C. D. House,

Twisting Head.

No. 99674. Patented Feb. 8. 1870

Fig. 1.

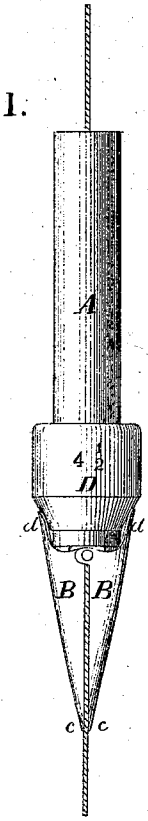


Fig. 2.

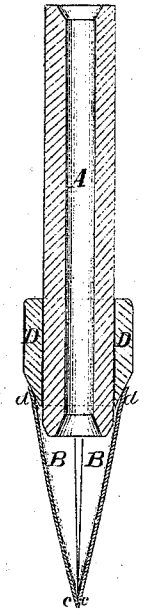


Fig. 3.

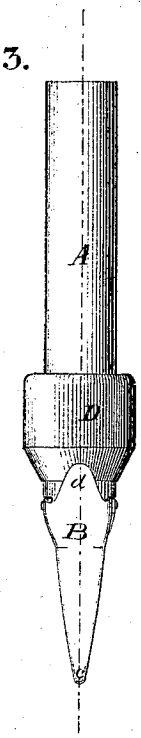
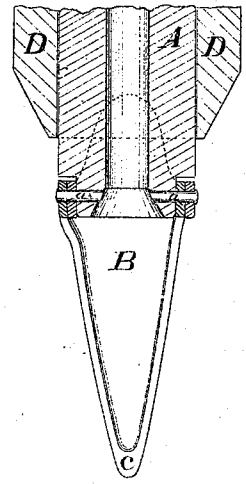


Fig. 4.



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CHARLES D. HOUSE, OF LAKE VILLAGE, NEW HAMPSHIRE.

Letters Patent No. 99,674, *dated February* 8, 1870.

IMPROVEMENT IN TWISTING-TUBES FOR SPINNING.

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, CHARLES D. HOUSE, of Lake Village, in the county of Belknap, and State of New Hampshire, have invented a new and valuable Improvement in Twisting-Tubes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a side view of my invention.

Figure 2 is a central vertical section of same.

Figure 3 is a side view of same, taken at right angles to the view shown in fig. 1.

Figure 4 is an enlarged sectional view, showing the interior form of the conical jaw.

My invention has relation to spinning-machines, and consists, mainly, in the construction and novel arrangemen of devices, whereby a cone-pointed twister is adapted to any grade of yarn, and otherwise greatly improved.

The letter A of the drawings designates the twister, a hollow tube, of brass or other suitable metal, revolved by means of a cord or band connected with the drum of the spinning-machine. Sometimes a pulley is arranged on the twister, with a grooved edge, in which the cord runs.

B B represent the hollow conical jaws, hinged at each side of the tube by means of the rivets *a a*, or by any other arrangement which will allow them to hang suspended with free motion backward and forward.

That arrangement is preferable which will, as shown in the drawings, give greater steadiness to the points *c c*, or in which the hinged points are at the greatest distance from each other.

Ears *d d* are formed at the upper part of each jaw, projecting up from the middle between the hinged points, and slightly bent outward at the tips, to receive the conical base of the cam-weight D.

The adjacent surfaces of the points *c c* of the jaws are plain for about an eighth of an inch from the extremities, so that the roving is not nipped, as heretofore has been the case, by the thin biting edge in use.

There are several ways of adjusting the cam-weight D so that it will operate the jaws. Sometimes I employ two weights, arranged to slide up and down by means of slots formed in the tube above the ears *d d*. Sometimes the weights are fixed upon the projections or ears *d d* themselves; but, generally, I prefer the annular cam-weight D, as shown, encircling and sliding freely on the twisting-tube.

The cam-weight D has a conical base, which descends between the ears *d d* of the jaws, and presses them outward, thus bringing together the points *c c* with a degree of force depending on the weight of the cam D. Thus, by the use of cams of different weights, the same twisting-tube and delivering-points may be used for any number of yarn, whether coarse or fine, loose or closely twisted.

The cam-weight shown in the drawing is adapted for No. 4½ yarn—a medium grade.

In the use of springs or other elastic devices for keeping the conical points together, a passing knot will have a tendency to throw the points suddenly apart, when they will as quickly come together, and, if the edges be thin, or not exactly opposite each other, as is usually the case, the roving will be cut.

I do not claim the use of elastic force for the purpose of keeping my improved conical points together; but

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

1. The adjustable conical delivery-jaws B B, hinged to the twisting-tube of a spinning-machine, and operated by the variable sliding cam or weight D, as shown and described.

2. The hinged jaws B B, having upward projections or ears *d d*, and broad plane inner surfaces to the delivery-points *c c*, as shown and described.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

CHARLES D. HOUSE.

Witnesses:

JOHN ALDRICH,

JOHN L. FLANDERS.