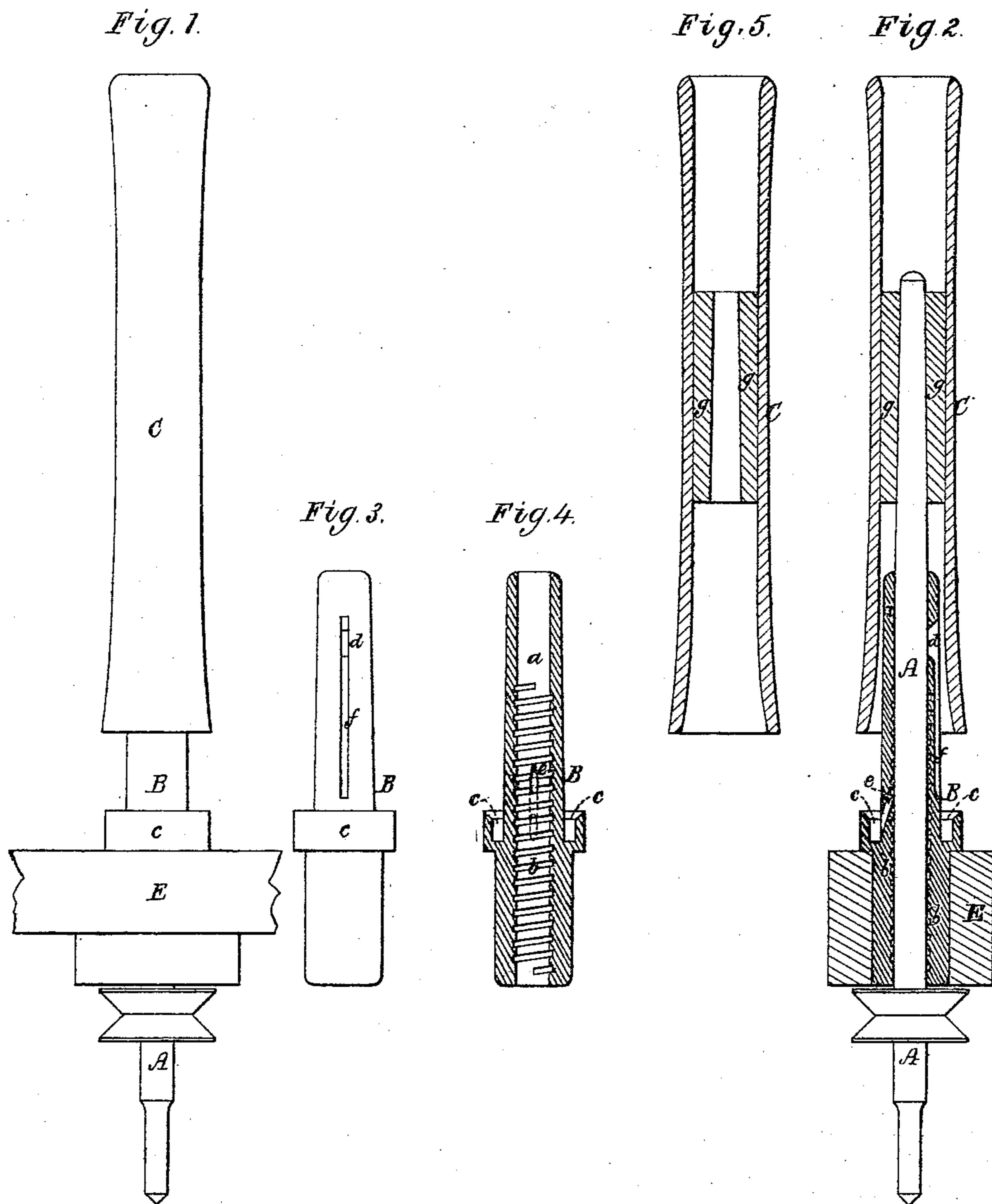


G. RICHARDSON.

Spindle-Bolsters for Spinning-Machines.

No. 148,625.

Patented March 17, 1874.



Witnesses.  
S. W. Piper.  
J. R. Snow.

George Richardson.  
by his attorney  
R. W. Hedy

# UNITED STATES PATENT OFFICE.

GEORGE RICHARDSON, OF LOWELL, MASSACHUSETTS.

## IMPROVEMENT IN SPINDLE-BOLSTERS FOR SPINNING-MACHINES.

Specification forming part of Letters Patent No. **148,625**, dated March 17, 1874; application filed December 11, 1873.

*To all whom it may concern:*

Be it known that I, GEORGE RICHARDSON, of Lowell, of the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Mechanism for Spinning; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, in which—

Figure 1 denotes a front elevation, and Fig. 2 a vertical section, of a spinning-frame, bobbin, and spindle, and its bolster, provided with my invention. Fig. 3 is a front elevation, and Fig. 4 a vertical section, of the bolster. Fig. 5 is a longitudinal section of the bobbin.

One object of my invention is the adaptation of the subject of the United States Patent No. 143,785, granted to me on October 21, 1873, to long bolsters, which are or are to be encompassed by the bobbin while being supported or sustained and revolved by the spindle. In order to so insulate, from the bobbin, the descending current of oil that such oil may not gather upon the bore of the bobbins and descend therein, and be thrown off at and tangentially from its bottom, I construct the long bolster with a groove or channel arranged within its outer surface, and to descend from the educt leading out of the bolster near its upper end, such channel being of such a depth as to convey the oil down from the educt to the reservoir or trough without contact with the bobbin, which usually nearly touches the outer surface of the bolster.

In the drawings, A denotes the spindle; B, the bolster; and C, the bobbin, the latter being supported by the spindle, which, in this case, is what is termed a "stump-spindle," or one whose top is considerably below the top of the bobbin. The bore *a* of the bolster is provided with one or more helical grooves, *b*, to go around within it. Each groove I usually close at its ends, and it is to extend from near

the bottom to near the top of the bore of the bolster. The bolster I form or construct with a surrounding channel or trough, *c*, for reception of oil, such trough being located below the bobbin, and at the top of the bolster-rail E. Through the upper part of the bolster I form an educt, *d*, to extend laterally out of the bore and into a groove or channel, *f*, made down in the outside of the bolster, and extended to or nearly to the trough, and below the bobbin when in place about the bolster and on the spindle. I also form in that part of the bolster which is above and next the trough, one or more capillary holes, passages, or inducts, *e*, inclined and opening into the bore from the trough, in manner as shown. The bobbin represented in the drawings has a spindle-bearing, *g*, at or near the middle of its bore, and from such bearing the bore continues open to and through each end of the bobbin, as shown. There is no spindle-bearing at the head or upper end of the bobbin, or no plug fitted therein. As a consequence, the bobbin is rendered lighter in structure and steadier in operation than it would be with a solid head or spindle-bearing or plug fixed in the upper part of the bore or forming part of the bobbin.

I herein make no claim to the bolster constructed as represented and claimed in my said Patent No. 143,785, but in combination with a bobbin to extend down around the bolster.

I claim—

The bolster provided with the reservoir or trough *c*, one or more capillary inducts, *e*, one or more helical grooves, *b*, an educt, *d*, and the descending channel or groove *f*, all arranged substantially in manner as specified.

GEO. RICHARDSON.

Witnesses:

EDWARD S. WOODIES,  
EDWARD W. CARLETON.