

JOHN W. CHAPPELL.

2 Sheets--Sheet 1.

Improvement in Twisting and Spinning Heads.

No. 115,435.

Patented May 30, 1871.

Fig 1

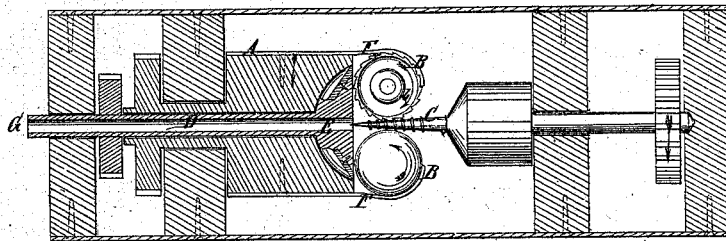
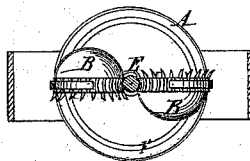


Fig 2



Witnesses:

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Inventor:

John W. Chappell.

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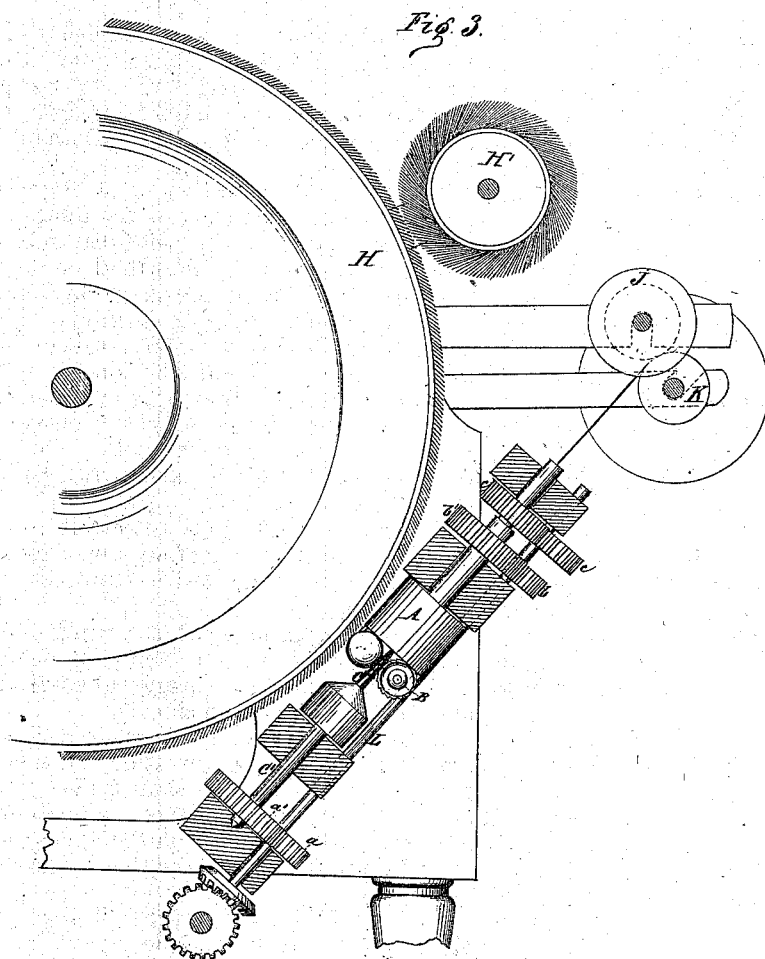
JOHN W. CHAPPELL.

2 Sheets--Sheet 2.

Improvement in Twisting and Spinning Heads.

No. 115,435.

Patented May 30, 1871.



Witnesses:

*H. J. Trevis*  
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# UNITED STATES PATENT OFFICE.

JOHN W. CHAPPELL, OF BERLIN, MICHIGAN, ASSIGNOR TO HIMSELF AND  
DENNIS MACOMBER, OF SAME PLACE.

## IMPROVEMENT IN TWISTING AND SPINNING HEADS.

Specification forming part of Letters Patent No. 115,435, dated May 30, 1871.

*To all whom it may concern:*

Be it known that I, JOHN W. CHAPPELL, of Berlin, in the county of Ottawa and State of Michigan, have invented a new and Improved Spinning-Head; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification.

My invention consists in certain combinations of mechanical devices, as hereinafter fully described and subsequently pointed out in the claim, for removing and twisting slivers from the carding-machines and depositing them upon rollers or bobbins.

My primary object is to enable those skilled in the art to which this invention belongs to dispense with condensers and jacks, and to thereby simplify and cheapen manufactured yarn to the public.

Figure 1 is a longitudinal section of my spinning-head. Fig. 2 is an end view, showing a front detail view. Fig. 3 is a side view of a carding-cylinder with my improved spinning-head arranged at a tangent thereto, and showing the relative position of the winding and tension spool.

A, Fig. 1, represents a hollow cylinder. B B are rolls, having a worm on the peripheries and oblique teeth on one edge of each. These teeth on the two rollers point obliquely in opposite directions. C is a worm-spindle arranged between these rollers to rotate them, and, pointed at the end to center in the axis of cylinder A. D is a tube passing through the latter cylinder, and having head E, with leather wiper F, in front of rollers B B. It is rotated by power applied at the other end for the purpose of operating said wiper. H, Fig. 3, is a carding-cylinder, and J is a spool on which the yarn is wound as fast as twisted. K is a drum, which, in connection with the spool, affords the necessary tension to the yarn

as delivered from the spinning-head. I represents the driving-shaft of the spinning-head, while *a a' b b' c c'* are differential spur-gears, which impart a more rapid motion to the wiper-tube D and the worm-cylinder C than to the cylinder A.

The mode of operation is as follows: As the carding-cylinder carries the fiber around on its circumference the said fiber is brought into contact with the oblique teeth on the edges of rollers B B. Separate slivers are removed by each set of teeth, and, as they are being carried around by them, are brushed off by the wipers F at a point opposite to tube D. Through this tube they pass in one continuous yarn, which has been twisted between the point of delivery and the tube. From this tube the twisted yarn passes directly to the spool J.

Having thus described all that is necessary to a full understanding of my invention, what I esteem as new, and desire to protect by Letters Patent, is—

1. In combination with a carding-cylinder, H, the above-described spinning-head and spool mechanism, operating substantially as and for the purpose specified.

2. In spinning-heads, the rolls B B, slowly revolving in opposite directions on their own axes, and rotated, at the same time, in a plane at right angles to their axes, and having the reversely-obliques teeth on the edges thereof, all substantially as and for the purpose specified.

3. The tube D having wiper F, and rolls B B having reversely-obliques teeth on their edges, combined and operated together, as and for the purpose specified.

JOHN W. CHAPPELL.

Witnesses:

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