N. H. BORGFELDT.

Tobacco-Cutting Machines.

No. 138,606. Patented May 6, 1873.

Fig. 1.

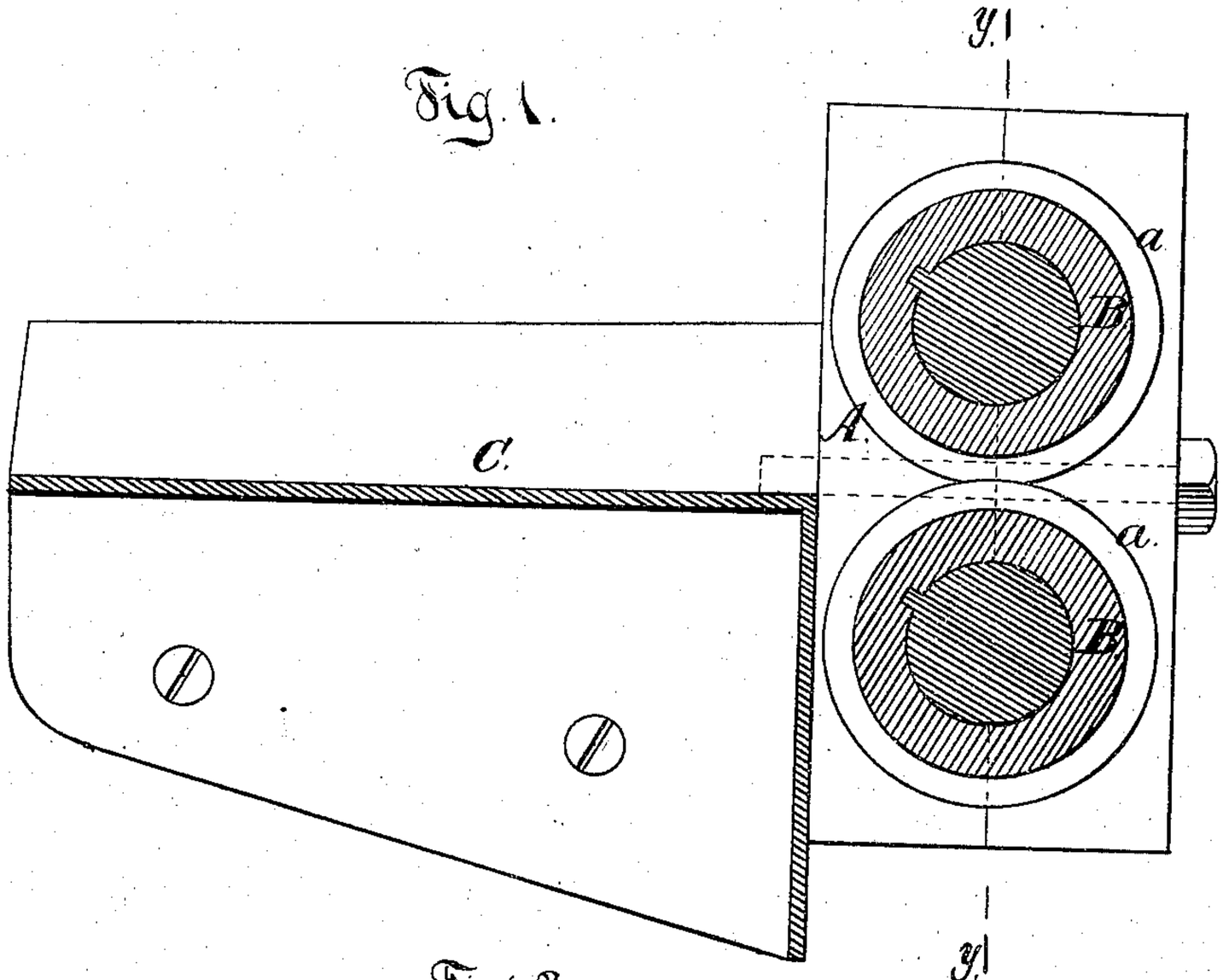
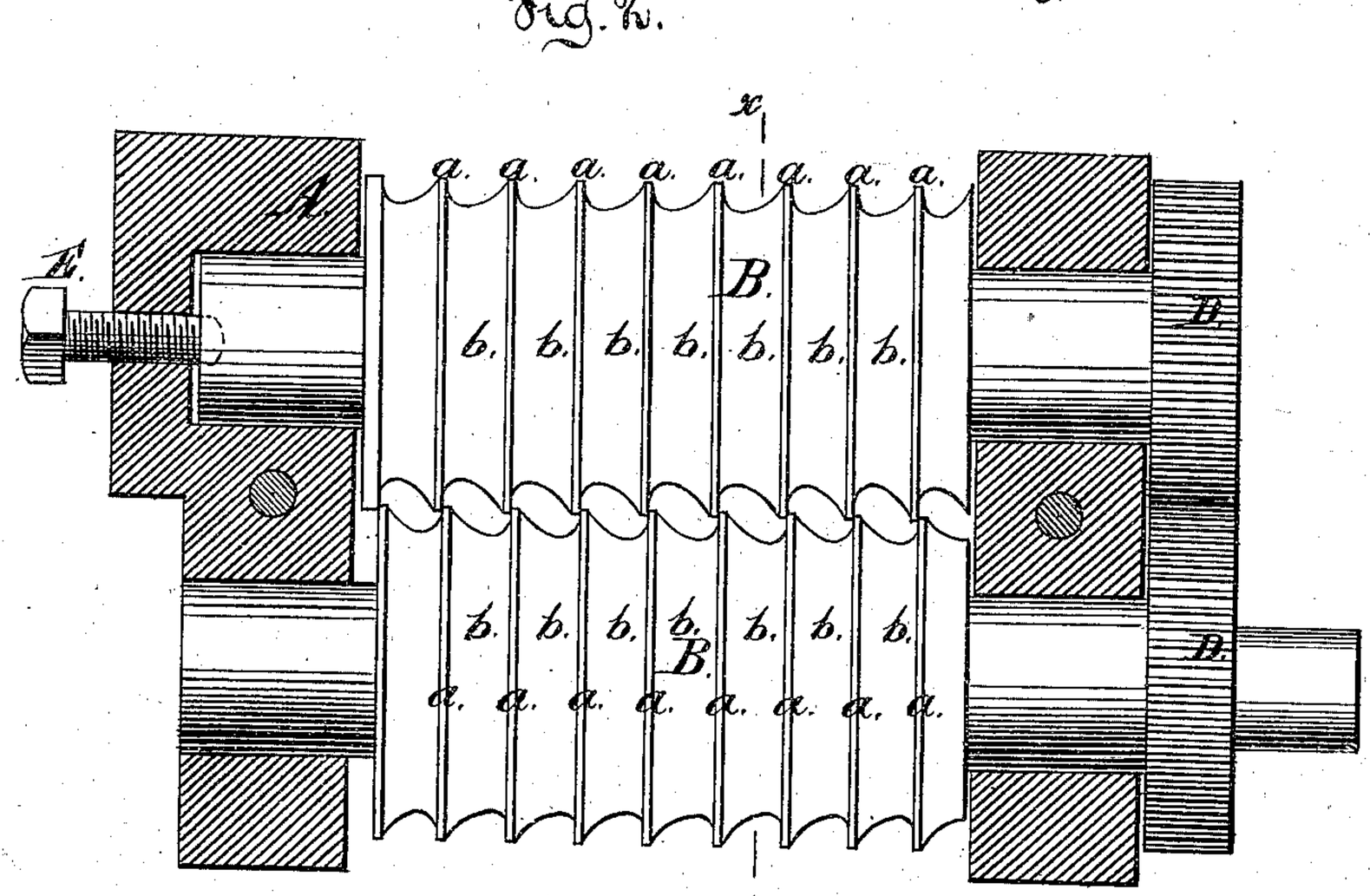


Fig. 2.



Witnesses.
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NICHOLAS H. BORGFELDT, OF NEW YORK, N. Y.

IMPROVEMENT IN TOBACCO-CUTTING MACHINES.

Specification forming part of Letters Patent No. **138,606,** dated May 6, 1873; application filed April 16, 1873.

To all whom it may concern:

Be it known that I, NICHOLAS H. BORGFELDT, of the city, county, and State of New York, have invented a new and Improved Machine for Cutting Tobacco and other materials; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a transverse section of my invention in the plane *x x*, Fig. 2. Fig. 2 is a longitudinal section of the same in the plane *y y*, Fig. 1.

Similar letters indicate corresponding parts.

This invention consists in the combination of two rollers, each of which is provided with a series of ridges and curved grooves, said ridges being cast solid on the rollers and being provided with cutting-edges, the cutting-edges of one roller acting against those of the other rollers, while the curved grooves facilitate the discharge of the material to be cut, from the rollers in such a manner, that scraps of tobacco or other materials can be cut even in a damp or moist state without danger of clogging up the cutters, and at the same time a cheap and simple machine for cutting such materials is obtained.

In the drawing, the letter A designates a frame, which forms the bearings for the two rollers, B B, and which is provided with a table, C, over which the material to be cut is fed to the rollers. Said rollers are geared together by cog-wheels D D, and one of them has a sliding motion in its bearings, so that it can be set up against the other roller by means of a set-screw, E, as will be presently more fully explained. Each of the rollers is provided with a series of ridges, *a*, which are cast solid with their rollers, and which are separated from each other by curved grooves *b*. The edges of these ridges are turned off sharp, those of one roller on one and those of the other roller on the opposite side, so that the flat sides of said ridges can be brought to bear against each other, the set-screw E serving to retain the rollers in the desired position. When the rollers revolve, the cutting-edges of one roller act in conjunction with those of the other, and the tobacco or other material passed through between them is rapidly cut up. When the cutting-edges take effect, the material to be cut is depressed into the grooves *b*, and as these grooves are curved upward, the material rises up in each of them on the side opposite the cutting-edges, and thereby the discharge of the material from the cutting-rollers is facilitated. In fact my experience shows that by combining the curved grooves *b* with the cutters *a*, I am enabled to cut up damp or moist tobacco, or other materials in a damp state without danger of clogging up my rollers, and I require no scrapers for the purpose of keeping the rollers clean.

My machine can be used with advantage for cutting scraps of tobacco, and also for cutting up paper or other materials.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of two rollers B, each of which is provided with a series of cutting-edges, *a*, and intervening curved grooves *b*, the cutting-edges of one roller being set up against those of the other by a set-screw, E, and the curved grooves serving to facilitate the discharge of the cut material from the rollers, substantially as set forth.

NICHOLAS H. BORGFELDT.

Witnesses:
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