

H. T. Potter.

Twisting Head for Spinning.

N^o 62,498.

Patented Feb. 26, 1867.

Fig. 2.

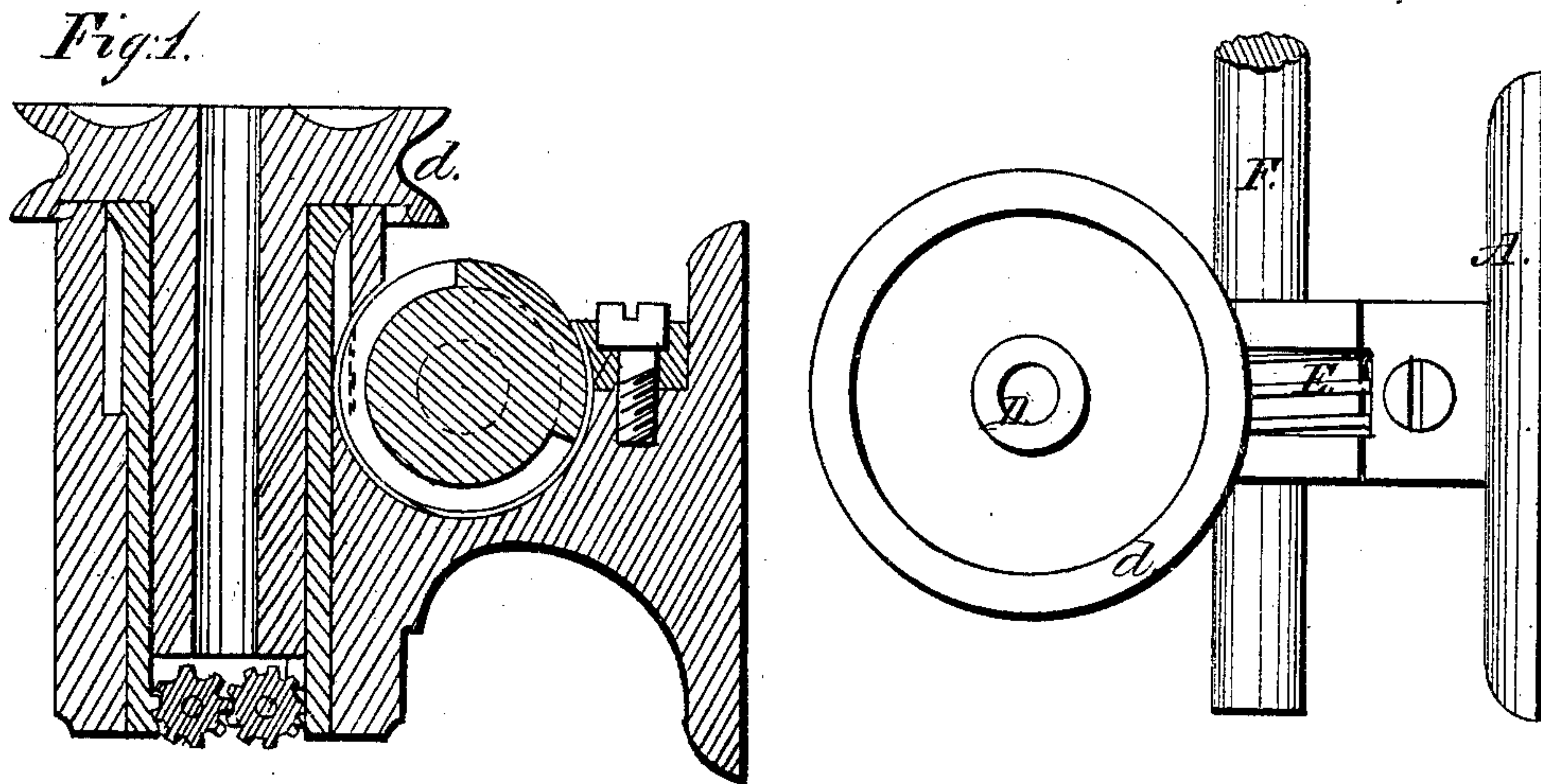


Fig. 1.

Fig. 3.

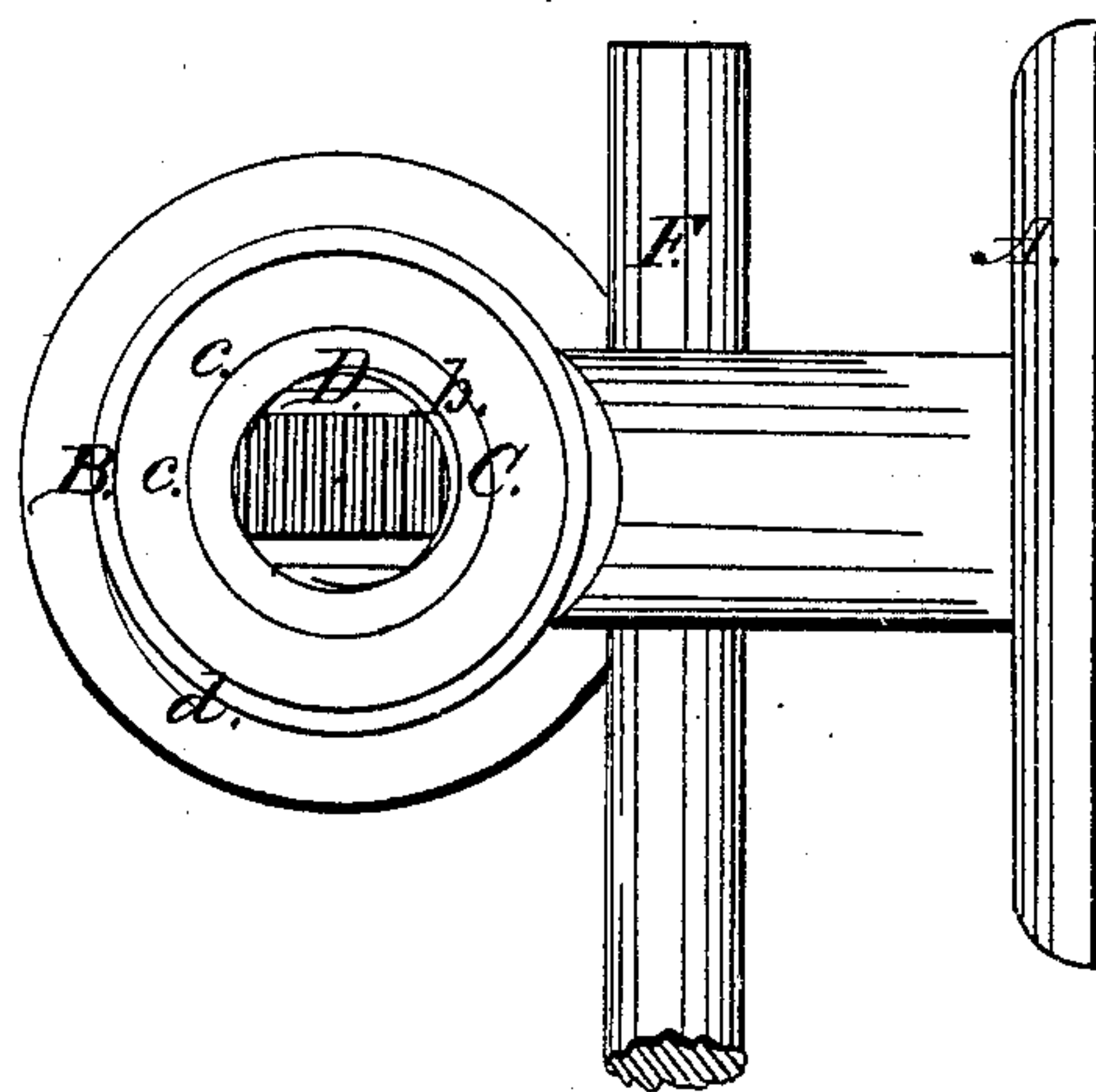
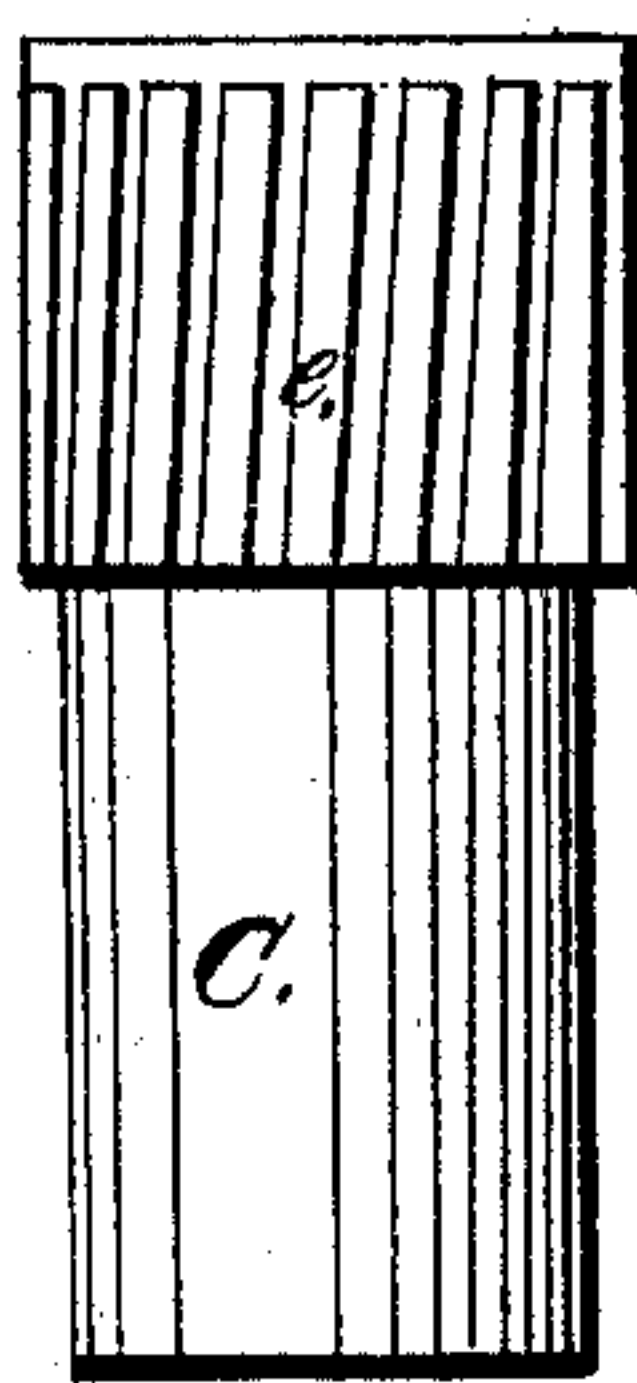


Fig. 4.



Witnesses.

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United States Patent Office.

HENRY T. POTTER, OF NORWICH TOWN, CONNECTICUT, ASSIGNOR TO HIMSELF, EDWIN ALLEN, AND ELISHA H. HOLMES.

Letters Patent No. 62,498, dated February 26, 1867.

IMPROVEMENT IN DRAWING AND TWISTING HEADS FOR SPINNING MACHINERY.

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, HENRY T. POTTER, of Norwich Town, in the county of New London, and State of Connecticut, have invented a certain new and useful Improvement on Drawing and Twisting Heads for Spinning or Roving, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a sectional view of a drawing and twisting head, constructed according to my improvement, supposing the device to occupy a vertical position.

Figure 2, a top view or plan thereof.

Figure 3, an inverted plan of the same; and

Figure 4, an outside longitudinal view of the socketed screw-head forming part of my improved combination which constitutes the invention.

Like letters indicate like parts throughout the several figures.

My improvement has reference to that description of drawing and twisting heads applicable to spinning and roving various fibrous materials, but more particularly wool, in which the sliver is fed through a revolving tube provided with drawing rollers, that, in addition to their revolution with the tube, are made to rotate on their own axes by the gear of said rollers with a worm or screw-thread cut in the interior of an outer cylinder, box, or head to the rollers; and said invention more particularly relates to a certain improvement on such drawing and twisting heads which is the subject of a separate application for Letters Patent of the United States, and in which the screw-head or box is so hung and operated as that it may either be stationary to give a fixed twist relatively to the draught, or may be rotated as well as the tube which carries the rollers, and either in the same or opposite direction, at different velocities, whereby the twist and draught relatively to each other may be more or less varied, and adjusted to meet different peculiarities of the fibre; some slivers or descriptions of wool admitting of more and others of less twist in proportion to the draught. The nature of this invention on said improvement consists in a peculiar combination of devices for producing such action, in which the revolving twisting tube with its drawing rollers is made to fit and rotate within a socketed construction of screw-head that gives the drawing motion to the rollers, and that is made capable of revolving in the same or reverse direction to the twisting tube by a worm-wheel formation on it, gearing with an endless screw on the shaft which is employed to rotate the head, which combination is not only compact, simple, and readily admits of the parts being detached for the purpose of cleaning or repair, but gives a positive motion to the head that is free from slip.

Referring to the accompanying drawing, A represents a bracket for bolting the drawing and twisting head to the frame of a spinning machine, said frame carrying any number of such heads. B is a tubular bearing or socket connected with or forming part of said bracket, and serving to receive, so as to be capable of free rotation within it, a socketed screw-head, C, which has an interior spiral or screw-thread, *b*, preferably at or near the feed end, into which the teeth of the drawing rollers *c c* mesh, and which serves to give said rollers their drawing action as they are rotated in common with the twisting tube D, that carries them, and which may be rotated by a whirr, *d*. On the outside of said socketed screw-head, preferably at or near its opposite end to that of the spiral or screw-threads *b*, are teeth, *e*, of a spiral or worm character, into which an endless screw, E, meshes, said screw projecting through the shell or socket B, and being rotated by a shaft, F, which may be driven by cone pulleys, furnished with a suitable reverse motion to vary its velocity and direction of motion relatively to the twisting tube D. By this combination it will be obvious that on failing to give motion to the shaft F, then the twisting tube D and drawing rollers *c c* will have a fixed relative velocity, the one to the other, thereby giving a fixed draught in relation to the twist; but, on setting the shaft F in motion, fast or slow, and so as by its screw E to rotate the screw-head C either in the same or opposite direction to that of the tube D, accordingly as more or less draw is required in relation to the twist, the screw-head C in revolving will produce such changed or variable action on the drawing rollers. The gear of the shaft F by its screw E, with the screw-head C by its teeth *e*, being a positive one, there will be no tendency to slip on starting, driving or altering the

velocity or direction of motion of the screw-head, which is important ; while the combination, as described, is not only simple and compact, but readily admits of the parts being detached for cleaning or repair.

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

The combination, with the twisting tube D, and drawing rollers *c c*, of the socketed screw-head C, and revolving screw E, in gear therewith, for operation together, the whole being constructed and arranged substantially as and for the purpose or purposes herein set forth.

HENRY T. POTTER.

Witnesses:

SOLOMON LUCAS,
WEBSTER PARK.