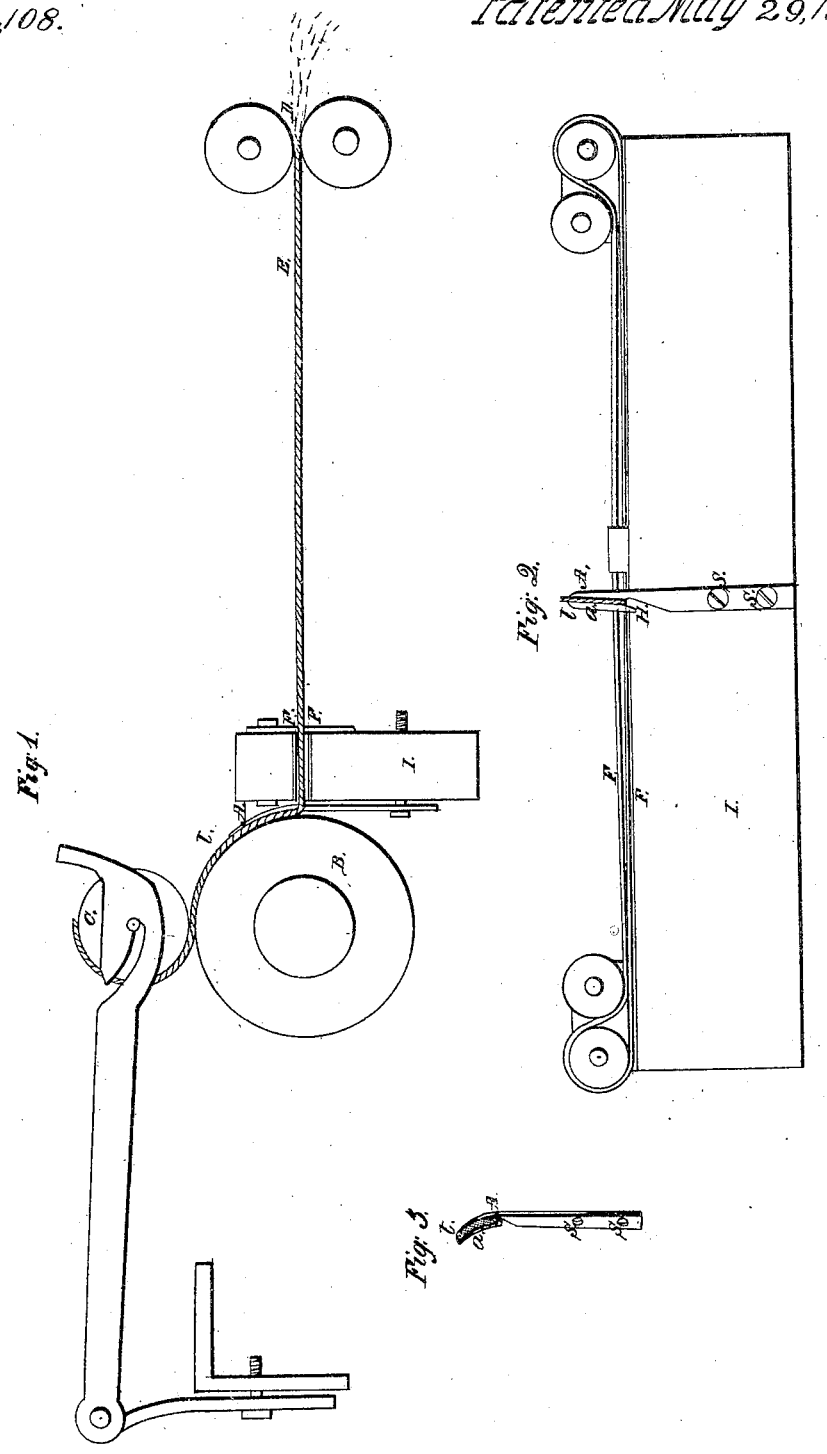
# J. Whitehead.

## Carding Mach.

No. 2,108. Patented May 29, 1841.



# UNITED STATES PATENT OFFICE.

JESSE WHITEHEAD, OF MANCHESTER, VIRGINIA.

## COUNTER-TWIST SPEEDER FOR COTTON ROPING.

Specification of Letters Patent No. 2,108, dated May 29, 1841.

*To all whom it may concern:*

Be it known that I, JESSE WHITEHEAD, of Manchester, in the county of Chesterfield and State of Virginia, have invented a new and useful improvement in counter-twist speeders, being a new and useful method of conveying the roping from the guide to the bobbin in the compressed state in which it leaves the twisting-bands, which improvement is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

The nature of my invention and improvement consists in the application of the revolving block or driving drum directly to the metallic guide which is placed in front of the twisting belts or bands for twisting the roping, which is delivered, as it passes through the guide directly against the block and near the center thereof, horizontally, and conveyed from thence between the guide and block to the bobbin placed above the block and in contact therewith—the said guide being grooved or channeled along its concave side to admit the roping for the purpose of keeping it in its compressed state as it leaves the twisting belts.

Figure 1 is a side elevation of the part of the speeder as improved. Fig. 2 is a side view of the carriage and a front view of the guide fixed thereto. Fig. 3 is a perspective view of the metallic guide.

Similar letters in the several sections of the drawings refer to similar parts of the machine.

The frame of the speeder is made in the usual manner.

The metallic guide A is made of a suitable piece of metal, straight about two thirds its length and curved the remaining third of a curvature of a diameter a little greater than that of the block or drum near which it is placed. The concave part which lies next the surface of the block is channeled in a single channel *a* about the size of the roping E which lies therein and by which it (the roping) is kept in a compressed state against the drum. The guide is tapered from the straight part to the upper end of the curved part and it is also scalloped at the side or in the edge forming a hook H. The straight part is perforated with two round holes for screws S which fasten it to the carriage. When the guide is properly placed it will lie with the hook part near the twisting belts F, and the curved point or upper end *t* near the point of contact of the block and bobbin B, C, the concave part nearly touching the convex surface of the revolving block or drum B.

The revolving block or drum B may be placed in the usual, or any other convenient position, with the bobbin C immediately over and upon it and by which it is turned by friction in the usual manner. The drawing rollers D are also made and placed in the usual manner. The roping E passes between these rollers and between the bands F—through the guide—along its curved groove or channel and against the revolving block to the point where the spool and block nearly touch and where it is received and wound upon the bobbin in the compressed state in which it leaves the twisting bands F and always at the same degree of tension, although the bobbin C is constantly increasing in size and diminishing in the number of revolutions in a given time; because the velocity of the surface of the bobbin varies not from that of the revolving block B which has a uniform motion; and as the bobbin fills its center rises in the arc of a circle and without the necessity of receding the center from the guide in order to keep the surface of the bobbin, as it fills, always at the same distance from the guide in the manner described in my patent of 1839; or without the necessity of bringing the twisting bands between the bobbin and block and delivering the roving on the bobbin immediately after leaving the bands as in some other machines—thus doing away with all the machinery requisite to produce the aforesaid effect and in simplifying and cheapening the construction of the speeder in a great degree.

The carriage I has an alternate transverse horizontal movement for the purpose of winding the roving evenly upon the bobbin as in other machines.

The before described principle of receiving the roving directly from the twisting bands (which give it the required twist) by a guide of the aforesaid construction and holding it in a compressed state against the surface of the revolving drum in order to prevent its losing the said twist while being wound upon the bobbin and in combination

therewith the mode of winding the roving at a uniform and equal degree of tension and twist is believed to be original.

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

1. The before described mode of delivering the twisted roving in the compressed state in which it leaves the twisting bands at a uniform and regular tension by means of the aforesaid combination and arrangement of guide, block, and bobbin.

2. I also claim the construction of the metallic curved and channeled guide as described.

JESSE WHITEHEAD.

Witnesses:

WM. P. ELLIOT,

EDMUND MAHER.