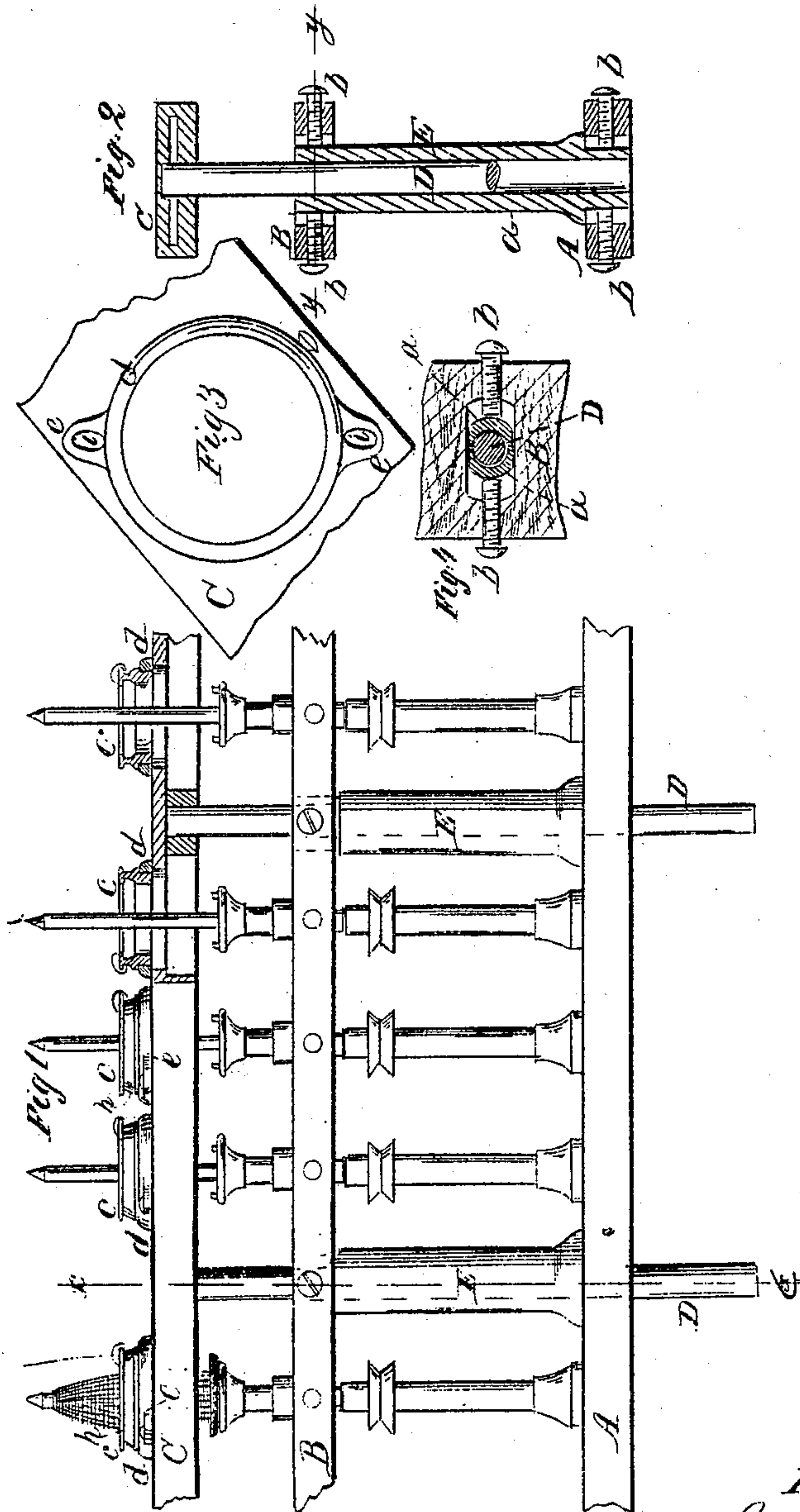


C. B. Morse.
Spinning Machine.

No. 70,798.

Patented Apr. 14. 1868.



Witnesses:
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CYRUS B. MORSE, OF RHINEBECK, NEW YORK.

Letters Patent No. 76,798, dated April 14, 1868.

IMPROVEMENT IN SPINNING-FRAME.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CYRUS B. MORSE, of Rhinebeck, in the county of Dutchess, and State of New York, have invented new and useful Improvements in Rails for Ring-Spinning; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a front view of a section of rails for ring-spinning.

Figure 2 is a cross-section of the rails, through the lifting-rail support in the line *x x*, fig. 1, showing my improved tubular lifting-rod support.

Figure 3 is a top view of a portion of the lifting-rail, showing my improved ring-holder.

Figure 4 is a horizontal section through the bolster-rails, in the line *y y*, fig. 2, showing the arrangement of my improved adjustable ring-rails.

Similar letters of reference indicate corresponding parts.

This invention relates to new and useful improvements in the construction of rails for ring-spinning, and their connected parts, which consist, first, in a tubular support for the lifting-rod; secondly, in a device for adjusting the lifting-rail, by means of set-screws moving the position of the lifting-rod in or out, above or below, in transverse slots in the bolster and step-rails.

A represents the bottom or step-rail of a ring-spinning frame, B the bolster-rail, and C the lifting-rail. The lifting-rods D D have hitherto been set in bushings in the step and bolster-rails, without the means of adjustment, and they have been subjected to uneven wear at the two points above and below, in passing through each rail, giving a taper form in consequence of the irregular friction produced by the varying motion of the lifting-rod at different stages of winding the yarn on the cop. This defect in the wear of the lifting-rods at two points has caused much difficulty in the operation of ring-spinning.

To remedy the defect, I have constructed a tubular lifting-rod support, E, split longitudinally into two equal parts *a a*, extending from the bolster to the step-rail, within which tube the lifting-rod is fitted exactly, as is a piston, so that the surface has an equal bearing the whole length of its movement, and this wears evenly from top to bottom, and never gets out of true, as shown clearly in fig. 2. The tubular lifting-rod support E is held in place by two set-screws *b b*, on opposite sides of each rail, which screws bear against the sides of the ends placed in transverse slots in the rails, as shown in figs. 2 and 4. By means of these screws, the lifting-rail can be adjusted precisely as it may require, from time to time, in consequence of displacement out of line by the drawing pressure of the pulley-belts towards the cylinders of the spindles. Instead of the ordinary method of securing the rings *c c* in the lifting-rail with side screws, I place them in holders *d d*, which are screwed upon the rail, and arranged so as to be adjustable for centring the ring perfectly with the spindles. The holder *d* is a ring-band, within which the ring *c* is set. On opposite sides are two lugs or ears *e e*, which are slotted with slots *i i*, fig. 3, wider than the tightening-screws *h*, which pass through them to fasten the ring-holder firmly to the top of the rail. By means of these slots in the ears of the ring-holder, the ring-holder can be adjusted on the rail in any direction by the screws, so as to centre the ring exactly upon the spindle. To do this is the work of a moment only, by means of a centring-block slipped over the spindle, and setting the ring true around it, before screwing up the ring-holder fast upon the rail.

Having described my invention, I claim as new, and desire to secure by Letters Patent—

The tubular lifting-rod support E, in combination with the slotted bolster and step-rails A B, and with the lifting-rail C, for the purpose of adjusting said lifting-rail to and from the centre of the machine, substantially as herein set forth.

CYRUS B. MORSE.

Witnesses:

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