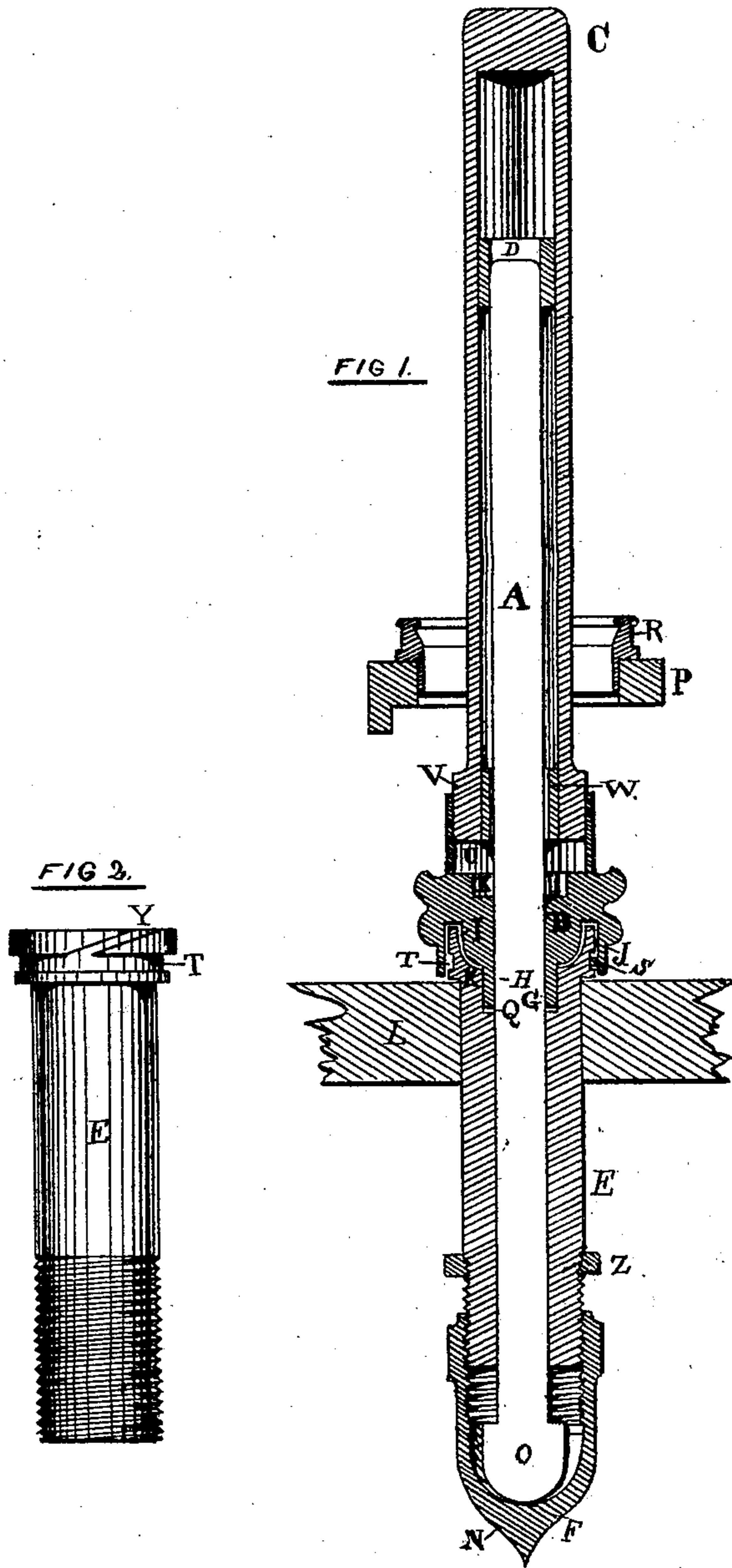


W. G. PERRY.

Spindles for Spinning-Machines.

No. 145,009.

Patented Nov. 25, 1873.



WITNESSES. — — —

Mr. Hall
Frank T. E. Richardson

INVENTOR. — — —

W. G. Perry

UNITED STATES PATENT OFFICE.

WILLIAM G. PERRY, OF MANCHESTER, NEW HAMPSHIRE.

IMPROVEMENT IN SPINDLES FOR SPINNING-MACHINES.

Specification forming part of Letters Patent No. **145,009**, dated November 25, 1873; application filed July 21, 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 certain Improvements on the PERRY Spindle, patented March 25, 1873, and on the common Live-Spindle now in use in ring-spinning, of which the following is a specification:

My invention relates to a method of construction of a spindle and connecting mechanism, the same being combined for operation, as hereinafter more fully described.

The drawings represent a dead-spindle with bobbin for ring-spinning frames, constructed in accordance with my invention.

Figure 1 shows a section of the bobbin, whirl, and bolster; and Fig. 2 shows the bolster detached.

The spindle A is held in position by the tube or the bolster E, which has the flange K resting upon the bolster-rail L. The bulb O is the foot of the spindle, and rests in the screw-cup step N at F. The spindle is prevented from rising in the bolster-tube by the bulb, and it can only be detached by removing it downward after taking it off the screw-cup step. The spindle is adjusted by means of the screw-cup step being screwed on or unscrewed, which raises or lowers the spindle as desired. By the use of the ring Z, screwed down upon the screw-cup step, it is more firmly held in its required position.

The bobbin C is a hollow tube, bushed at D and W. The bushing at D steadies the top of the bobbin while resting against the upper end of the spindle. The bobbin is held in its place by means of the bobbin-cup U in the whirl B. The inner sides of the bobbin-cup are constructed upon an angle, which increases as it approaches the top of it. The bobbin-flange V is on the same angle as the inner sides of the bobbin-cup, and by pressing the bobbin down into the bobbin-cup the bob-

bin is made to rotate around the spindle by friction.

The bushing W has no connection with the spindle, except to steady the bobbin upon the spindle until the bobbin enters the cup.

The bore X in the bobbin-cup is to be partially filled with a woolen washer; and, by raising the bobbin out of the bobbin-cup, oil can be introduced upon the washer of wool, which will percolate through the washer, down the spindle, into the screw-cup step N, that being a reservoir.

When heat is produced by the turning of the whirl B upon the spindle, the superabundance of oil below the whirl rises to supply any deficiency of oil in the whirl-tube.

The whirl caps the bolster-flange K, which bolster-flange runs up into the groove I of the whirl. The whirl is supported wholly by the neck H and shoulder G upon the copper washer Q, and rotates around the spindle. The cap-flange J of the whirl has a pin, S, that plays in the groove T on the bolster-head, (see Fig. 2,) which secures the whirl while the bobbin is being removed from the spindle. The whirl is detached from the spindle by turning the whirl-pin S to and out of the diagonal groove Y in the bolster-head. (See Fig. 2.) The ring-rail is seen at P, and one of the rings at R.

In my invention the advantages gained are, a much less weight of material to be kept in motion, an increase of speed with less power, the ease, rapidity, and certainty of securing the bobbin, and the great protection of the oil and oil-bearings from all dirt, dust, and filaments.

I claim—

The whirl B, having the cup U, flange J, neck H, and pin S, in combination with the bolster E, having screw-step N, and groove Y T, and the spindle, as and for the purpose specified.

Witnesses:

M. P. HALL,

FRANK T. E. RICHARDSON.

WM. G. PERRY.