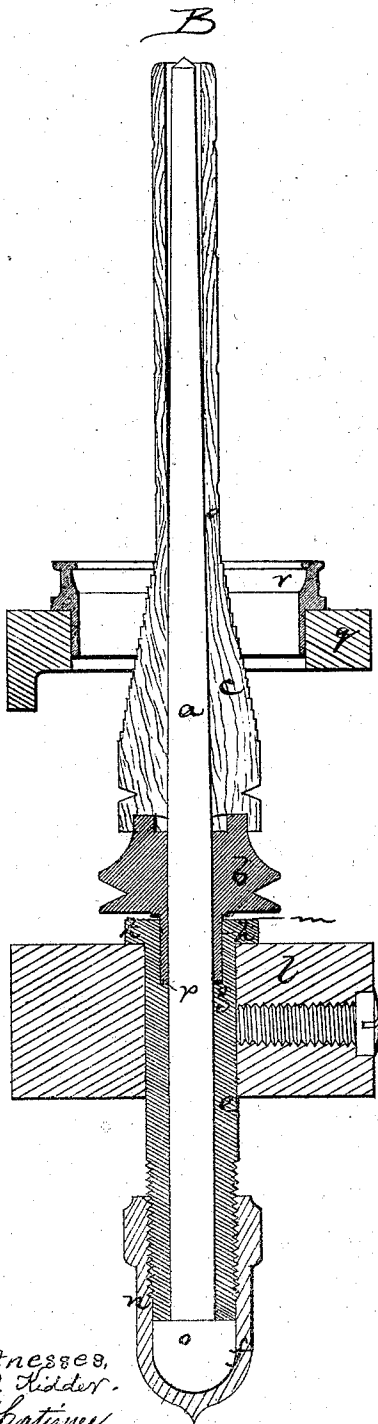


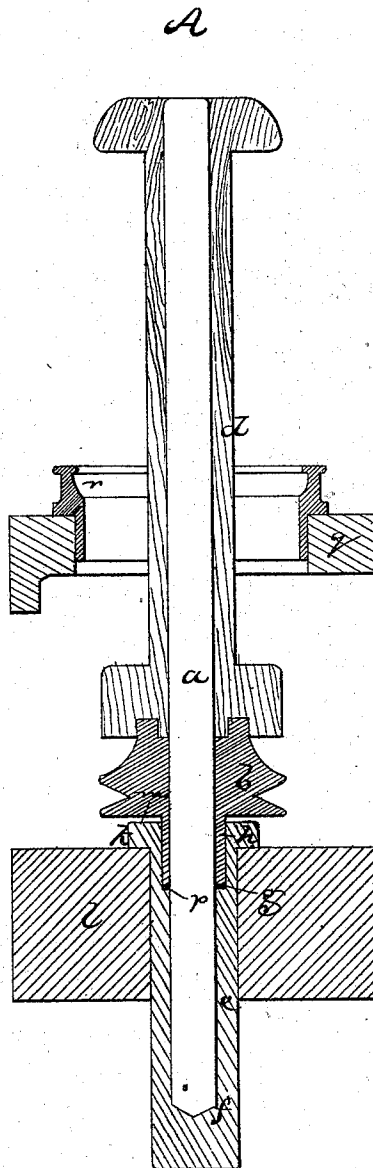
W. G. PERRY.
Spinning-Machines.

No. 137,236.

Patented March 25, 1873.



Witnesses,
J. B. Kidder.
L. H. Atwater.



Inventor
W. G. Perry
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UNITED STATES PATENT OFFICE.

WILLIAM G. PERRY, OF MANCHESTER, NEW HAMPSHIRE.

IMPROVEMENT IN SPINDLES FOR SPINNING-MACHINES.

Specification forming part of Letters Patent No. 137,236, dated March 25, 1873.

To all whom it may concern:

Be it known that I, WILLIAM G. PERRY, of Manchester, in the county of Hillsborough and State of New Hampshire, have invented an Improvement in Spinning Mechanism; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

The invention relates to a method of mounting dead-spindles for ring-spinning frames, by means of which method great speed and effectiveness are obtained with little weight of material and with great saving of power.

In my invention I mount the foot of the spindle in a cup or tube, within which is the step or bearing upon which the spindle rests and turns, this cup holding the oil for lubrication, and not only keeping the parts well lubricated, but insuring at all times clean bearings, free from entrance of dust or filaments.

The drawing represents a spindle constructed and mounted in accordance with my invention.

A shows one form of support. B shows another.

a denotes the spindle; *b*, the whirl; *c*, the bobbin; *d*, a warp-spool. The lower end of the spindle extends into an oil-cup, *e*, said cup being a tube closed at bottom, and having at its bottom a step-bearing, *f*, for supporting the foot of the spindle, and near the top of this tube is a shoulder, *g*, for a bearing and support for the neck *h* of the whirl *b*. Below this shoulder the bore of the tube corresponds in diameter with the diameter of the spindle, thereby forming a lateral bearing for the spindle, the step *f* at the bottom forming a bearing both for the support of the spindle and for guiding it in its rotations. The bore of the whirl corresponds to the diameter of the spindle, and the whirl being kept in position laterally by the spindle, and the spindle by its bearings within the tube, the neck of the whirl is simply supported at bottom upon the seat or shoulder *g*, its outside needing no support and having no contact. At the top of the bearing-tube said tube is formed with the flange or bolster *k*

that rests upon the bolster-rail *l*, the tube extending through the rail, and there being no step-rail.

The top of the tube *e* is to be concaved at *m*, and oil being poured upon this concave flows down the tube to the bearing *g*, and then to the bottom of the tube to the bearing *f*; and, while the bearings will thus be kept well lubricated without possibility of escape of the oil, oil will pass freely up between the surfaces in contact, so as to keep them perfectly lubricated.

At B the construction is substantially the same, except that the bottom of the bearing-tube is made as a removable attachment, *n*, and the spindle has a bulb or ball, *o*, at its bottom, the spindle being removable downward (and not upward) by unscrewing and removing the bearing *n*, whereas at A the spindle is removable by simply raising it. Both constructions are alike adapted for filling shuttle-bobbins or warp-spoils.

It will be observed that the bolster and step for each spindle and whirl, shown in Fig. A, are made as one piece; and also that the dead-spindles are arranged in a ring-frame, each spindle being driven by frictional contact with the whirl.

By this construction great speed may be attained, the mechanism is much more compact than in ordinary spinning-frames, and there is a great saving in weight of material and in the power required to drive the spindles, there being a saving of about twenty-five per cent. over the common live-spindle frames, and about forty-five per cent. over the ordinary dead-spindle frames; and there being, moreover, a great saving in the labor required to oil the bearings and keep the frame clean.

The neck of the whirl preferably stands and rotates upon a copper washer, *p*, as seen both at A and B.

The ring-rail is seen at *q*, and one of the rings at *r*.

The cup *f* not only forms a reservoir and step, but the spindle is prevented from being raised while doffing, and may be removed downwardly by unscrewing the cup, this screw-cup also affording a means of adjusting the spindle, so that any desired space may

be left between the bulb *o* and the bottom of the tube *e*, such space being controllable by turning the cup *f*.

I claim—

1. The bobbin or spool and the spindle *a*, whirl *b*, and tube or cup *e*, connected and relatively arranged substantially as shown and described.

2. In combination with the spindle and tube, the removable step *n* and the bulb *o* upon the foot of the spindle, substantially as shown and described.

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Witnesses:

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