

(No Model.)

W. M. MILLS.

ROLLER FOR GRADUAL REDUCTION FLOUR MILLS.

No. 253,878.

Patented Feb. 21, 1882.

Fig. 1.

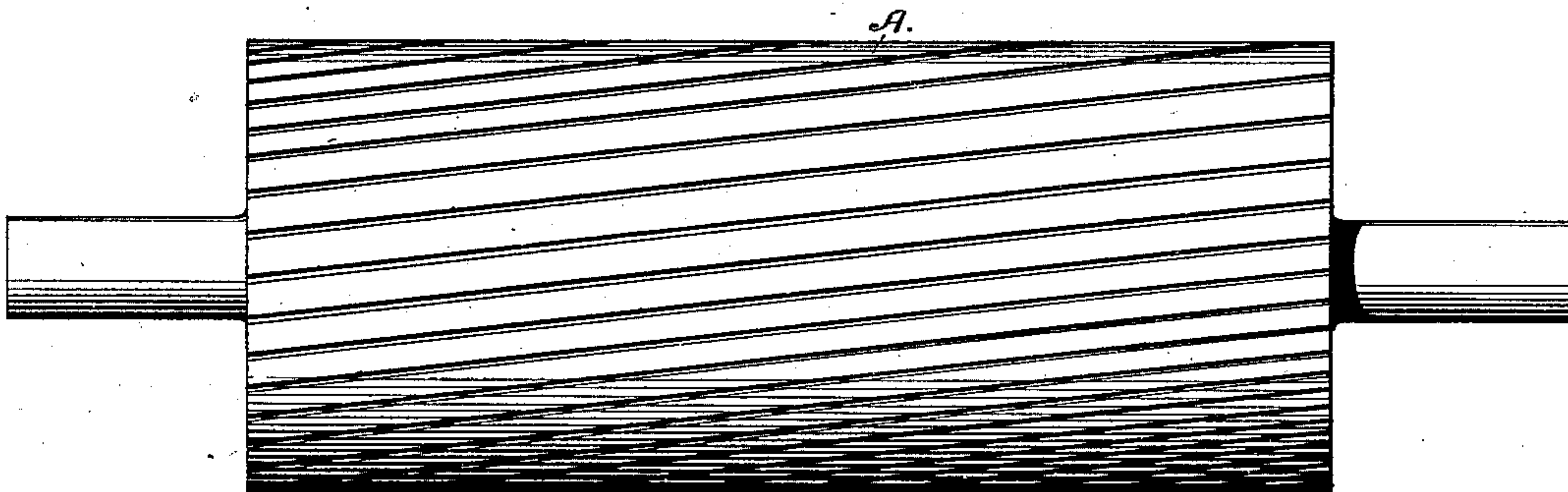


Fig. 2.

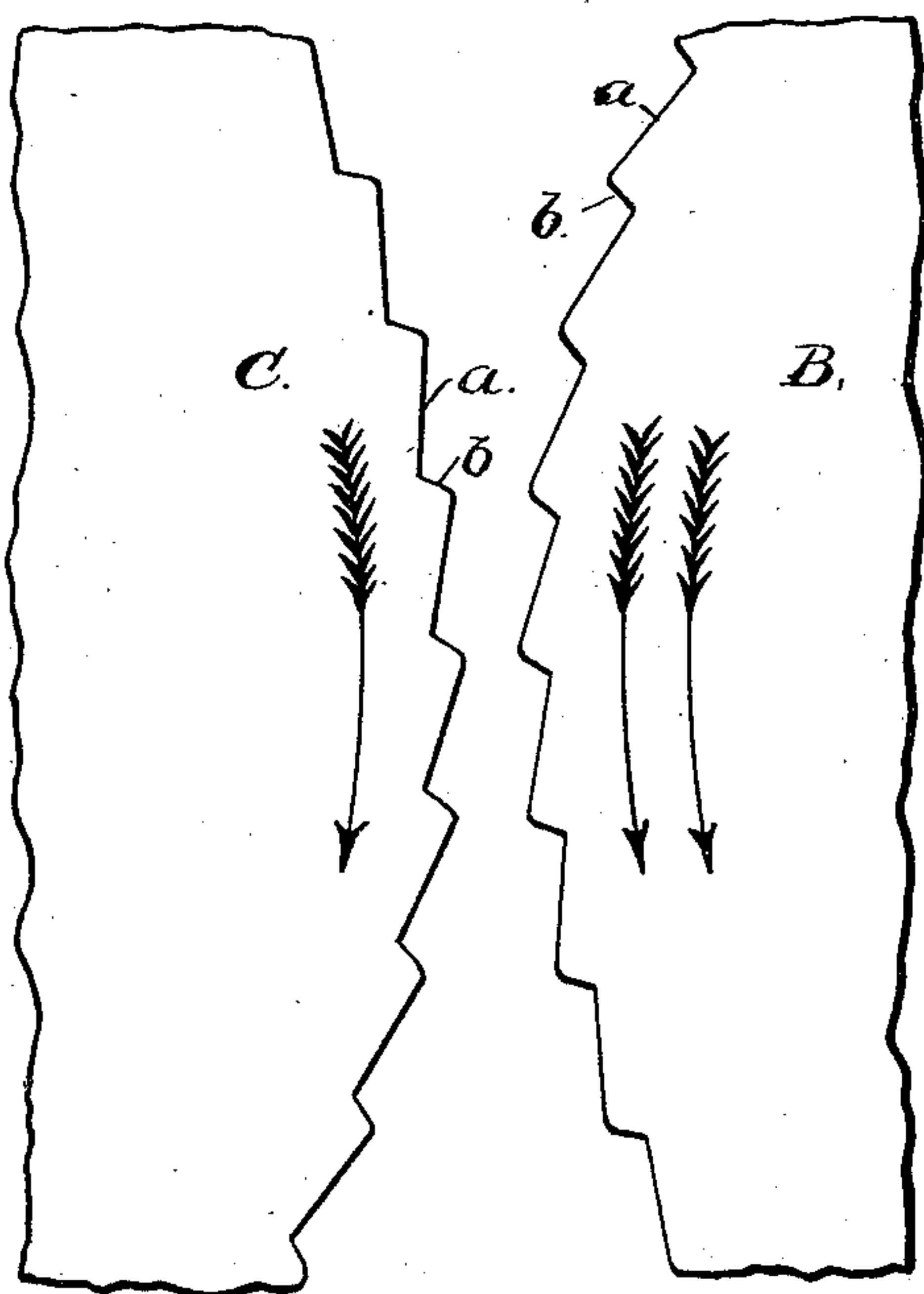
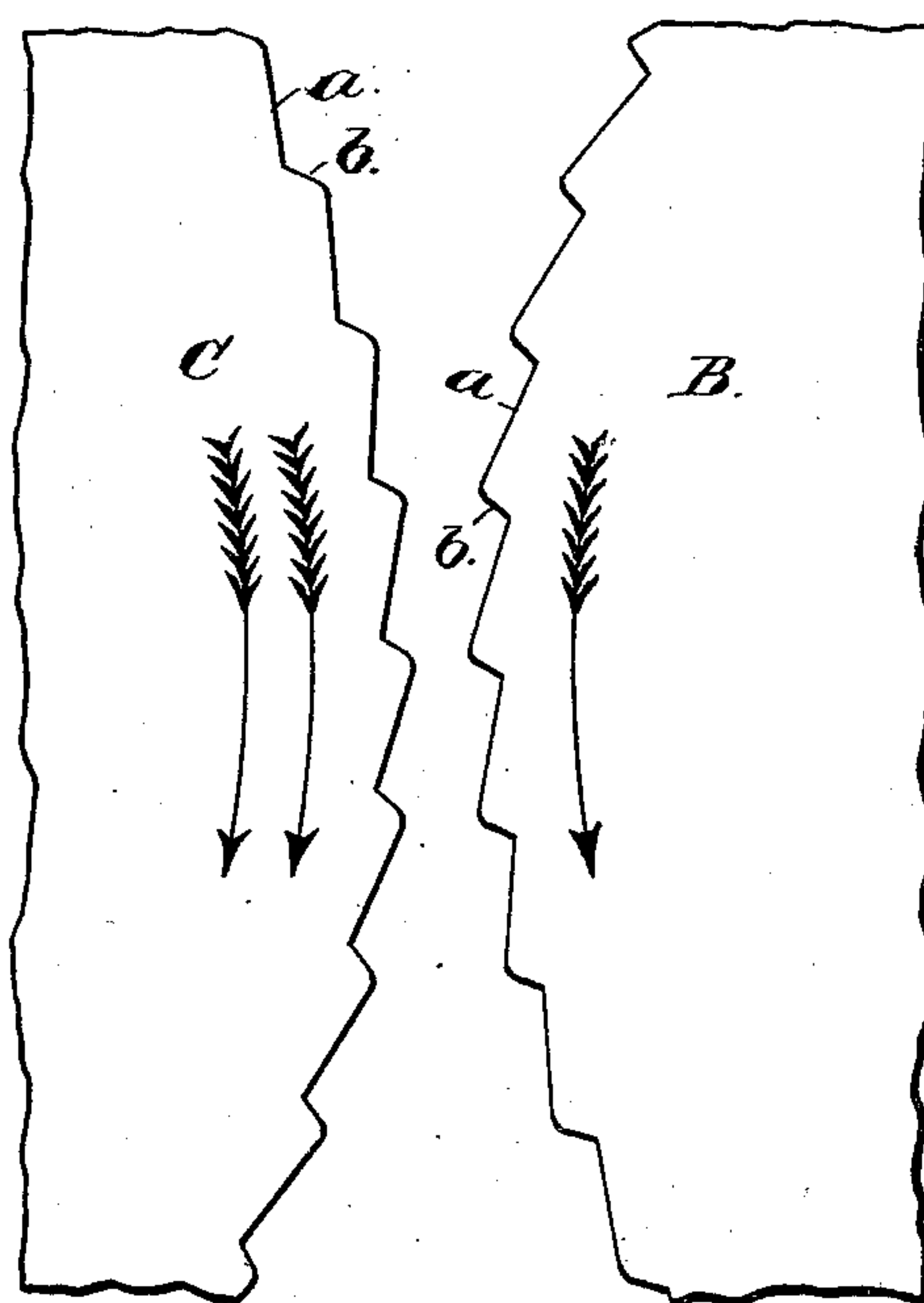


Fig. 3.



Attest.

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UNITED STATES PATENT OFFICE.

WILLIAM M. MILLS, OF DAYTON, OHIO.

ROLLER FOR GRADUAL-REDUCTION FLOUR-MILLS.

SPECIFICATION forming part of Letters Patent No. 253,878, dated February 21, 1882.

Application filed April 20, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. MILLS, of the city of Dayton, county of Montgomery, and State of Ohio, have invented a new and useful Improvement in Rollers for Gradual-Reduction Flour-Mills, of which the following is a specification.

My invention relates to an improvement in the dress of rollers for what are known as "gradual-reduction flour-mills." This class of mills usually employ one or more sets of iron grinding or reduction rollers having corrugated surfaces, between which the wheat is fed, and by which it is gradually reduced to granulated or what is known as "new-process" flour.

The novelty consists in the shape of the corrugations or dress of the rollers, whereby they are adapted to grind wheat of different degrees of hardness, as will be herewith set forth and specifically claimed.

In the accompanying drawings, Figure 1 is a perspective view of one of my improved rollers. Figs. 2 and 3 are transverse sectional views through pairs of rollers, with arrows indicating the direction and relative speed of each, and showing more fully the shape of the corrugations.

The construction of the mill, with its hopper and one or more sets of rollers, may be of the usual or any suitable construction.

The spindles of the rolls are properly secured in boxes which may be adjustable upon the frame, and are driven by intermeshing gears which can be changed to vary the relative speeds of the rolls. The rolls A, Fig. 1, are corrugated diagonally across the peripheries, as shown in Fig. 1, and the sectional shape of these corrugations is seen in Figs. 2 and 3.

It will be observed that each corrugation is in the form of an obtuse angle, with one face, *a*, twice or three times as long as the other, *b*. The relative lengths of these faces are immaterial, further than that the one face should be longer than the other.

This construction of the dress or corrugations enables the same rolls to work upon wheat of different degrees of hardness, for by running the roll B of Fig. 2 faster than the roll C the short and sharper faces of the corrugations are made to do the grinding, while upon reversing the relative speeds of the two rolls, as in Fig. 3, the long and blunter faces do the grinding.

The advantages of this construction are obvious.

Having thus fully described my invention, I claim—

1. A grinding-roll having peripheral corrugations the sides of each of which are of different lengths and together form an obtuse angle, substantially as described.

2. A grinding-roll having peripheral corrugations arranged spirally, the sides of each corrugation being of different lengths and together form an obtuse angle, substantially as described.

3. A pair of co-operating grinding-rolls having peripheral corrugations the sides of each of which are of different lengths and together form an obtuse angle, substantially as described, for the purpose specified.

WILLIAM M. MILLS.

Witnesses:

CHAS. M. PECK,
GUS A. MEYER.