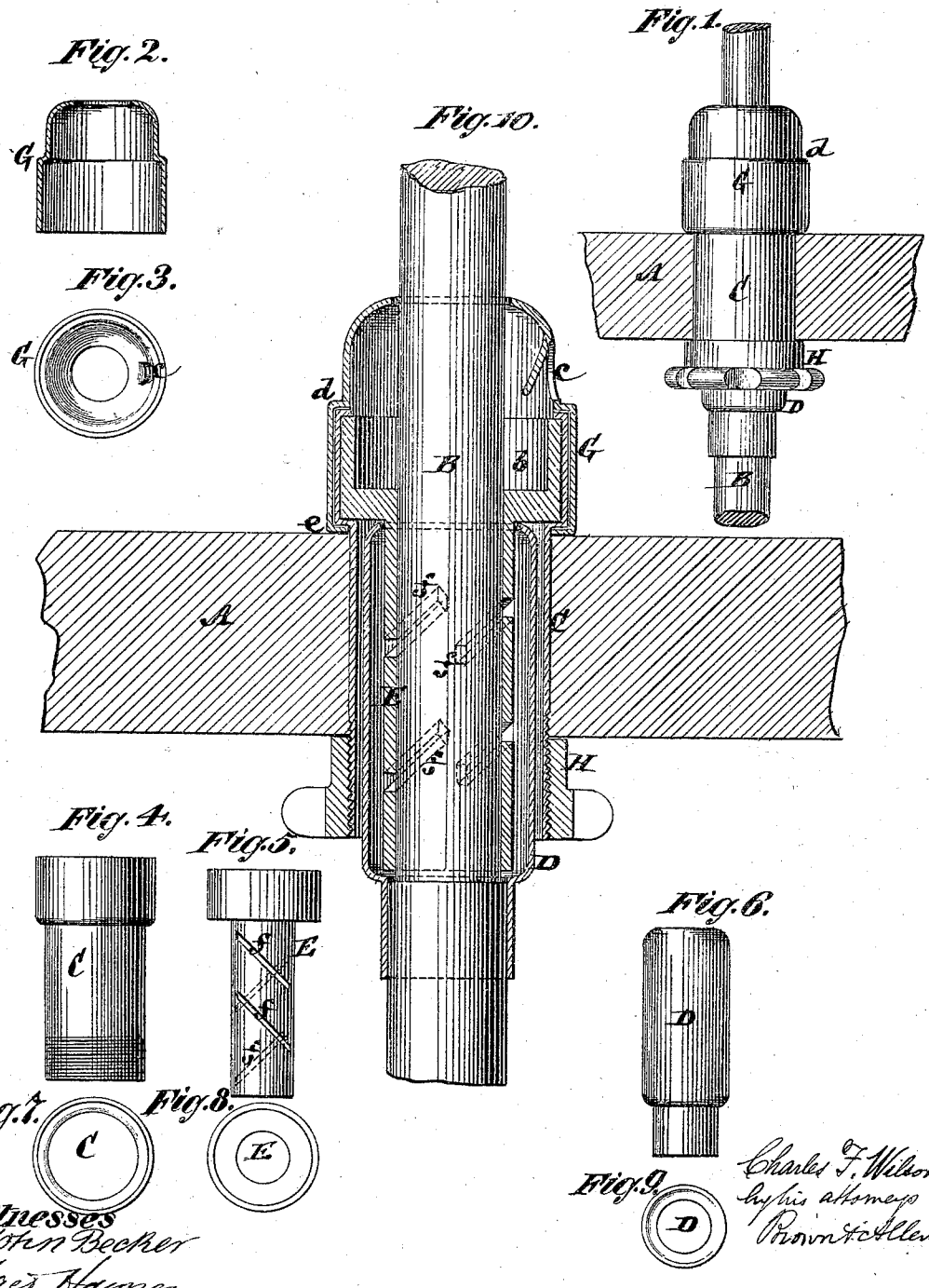
C. F. WILSON.

Spindle Bolsters.

No. 148,015. Patented Feb. 24, 1874.



Witnesses
John Becker
Fred Haynes

Charles F. Wilson
by his attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

CHARLES F. WILSON, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF AND JESSE E. FOLK, OF SAME PLACE.

IMPROVEMENT IN SPINDLE-BOLSTERS.

Specification forming part of Letters Patent No. **148,015**, dated February 24, 1874; application filed February 3, 1874.

To all whom it may concern:

Be it known that I, CHARLES F. WILSON, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Spindle-Bolsters of Spinning-Frames, of which the following is a specification:

This invention consists in a spirally-slotted bearing or journal-box, in combination with the spindle thereof and outer sleeve-like oil-cup attached to the spindle, whereby a most perfect lubrication of the spindle is effected, both when at rest and while in motion, and the oil is prevented from scattering or being wasted. The invention also consists in a spindle-bolster for spinning-machinery constructed wholly or mainly of sheet metal, and composed of an outer shell, which is secured to the rail by a nut below and shouldered cap above, a perforated bearing for the spindle with oil-box at top, and a sleeve-like cup attached to the spindle and arranged between the shell and the bearing, the whole forming a cheap, simple, light, and close construction of bolster, readily put together by simply bending over the edges, or certain of them, of the contiguous sheet-metal parts.

In the accompanying drawing, Figure 1 represents a vertical exterior view of my improved spindle-bolster with spindle therein, and as applied to the rail of a spinning-frame; Fig. 2, a vertical section of the cap prior to putting the parts of the bolster together; Fig. 3, an inverted plan of the cap. Figs. 4, 5, and 6 are exterior longitudinal views of the shell, the journal-box or bearing, and the sleeve-cup of the bolster; and Figs. 7, 8, and 9, end views of said details. Fig. 10 is a vertical section, upon an enlarged scale, of the whole bolster with spindle as applied to a rail.

A is the spinning-frame rail, and B the spindle. C is the shell, which surrounds the sleeve-like cup D and bearing or journal box E of the spindle. G is an independent cap, constructed at its top to nearly fit the spindle without causing friction, and, in conjunction with an enlarged chamber, *b*, at top of the bearing E, serving to form an oil-reservoir, to which access for introduction of the oil is had through an orifice, *c*, formed by a partly-punched lip. The shell C, the cap G, and the sleeve-cup D, as also, if desired, the bearing E, are all made of sheet metal, although the bearing or journal-box E may be of cast metal. The bolster is firmly secured to the rail A, below, by a nut, H, arranged to screw onto the shell C beneath. The upper portion of said shell is constructed with an enlarged upper portion to receive within it the enlarged upper oil-chamber portion *b* of the bearing, and the upper edges of the shell turned over the upper edges of the latter. The cap G is also made with a shoulder, *d*, and enlarged lower portion, to fit or bear down on the upper turned-over edges of the shell, and to slip over and inclose the enlarged upper portion of the shell, and so that the lower edges of the cap may be turned under such portion of the shell, as shown at *e*. The sleeve-like cup D, which is attached to the spindle, and revolves in the annular space between the shell and the bearing, is also made of sheet metal, and is bent invariably both above and below to form a close chamber around the bearing, but extending somewhat below the latter.

The construction of the bolster wholly or mainly of sheet metal, as described, is not only cheap, simple, and admits of the parts being readily put together, but makes a tight bolster from which the oil cannot possibly be scattered by the centrifugal motion of the rapidly-running spindle.

To secure perfect lubrication of the spindle, thorough communication is made through the bearing E with the surrounding cup D, by perforations formed of spiral slots *f*. The oil introduced into the chamber *b* at top of the bearing E runs down the spindle to the bottom of said bearing, from whence it passes into the cup D, and the centrifugal force of the spindle carries such oil up into and through the spiral slots *f*, that serve most effectually, as the spindle is revolved, to worm, as it were, the oil from out of the cup up the spindle, between the bearing E and the latter, and to produce a thorough circulation of the oil to the effectual and constant lubrication of the spindle.

Instead of long spiral slots, such as are represented in the bearing in the drawing, shorter

slots or holes arranged spirally in one or more series may be adopted.

I claim—

1. The bearing or journal-box E, having spiral slots or openings *f* through its sides, in combination with the cup D and spindle B, substantially as specified.

2. The bolster constructed mainly or wholly of sheet metal, and composed of an independent sheet-metal cap, G, independent sheet-metal shell C, a sheet-metal cup, D, and a bearing or journal-box, E, the whole being fitted together in relation with each other and the spindle essentially as shown and described.

C. F. WILSON.

Witnesses:
HENRY T. BROWN,
MICHAEL RYAN.