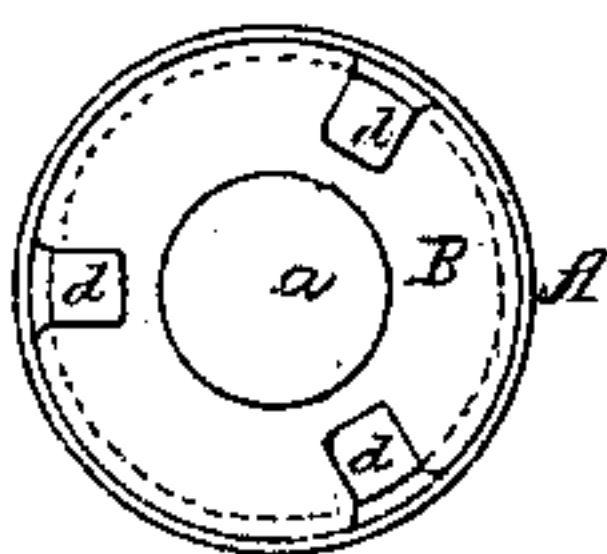


I. P. RICHARDS.  
SPINDLE BOLSTER.

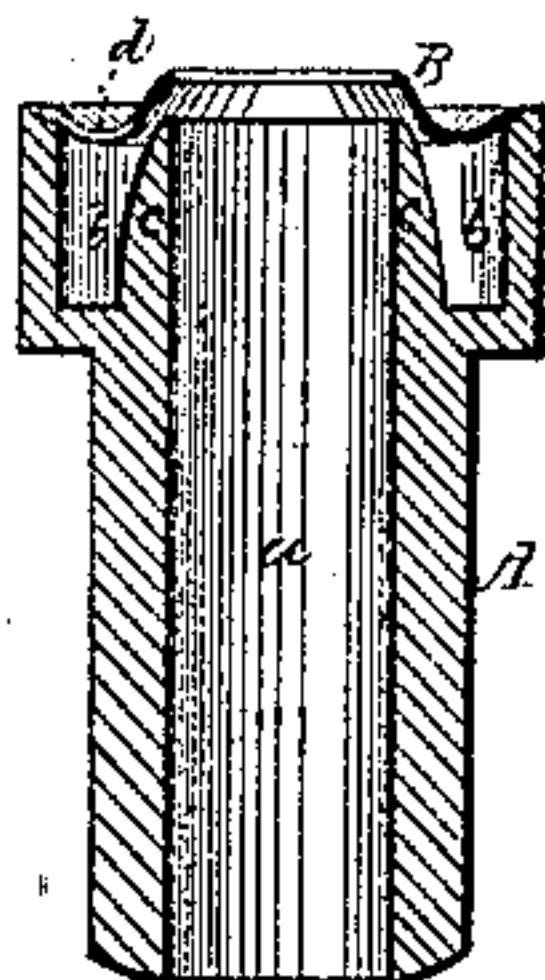
No. 106,621.

Patented Aug. 23, 1870.

*Fig. 1.*



*Fig. 2.*



Witnesses.

S. N. Piper

L. N. Moller

I. P. Richards

by his attorney.

W. M. Eddy

# United States Patent Office.

ISAAC P. RICHARDS, OF WHITINSVILLE, ASSIGNOR TO GEORGE DRAPER & SON, OF HOPEDALE, MASSACHUSETTS.

Letters Patent No. 106,621, dated August 23, 1870.

## IMPROVEMENT IN SPINDLE-BOLSTER

The Schedule referred to in these Letters Patent and making part of the same.

To all persons to whom these presents may come:

Be it known that I, ISAAC P. RICHARDS, of Whitinsville, of the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in the Bolsters of the Spindles of Spinning-Frames or Machines; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a top view, and

Figure 2 a vertical section of a bolster as improved by me, the improvement having reference to the bolster constituting the subject of Letters Patent No. 92,647, dated July 13, 1869, and granted to me.

My patented invention consisted in constructing conical, or with an inclination to the axis of the bolster, that wall or part of the oil-reservoir of the bolster which is next to the spindle bearing.

In carrying out my present invention, I have combined with the bolster so made an annular guard or deflector, to be arranged at the top of the oil-reservoir, and to extend from the outer edge thereof nearly to and around the bolster, cone, or inclined part, as described, the purposes of such guard being to prevent dust and fibers from getting into the oil-reservoir; also to prevent the oil from being thrown out of the reservoir by centrifugal force or otherwise; also to prevent the cloth or waste used in cleaning the spin-

dle and bolster from being thrust by the cleaner into the oil-reservoir and the oil thereof.

In the drawing—

A represents the bolster, whose form, externally, is like others in common use.

b is the annular chamber or oil-reservoir, and

c is the internal cone or oil-elevator, raised within the oil-reservoir and about the spindle bearing a.

The annular guard is shown at B. It may be somewhat varied in form from what is shown, without changing it in principle or operation, that it may be more or less concave or convex, and, if desirable, it may have one or more apertures, d, through it, for the purpose of enabling oil to be forced through it into the reservoir.

It serves as a shield to the cone, and prevents filaments from getting upon it and interrupting its effective operation. It will be observed that it is entirely insulated from the cone, or does not touch it, and circumscribes the spindle when in the bearing.

I claim—

The combination of the annular guard B with the bolster, made with the oil-elevating cone arranged in its oil-reservoir, as set forth.

Witnesses:

ISAAC P. RICHARDS.

G. E. TAFT,

WM. F. DRAPEL.