

H. WHORWELL & J. T. BLAUVELT.

SPINDLE-STEPS FOR SPINNING-FRAMES.

No. 184,742.

Patented Nov. 28, 1876.

Fig:1.

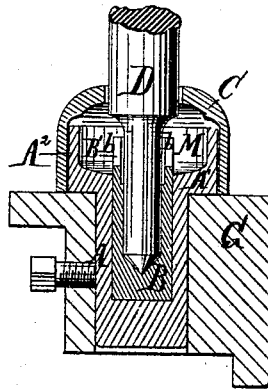
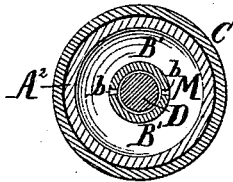


Fig:2.



Inventors:

Witnesses:

Asbury G. Gentry

C. C. Stetson

Henry Whorwell
and Jacob T. Blauvelt
by his attorney
Thomas D. Stetson

UNITED STATES PATENT OFFICE.

HENRY WHORWELL AND JACOB T. BLAUVELT, OF PATERSON, NEW JERSEY,
ASSIGNORS TO THE DANFORTH LOCOMOTIVE AND MACHINE COMPANY,
OF SAME PLACE.

IMPROVEMENT IN SPINDLE-STEPS FOR SPINNING-FRAMES.

Specification forming part of Letters Patent No. **184,742**, dated November 28, 1876; application filed
February 16, 1876.

To all whom it may concern:

Be it known that we, HENRY WHORWELL and JACOB T. BLAUVELT, of Paterson, Passaic county, in the State of New Jersey, have invented certain new and useful Improvements relating to Spindle-Steps for Cotton-Spinning Frames, of which the following is a specification:

The intense velocities impressed on spindles, and the necessity for plentiful lubrication, have induced various refinements in the steps or provisions for supporting and steadying the foot of each spindle. Among them has become in a degree standard the plan of inserting into the substantial rail a vertical cylinder of cast-iron, containing a lining or bushing of brass, with some provisions for receiving oil at the top.

Our improved step belongs to this class. We enlarge the cast-iron cylinder above the rail, and provide thereby a capacious receptacle for oil; provide a removable cover for the exclusion of dirt; construct the parts so that, on elevating the cover, the oil in the receptacle is plainly exposed to view, and arrest any whirling motion of the oil which might be received from the spindle, by providing fixed stops close to the spindle, which allow a sufficiently free access of oil, but prevent any whirling motion being imparted to the mass. We prefer to construct these stops by extending the bushing upward to, or a little above, the highest proper level of the oil, and provide limited spaces for the access of the oil to the spindle, by sawing across the bushing at its upper end.

However the stops to prevent a whirling motion of the oil may be arranged, we extend upward the bushing in the solid or undivided condition a little above the top of the cast-iron cylinder—or, in other words, a little above the bottom of the oil-vessel. This prevents the very bottom portions of the oil from finding access to the spindle, and forms a space in which any dregs or heavy particles in the oil may settle and accumulate. An occasional wiping out of the bottom of the oil-vessel and refilling of the receptacle with

clear oil insure the efficient lubrication, and prevent any access of grit to the spindle for an indefinite period.

The accompanying drawings form a part of this specification, and represent what we consider the best means of carrying out the invention.

Figure 1 is a side elevation of the spindle with the other parts in section, and Fig. 2 a horizontal section.

Similar letters of reference indicate like parts in both the figures.

G is a stationary rail. A is a cylinder of iron, held firmly in a hole in the rail G by means of a pinching-screw. M is the oil-receptacle, formed by an annular enlargement, A¹, and a cylindrical rim or circular wall, A², both formed in the same casting with the cylinder A. B is a brass bushing, fitted in the part A, and extending up a considerable distance in the oil-vessel M, as represented. Its upper part is divided by a saw-kerf, b. The parts of the bushing thus divided, and which project upward in close proximity to the spindle D, we will denominate B'. They serve as a stop to prevent the mass of oil outside from receiving a whirling motion from the rotation of the spindle. C is a movable cover, surrounding the spindle and matching over the exterior of the oil-vessel.

The cover C may be lifted by the thumb and finger of the attendant, and the interior of the oil-vessel is thus fully exposed to view. Inspection determines instantly whether or not there is a liberal supply of oil remaining in the vessel, and on introducing more oil the eye observes easily the rate at which it becomes filled.

The advantages of having a liberal supply of oil around the spindle have been long appreciated. Ordinarily, the whirling motion imparted thereto is liable to throw out the oil unless there is an internal flange on top of the oil-vessel, which latter, in addition to its useful function of preventing the throwing out of the oil, involves an objection by obscuring the view of the oil. It is impossible to ascertain, by inspection, the condition of

the interior of such vessels, however high the cover is lifted; and when the nose of an oiler is introduced and oil is applied, it is liable to be supplied in excess, and to overflow and be wasted before the attendant can be aware that it is full.

We claim as our invention—

The combination of the bushing B, having its imperforate annular portion extending above the bottom of the oil-chamber, and the

stops B', with the spindle D and vessel M, as specified.

In testimony whereof we have hereunto set our hands this 11th day of February, 1876, in the presence of two subscribing witnesses.

HENRY WHORWELL.
JACOB T. BLAUVELT.

Witnesses:

JOHN J. BYROM,
WM. BERDAN.