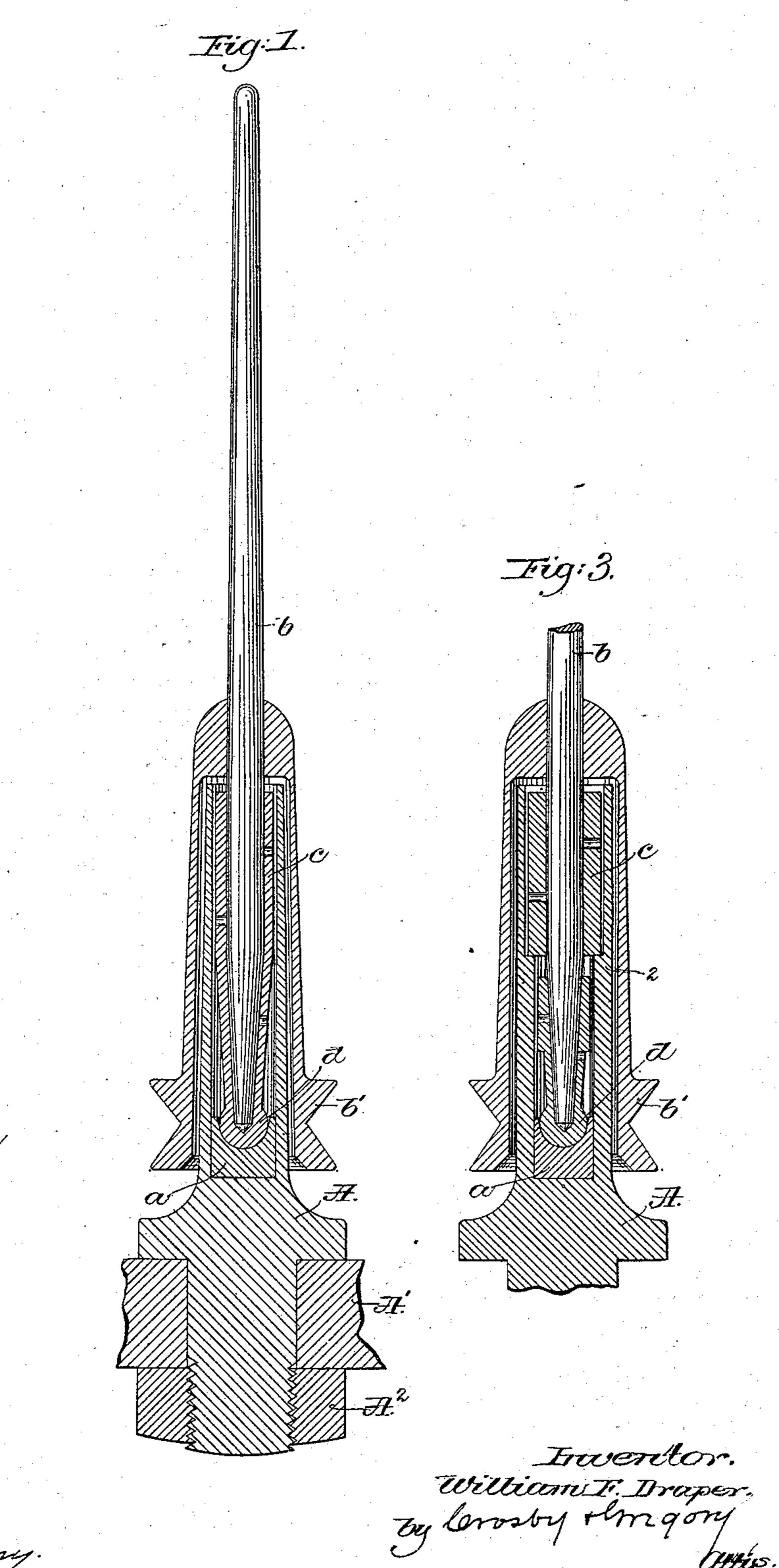
W. F. DRAPER. SUPPORT FOR SPINNING SPINDLES.

No. 406,823.

Patented July 9, 1889.



Witnesses. Edgar a. Goddin Frank Enney.

N. PETERS. Photo-Lithographer, Washington, D. C.

United States Patent Office.

WILLIAM F. DRAPER, OF HOPEDALE, ASSIGNOR TO THE SAWYER SPINDLE COMPANY, OF BOSTON, MASSACHUSETTS.

SUPPORT FOR SPINNING-SPINDLES.

SPECIFICATION forming part of Letters Patent No. 406,823, dated July 9, 1889.

Application filed May 17, 1889. Serial No. 311,177. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. DRAPER, of Hopedale, county of Worcester, State of Massachusetts, have invented an Improve-5 ment in Supports for Spinning-Spindles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In the invention to be herein described the spindle has a loose lateral bearing near its junction with the sleeve-whirl, and the step in which the foot of the spindle rests and turns is sustained by and free to rock or tip 15 upon a step-support located at or near the line of band-pull.

Figure 1, in partial elevation and section, represents a spindle and bearing embodying my invention, and Figs. 2 and 3 modifications

20 to be described.

The supporting-case or holder A, seated upon the usual rail A' and held in place by the nut A2, receives within it the step-support a, concaved or recessed at its upper side. 25 The pintle of the spindle b, having a sleevewhirl b', is surrounded above the grooved part of the whirl by a lateral bearing (shown as a tube) c, loosely mounted in the supporting-case, and the foot or extremity of the 30 pintle rests in a step portion d, sustained by the step-support, so as to enable the step to rock, swivel, or tip at or nearly in the line of the usual band-pull.

In Fig. 1 the portion c of the bolster or lat-35 eral bearing is in one integral piece with the step portion d, but in Fig. 3 the two portions are separated, and the bolster-bearing portion

is rested loosely upon a shoulder 2.

In Figs. 1 and 3 the lower end of the step portion is made spherical, but in Fig. 2 the 40 lower end of the step portion is made conical, as at 4, to enter a conical seat in the step-

support a.

I do not broadly claim a spindle-step having a partial spherical bottom; but prior to 45 my invention I am not aware that a bolster and step bearing has ever had its lower end seated to rock or tip on a step-support; nor am I aware that a loose lateral bearing and step portion have ever been combined with a 50 supporting-case or holder and sleeve-whirl spindle in such manner as to enable the step portion to rock or tip in a line at or near the line of band-pull.

The bolster and step-bearing portions will 55

contain usual oil-holes.

I claim—

1. The combination, with a spindle, supporting-case or holder, and step-support, of a bolster and step bearing swiveled at its lower 60 end to rock or tip on the said step-support, substantially as described.

2. The combination, with a supporting-case or holder, a step-support, and a sleeve-whirl spindle, of a loose bolster and a step portion, 65 the latter being free to rock or tip at or near the line of the band-pull, substantially as de-

scribed.

In testimony whereof I have signed my name to this specification in the presence of 70 two subscribing witnesses.

WM. F. DRAPER.

Witnesses:

E. D. BANCROFT, H. F. SEARLES.