGORY.