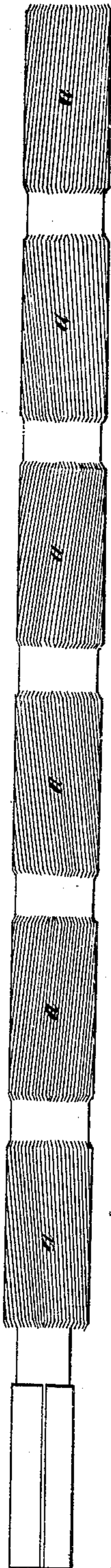


No 4,333.

W. Weild.  
Drawing Roller for Spinning.  
Patented Jan. 19, 1864.



Witnesses,  
Robert Morgan  
L. H. Smith,

Inventor:  
W. Weild

# UNITED STATES PATENT OFFICE.

WILLIAM WEILD, OF MANCHESTER, ENGLAND.

## IMPROVEMENT IN SPINNING-ROLLERS.

Specification forming part of Letters Patent No. 41,333, dated January 19, 1864.

*To all whom it may concern:*

Be it known that I, WILLIAM WEILD, of the city of Manchester, in the county of Lancaster and Kingdom of Great Britain, have invented certain improvements in fluted rollers, used in machines for preparing, spinning, and doubling cotton, wool, flax, silk, and other fibrous materials; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Hitherto fluted rollers used for preparing, spinning, and doubling fibrous materials have been made with straight flutes parallel to the axis of the roller, and in many cases the top roller, working on the fluted roller, is covered with leather, and the leather cover of such rollers in time gets fluted and cut up by the action of the fluted roller, which is a great evil.

Now, it is one of the objects of my invention to lessen or remove this evil; and my invention consists in the use of rollers in machines for preparing, spinning, and doubling fibrous materials, having flutes formed upon them in a special direction with a pitch of about one turn in sixteen inches, more or less, as required. By this means the upper roller will rest upon the tops of several flutes, (the manner depending upon the length of the boss, the pitch or distance between the flutes, and the pitch of their screw curve,) instead of resting entirely upon one flute, as in the ordinary fluted roller. In the ordinary fluted roller, the flutes being parallel to the axis, the upper roller must have a slight (though very slight) ascent and descent in passing over the top of each flute and the groove between every two flutes, while with my improved flute it is uniformly supported, and will not have the least ascending or descending movement. For this reason fluted rollers made with a screw, curved, or inclined fluting, according to my invention, (though most advantageous where the upper or top roller is covered with leather,) will be

also advantageous when the upper roller is plain and uncovered, or where the upper roller is fluted, particularly if fluted diagonally, according to my invention.

A further improvement in which my invention consists is in making the angle or curve of the flutes of one boss reverse to those of the adjacent boss, so that by turning the top roller, so as to reverse its ends, any tendency to flute or wear into impressions of the fluted roller below may be wholly or partly corrected, as the flutes formed on the leather by one boss would be wholly or partly effaced by the reverse inclination of the flutes of the other boss.

The accompanying drawing shows a side view of a roller fluted according to my invention.

*a* represents the bosses or fluted parts of the roller, and the diagonal lines the flutes thereof, which are reversed in direction on adjacent bosses, for the purpose above named.

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

1. The use in machines for preparing, spinning, and doubling fibrous materials of rollers having their flutes arranged in a spiral form and at an angle to the axis of the roller, as hereinbefore described, and illustrated by the accompanying drawing.

2. The system or mode of reversing the angle, direction, or curve of the flutes, as hereinbefore explained, and illustrated by the drawing, and the use of rollers having the angle, direction, or curve of the flutes so reversed.

In testimony that the foregoing is a true description of my said improvements I have hereunto set my hand this 14th day of October, A. D. 1863.

W. WEILD.

Witnesses:

HENRY WILDE,  
PETER J. LIVREY.