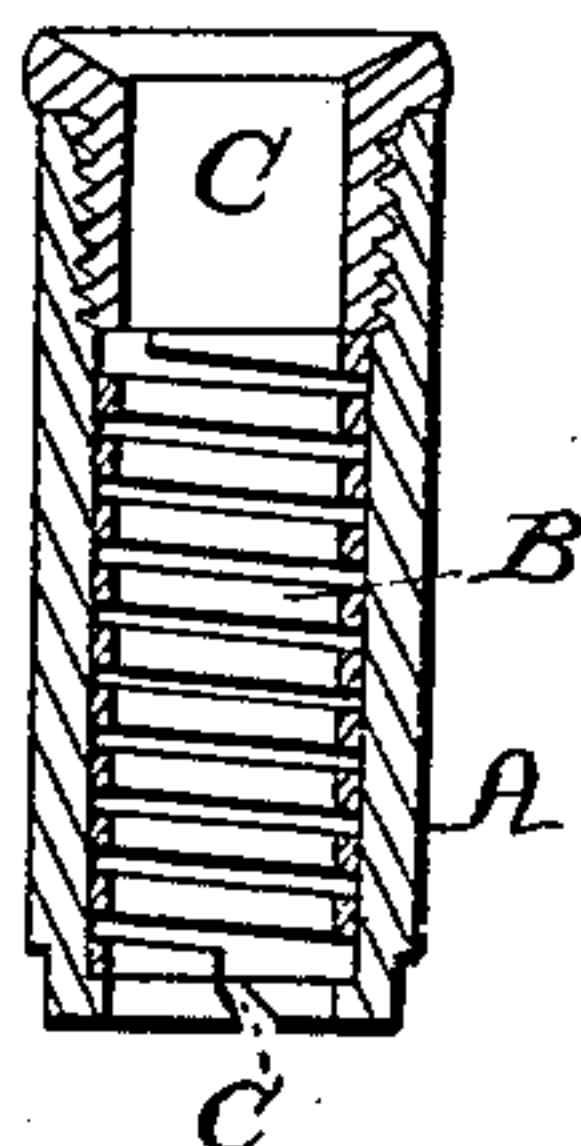


J. D. COTTRELL.
SPINDLE BOLSTER OF SPINNING FRAMES.

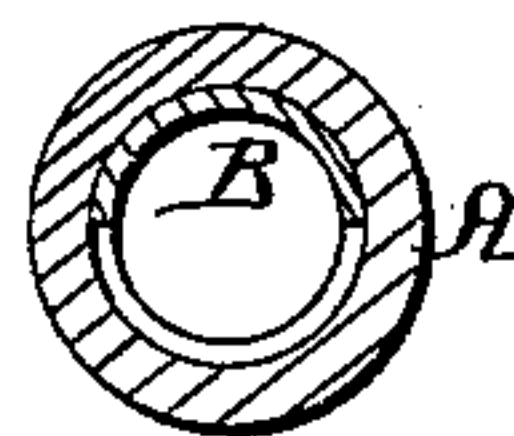
No. 61,518.

Patented Jan. 29, 1867.

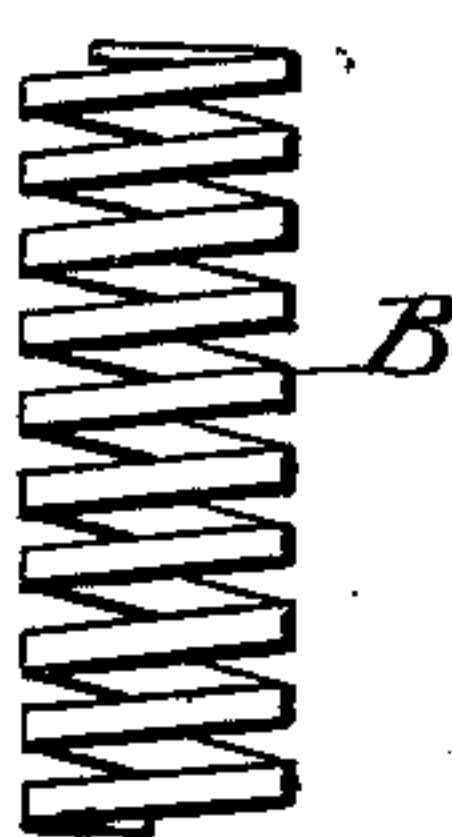
Fig; 1.



Fig; 2.



Fig; 3.



Witnesses;

Geo. H. Andrews
Samuel C. Piper

Inventor;

J. D. Cottrell

By his attorney

R. H. Eddy

United States Patent Office

JESSE D. COTTRELL, OF MILFORD, MASSACHUSETTS.

Letters Patent No. 61,518, dated January 29, 1867.

IMPROVEMENT IN SPINDLE-BOLSTERS FOR SPINNING-FRAMES.

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

TO ALL PERSONS TO WHOM THESE PRESENTS SHALL COME:

Be it known that I, JESSE D. COTTRELL, of Milford, in the county of Worcester, and State of Massachusetts, have made a new and useful invention having reference to the Bolsters for Spindles of Spinning-Frames; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a vertical section; and

Figure 2, a transverse or horizontal section of a spindle-bolster provided with my invention.

In order to prevent waste of oil from the bolster of a spindle, it has been customary to combine with the bolster or apply thereto a cup to receive and hold the oil, such being as represented and described in the United States Patent No. 20,920, granted July 13, A. D. 1858, to Amasa Houghton. It has also been customary to provide the inner surface of the bolster with a helical groove to extend upward from the said cup and encompass that part of the spindle which is within the bolster, the object of such groove being to effect the elevation of the oil from the cup to the surfaces to be lubricated. While my invention accomplishes as much, there results from it something more, that is to say, it affords a means by which the bearing surface of the bolster may be renewed when worn, and it enables a person to readily cleanse the helical groove of any extraneous matters which may be deposited therein. When the groove is formed in the bolster, and is immovable relatively thereto, it is liable to become more or less clogged by reason of the action of the centrifugal force generated in the oil by the spindle, the oil or grease being forced and sometimes packed into the groove, so as to clog it more or less. My invention or improvement enables the groove or part employed to form it to be extracted from the rest of the bolster, and cleansed, as occasion may require. When it may become too much worn by the spindle, the helical bearing may be removed from the bolster, and another or fresh one may be substituted therein for it. A common bolster, when worn so as to be unserviceable, becomes of no further use in the spinning-frame, but with my invention applied to a bolster the main body or part of the bolster will never become worn and unserviceable, but can always be retained in the spinning-frame. So, also, bolsters, as usually made, when worn so as to be unserviceable, can be altered or provided with my invention, and thus be utilized. Thus, my invention is productive of a saving in expense, for all of a bolster that need be cast aside is the helical lining or bushing, to be hereinafter described.

In carrying out my invention, I make the bolster with a cylindrical chamber arranged concentrically within it, and for reception of the helical bushing in which the spindle is to operate. This chamber I provide with an annular cap or cover to screw into it or on the bolster. Within the chamber I place a helix of wire to rest on the bottom of the chamber and extend up to the cap thereof, the said cap serving when screwed down upon the helical bolster to contract it, and with the bottom of the chamber to hold it firmly, in order that it may not revolve within the chamber when the spindle is in revolution. Each of the coils of the helix or helical bushing is to be at a short distance from the next adjacent coil, in order that there may be formed between them and by the inner surface of the bolster-chamber a helical channel, which, when the spindle is in the bolster, will envelop it and serve as a means of conducting oil from the oil-chamber upward about that portion of the spindle which is within the bushing.

In the drawings, A denotes the bolster, and B the helical bushing arranged in a cylindrical or annular chamber, *a*, formed in the bolster. C is the cap of the bolster, such cap being screwed into the upper part of such bolster. The helical bushing which is shown in Figure 3 as separate from the bolster, is a simple helix formed of wire, square or rectangular, in transverse section. A notch, *c*, made in the lower edge of the bolster, is to open communication between the bolster-chamber and the oil cup, which is to be used below the bolster, the same being in order that the oil from the cup may pass up into the helical bolster. By having the helical bushing separate, and removable from the bolster, the cleansing of the bushing becomes an easy matter, when it is removed from the bolster, to that of cleaning a helical groove made in the interior surface of the bolster.

I make no claim to the application of a simple cylindrical tubular bushing to a bearing, nor do I claim the construction of a spindle-bolster, with a helical groove so arranged within it as to encompass the spindle and aid in elevating oil thereon as described.

What I claim as my invention is, the combination of the separate helical bushing with the bolster, such bushing to be used therein substantially in the manner and for the purpose described.

I also claim the bolster as made with a chamber, *a*, and a screw-cap, C, or its equivalent, as specified, to receive and hold a helical bushing to be arranged within the bolster, and used as and for the purposes explained.

I also claim the bolster as made with the helical bushing, receiving-chamber, and with a passage or notch in the lower part thereof to lead out of the said chamber and into the oil-cup, when the bolster is arranged upon such a cup as specified.

JESSE D. COTTRELL.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.