T. ROBJOHN.

Fluting-Rollers.

No. 149,526. Patented April 7, 1874.

Fig. 1.

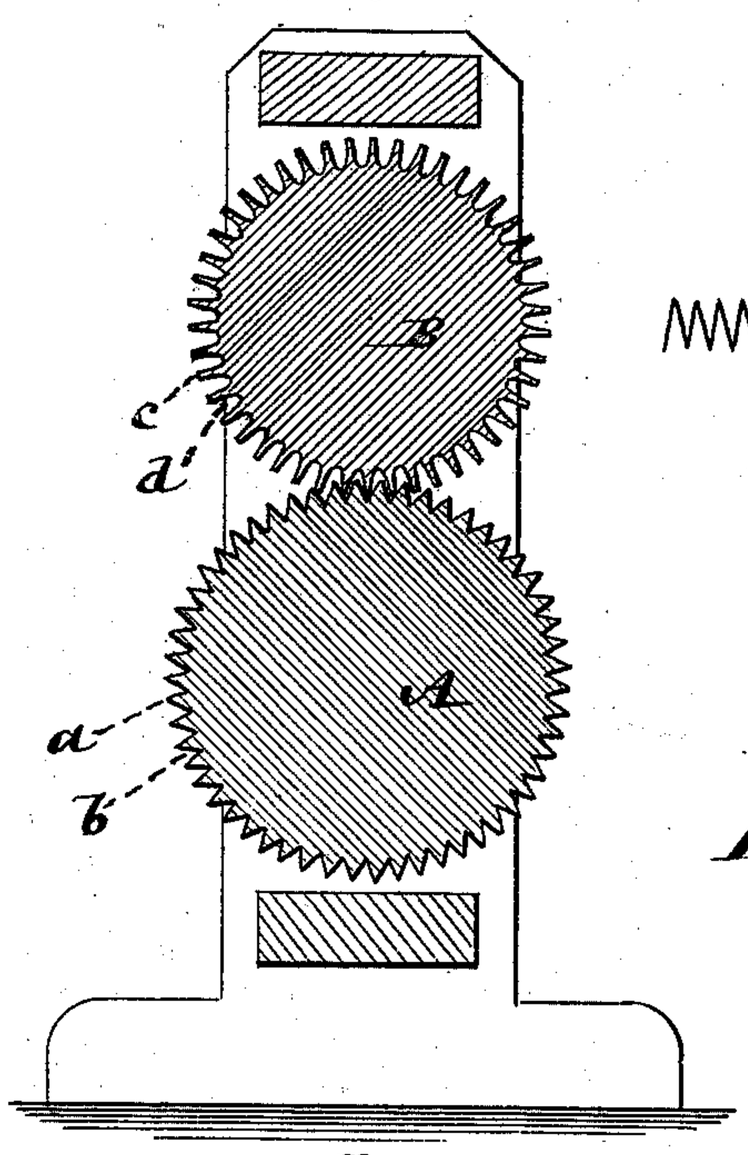


Fig. 3.

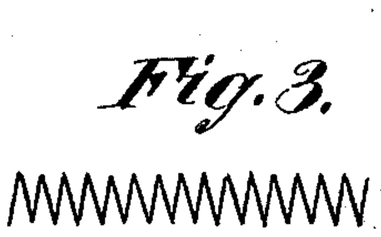
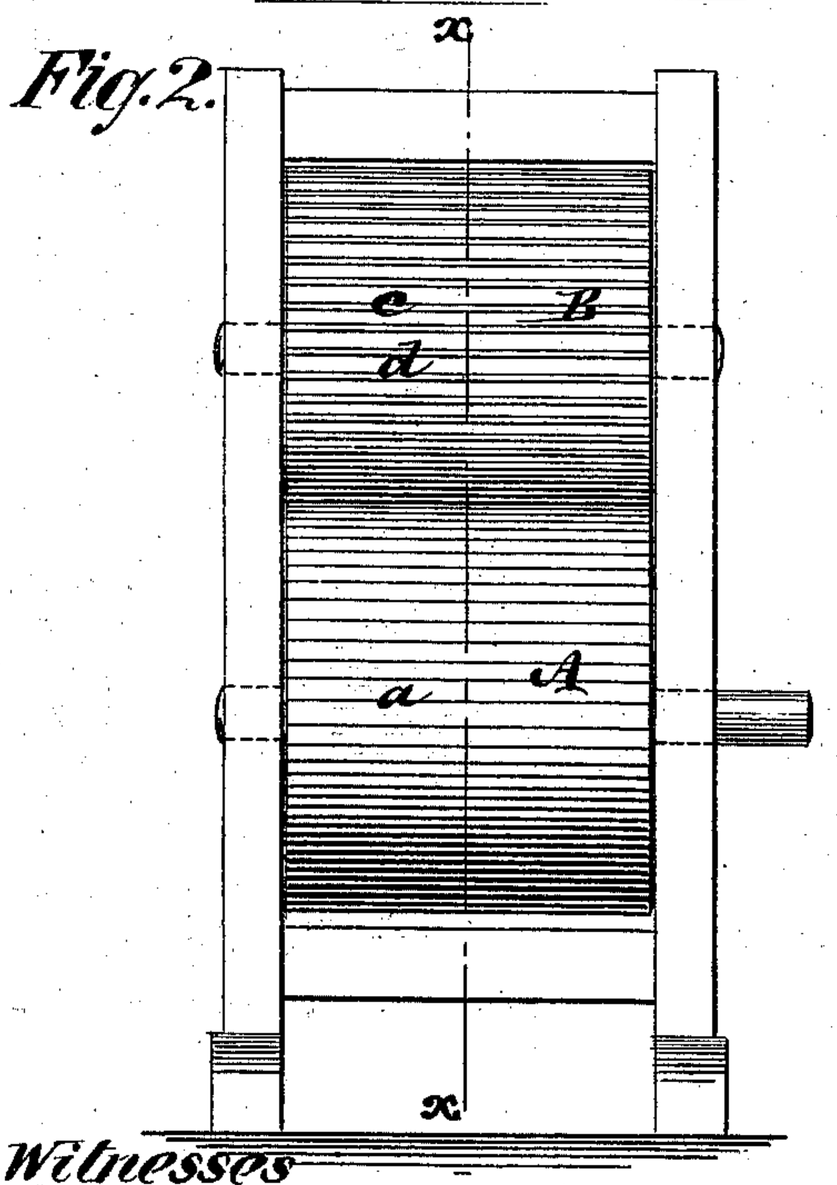


Fig. 4.

Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS ROBJOHN, OF NEW YORK, N. Y., ASSIGNOR TO GEORGE G. BATES, OF SAME PLACE.

IMPROVEMENT IN FLUTING-ROLLERS.

Specification forming part of Letters Patent No. **149,526**, dated April 7, 1874; application filed February 3, 1874.

To all whom it may concern:

Be it known that I, THOMAS ROBJOHN, of the city, county, and State of New York, have invented an Improvement in Fluting-Rollers, of which the following is a specification:

This invention consists in a pair or combination of fluting-rollers for making V-shaped fluting, the one of which rollers has its ridges and grooves of approximately equal triangular shape or construction, while the ridges of the other roller are of narrower angular construction, or of strip-like form, and its grooves of a U shape or with broad open inner bases, and of greater depth than the ridges of the first-named roller, and so that the pitch-line of the two rollers is at the outer edges of the ridges of the narrow-ridged roller and the inner bases of the triangular grooves of the other roller, whereby the material to be operated upon, as it passes in between the rollers, is transformed into V-shaped fluting, and the sides of the flutes pressed or ironed into shape by the rubbing or pressing action of the sides of the ridges and their outer edges on the material throughout the whole length and depth of the flutes, or thereabout, substantially as hereinafter described.

In the drawing, Figure 1 represents a vertical transverse section on the line *x x* of a pair of fluting-rollers constructed in accordance with my improvement: Fig. 2, a side or edge view of the same; Fig. 3, a view, in profile, of the fluting produced; and Fig. 4, a diagram, on an enlarged scale, in illustration of the grooved and ridged surfaces of the rollers.

A is the one, and B the other, of a pair of fluting-rollers, either of which may be the driver of the other. The one, A, of these rollers has its flutes formed by ridges *a* and grooves *b* of triangular shape, forming a sharp or close junction at the base of the contiguous ridges, and so that the ridges *a*, at their base, are of a thickness which approximates the cross-dimensions of the grooves *b*, between the outer edges of the ridges. The other roller, B, has its flutes formed by narrower or strip-like ridges *c* and grooves *d*, of somewhat greater depth than the ridges and grooves of the roller A, so that the one set of ridges *a* approximates an equilateral triangle, while the other ridges *c* approximate an isosceles triangle, and the grooves *d* of the roller B are of a U shape, or with broad open inner bases.

By this construction of the rollers, the pitch-lines *e f* of them are at the outer extremities or edges of the ridges *c* and inner edges or bases of the grooves *b*, and a free space is left between the outer edges of the ridges *a* and the inner surfaces or bases of the grooves *d* for the material to be fluted to freely pass, as required, between the rollers while it is fluted by the ridges, in connection with the grooves of the rollers, the outer edges of the ridges *c* bearing the material close within the sharp or narrow inner edges or bases of the grooves *b*, and the sides of the ridges *a c* working in nearly straight or close contiguity with each other, thereby exerting a rubbing or ironing action, as it were, upon opposite sides of the flutes, and making the latter of a sharp or V-shaped form.

I claim—

The fluting-roller A, having its ridges *a* and grooves *b* of triangular shape, in combination with the roller B, having its ridges *c* of narrower strip-like shape, and its grooves *d* U-shaped, or with broad inner bases, and of a greater depth than the ridge *a*, substantially as described, so that the pitch-line will be at the outer edges of the ridges *c* and inner edges of the grooves *b*, or thereabout, as specified.

THOS. ROBJOHN.

Witnesses:
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