2 Sheets--Sheet 1.

J. M. STONE.

Spindle-Bearings and their Lubrication.

No. 160,124. Patented Feb. 23, 1875.

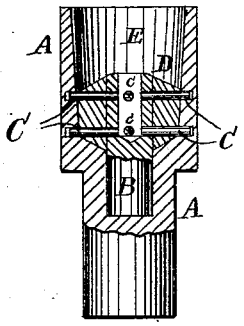

Fig. 1.

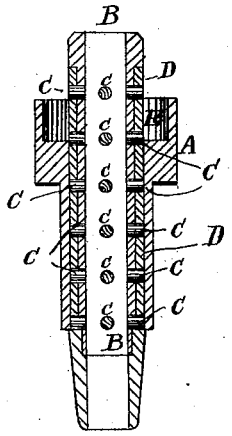

Fig. 3.

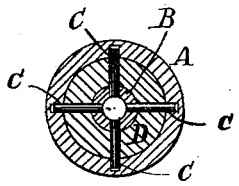

Fig. 2.

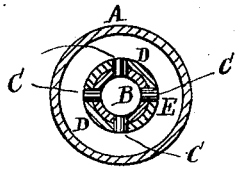

Fig. 4.

Witnesses
Wm. C. Hibbard
James W. Potter

Inventor
Joseph M. Stone

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

2 Sheets--Sheet 2.

J. M. STONE.

Spindle-Bearings and their Lubrication.

No. 160,124. Patented Feb. 23, 1875.

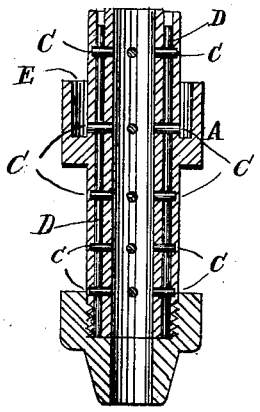

Fig. 5.

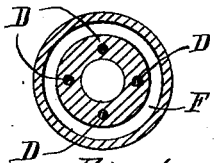

Fig. 6.

Witnesses.
Wm. E. Hibbard
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UNITED STATES PATENT OFFICE.

JOSEPH M. STONE, OF NORTH ANDOVER, MASSACHUSETTS.

IMPROVEMENT IN SPINDLE-BEARINGS AND THEIR LUBRICATION.

Specification forming part of Letters Patent No. **160,124**, dated February 23, 1875; application filed October 21, 1874.

To all whom it may concern:

Be it known that I, JOSEPH M. STONE, of North Andover, in the county of Essex and State of Massachusetts, have invented an Improvement in Spindle-Bearings, of which the following is a specification:

This improvement relates to the means for supplying oil to the bearings of spindles in spinning-machines; and consists in combining with the bearing one or more plugs of porous wood, the ends of which form portions of the bearing-surface, and conduct the oil to the spindle through their pores, and receive the oil from other conducting and distributing pieces of wood with which they are in contact, and which conducting and distributing pieces receive the oil from a suitable reservoir, and, by the porosity of the wood, conduct it to the several plugs, which thus continuously and uniformly lubricate the bearing without wasting the oil.

In the drawings, Figure 1 is a vertical sectional elevation of a spindle-step with my improvement in one form applied thereto. Fig. 2 is a horizontal section of the same. Fig. 3 is a vertical section of a spindle-bolster with the improvement applied thereto. Fig. 4 is a horizontal section of the same. Fig. 5 is another form of applying the improvement to a bolster, and Fig. 6 is a horizontal section of the same.

A is the body or socket of the step or bearing. B is the bushing or step in which the bearing for the spindle is formed. C, C, and C are small wooden plugs, which are made of some porous wood, and are inserted in radial holes in the walls of the bushing B, and their inner ends form a part of the bearing surface, as is shown. Their outer ends extend through and beyond the walls of the bushing, and connect with a distributing-piece, D, also of porous wood, which is inserted between the exterior of the bushing and the exterior socket, and which serves to conduct and distribute the oil in proper quantity from the reservoir E, in which the oil is supplied to the several plugs C, with which it is in contact.

By this arrangement the bearing is constantly lubricated, and, at the same time, without any waste of oil from excessive supply, which is controlled by the porosity of the wood.

The kind of wood which I prefer for this purpose is willow.

The bolster shown in Figs. 5 and 6 represents another form of applying my invention, where the whole, excepting the nut, is made of one piece of composition, in which case the conducting-pieces D are inserted in longitudinal holes bored in the metal, and are made to intersect with the radial plug C, as shown.

In this case, as well as the other, the radial holes to receive the plugs are bored through the socket from the outside, and after the plugs are inserted with their outer ends a little within the outer surface of the socket, the hole is closed upon the outside with solder, so that the oil cannot escape in that direction.

What I claim is—

The combination, with the bushing of a spindle-bearing, of the porous wooden plugs set radially around the same, and the porous wooden conducting-pieces to supply the oil thereto, and a reservoir to contain a supply of oil, substantially as described.

Executed October 15, 1874.

JOSEPH M. STONE.

Witnesses:

WM. C. HIBBARD,

JAMES W. POTTER.