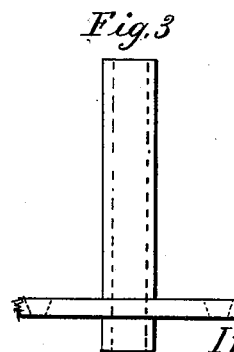
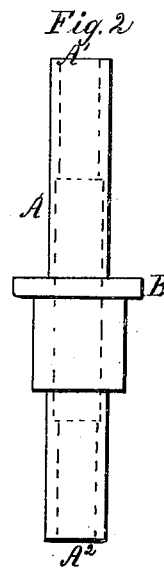
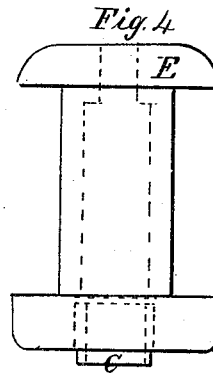
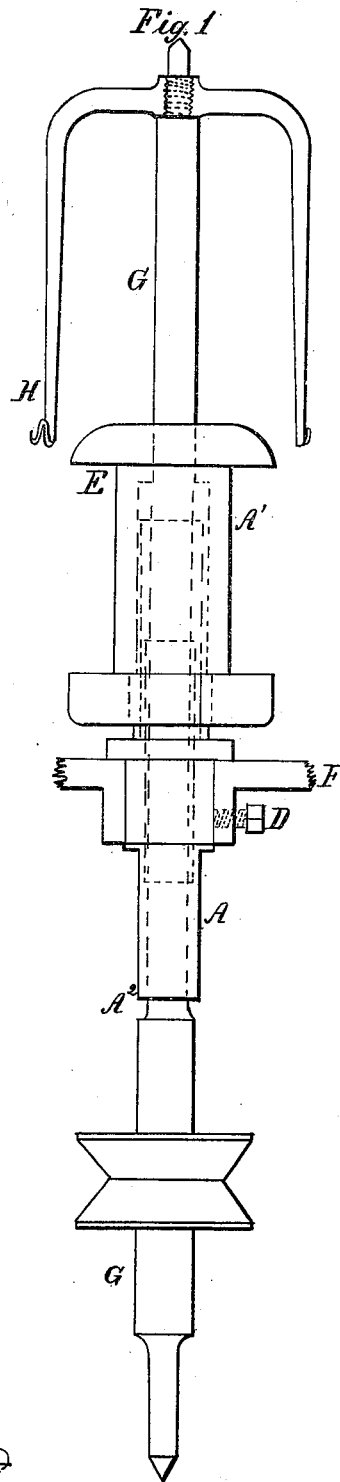


A. Anderson.
Spindle Bolster.

N^o 4,281.

Patented Nov. 21, 1845.



Witnesses
James R. Smith
Joseph L. Reed

Inventor
Alexander Anderson

UNITED STATES PATENT OFFICE.

ALEXANDER ANDERSON, OF PATERSON, NEW JERSEY.

MODE OF STEADYING THE LIVE SPINDLE.

Specification of Letters Patent No. 4,281, dated November 21, 1845; Antedated May 21, 1845.

To all whom it may concern:

Be it known that I, ALEXANDER ANDERSON, of the town of Paterson, in the county of Passaic and State of New Jersey, have
5 invented a new and useful Improvement in the Gore Tube for Spinning with the Live Spindle, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

10 Figure 1 is a side elevation of the spindle, flier, bobbin, tube, and part of the traverse rail. Fig. 2 is an elevation of the tube. Fig. 3 is an elevation of the Gore tube. Fig. 4 is an elevation of the bobbin.

15 Previous to the invention of Mr. Gore, of Manchester, England, great inconvenience was experienced in spinning with the use of the live spindle turned at a great
20 velocity, say 4,000 or 5,000 revolutions per minute, arising from the vibration of the spindle. To remove this difficulty Mr. Gore invented his tube, or collar, fastened to the rails, having the bearing above the rail on
25 the upper part of the spindle, as represented in Fig. 3. This invention was an important improvement in spinning. Still, however, the evil was not entirely removed;
30 for it was found that in running the spindle at a greater speed, say about 6,000 revolutions per minute, and when the tube was traversing on the upper portion of the spindle, there yet remained a considerable vibration
35 on the lower portion of the spindle which was below the rail—causing the spindle and tube to wear away to such degree as to render them useless for spinning at high velocities. I therefore, turned my attention
40 to this subject, with a view of removing the evil complained of, and think that I have accomplished this object; and in the following manner: I make the upper por-

tion of the tube like Mr. Gore's; but below the flange I extend the tube down through the rail to a sufficient distance to form another bearing for the lower portion of the spindle for steadying the same and preventing vibration during high velocities of the spindle and the traversing movement of the tube and rail, by which I am enabled to
50 run the spindle to any required velocity without the danger of destroying the parts and breaking the thread. It is this extension of the tube below the rail forming the lower bearing that I especially claim as my
55 invention and improvement, and nothing else.

A¹ is the tube having a bearing at each end A¹ A², or throughout its whole length, and fastened to a lifter or traverse rail F
60 of the usual form, arrangement, and operation.

D is a set screw for securing the tube to the rail. G is the live spindle made in
65 usual manner.

E is the bobbin, and H the flier, also made in the usual way.

The bore of the tube may be made of the same diameter throughout its entire length corresponding with the diameter of the
70 spindle on which it traverses; or the diameter of the bore may be enlarged near the middle to any required extent so as to form a recess or chamber.

What I claim as my invention and desire
75 to secure by Letters Patent is—

Extending the tube below the traverse rail in the manner and for the purpose set forth.

ALEXANDER ANDERSON.

Witnesses:

WM. P. ELLIOT,
A. E. H. JOHNSON.