

(No Model.)

J. BERES.

MACHINE FOR TREATING TIGHTLY ROLLED CIGARS.

No. 274,554.

Patented Mar. 27, 1883.

Fig. 1.

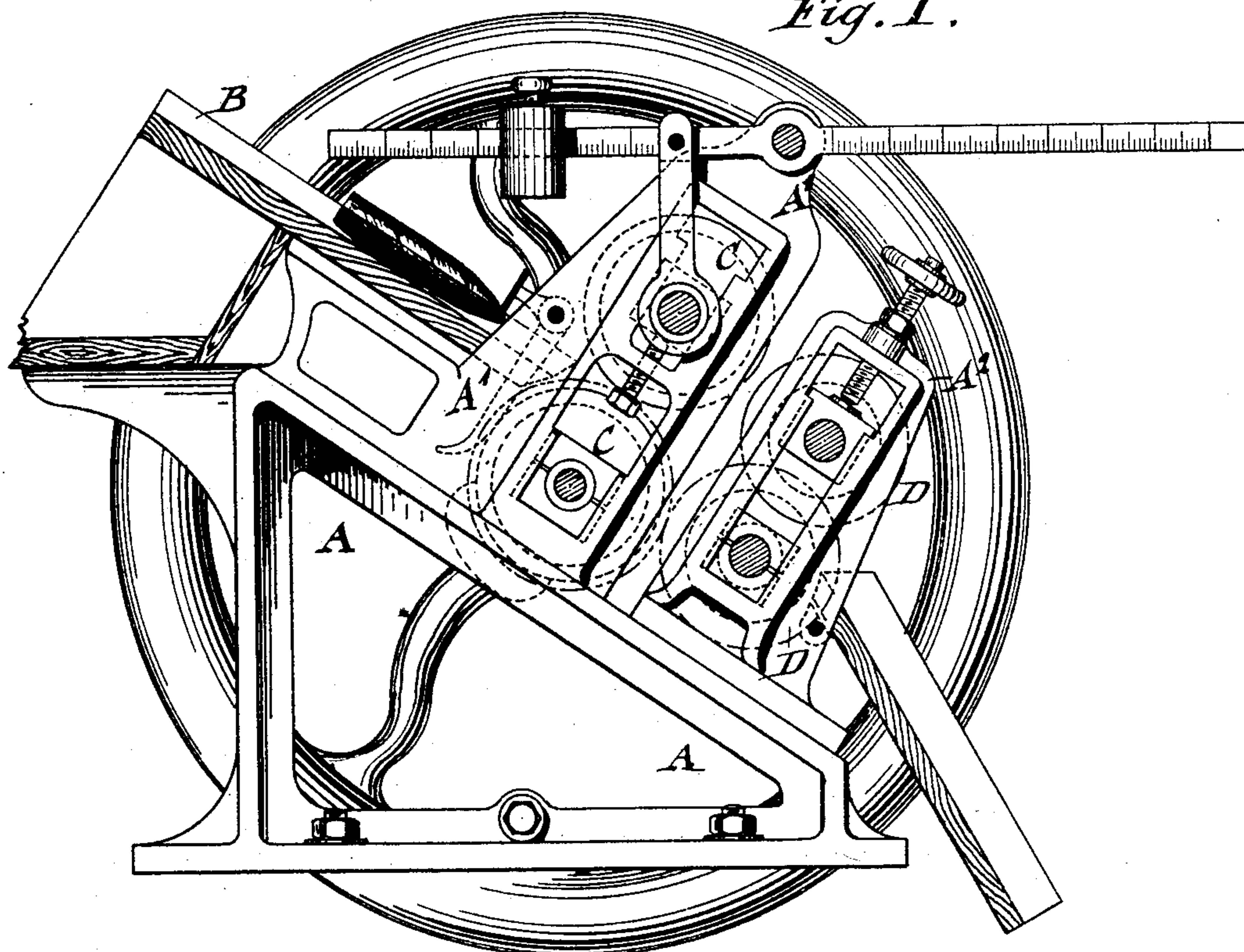


Fig. 2.

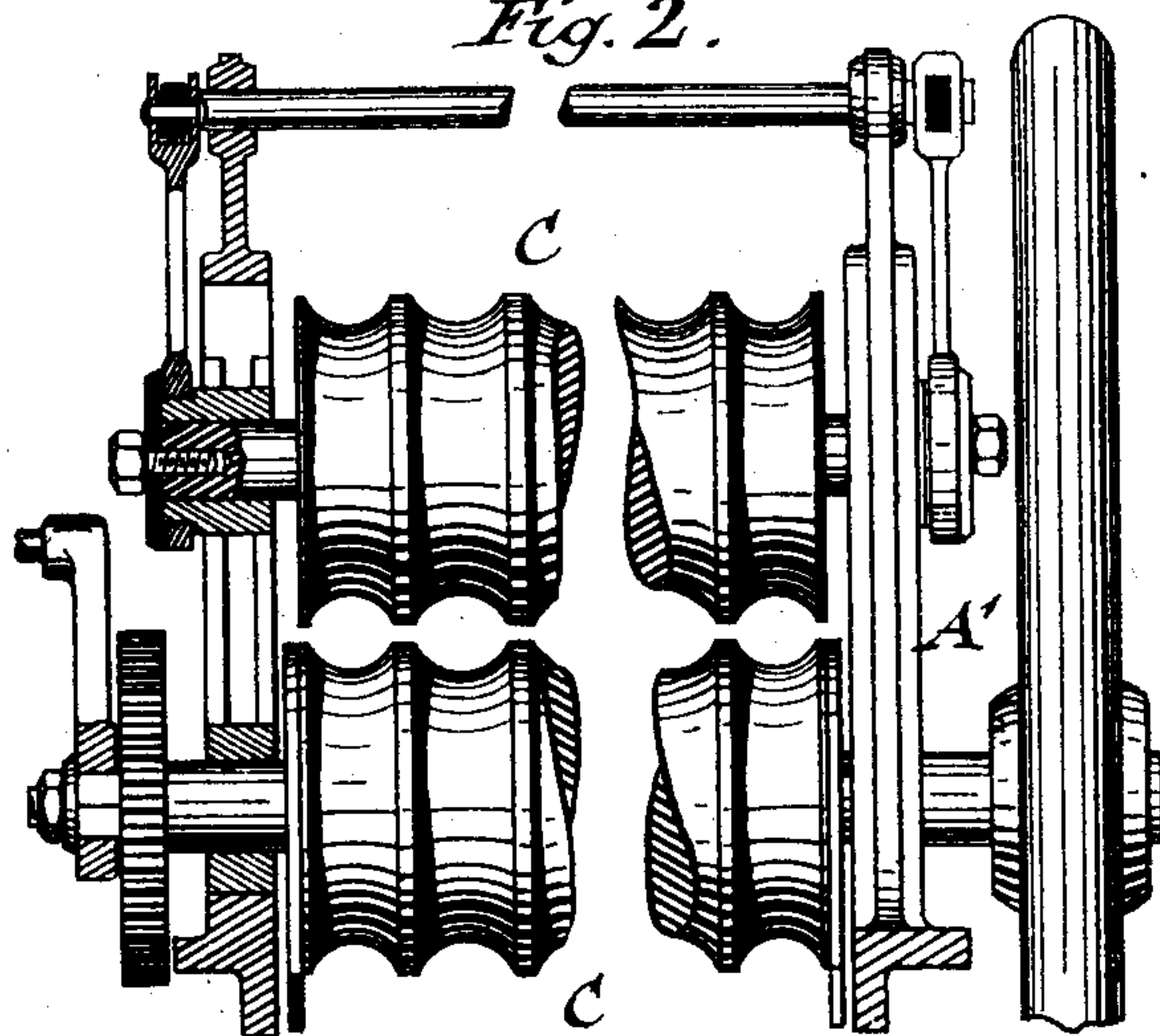
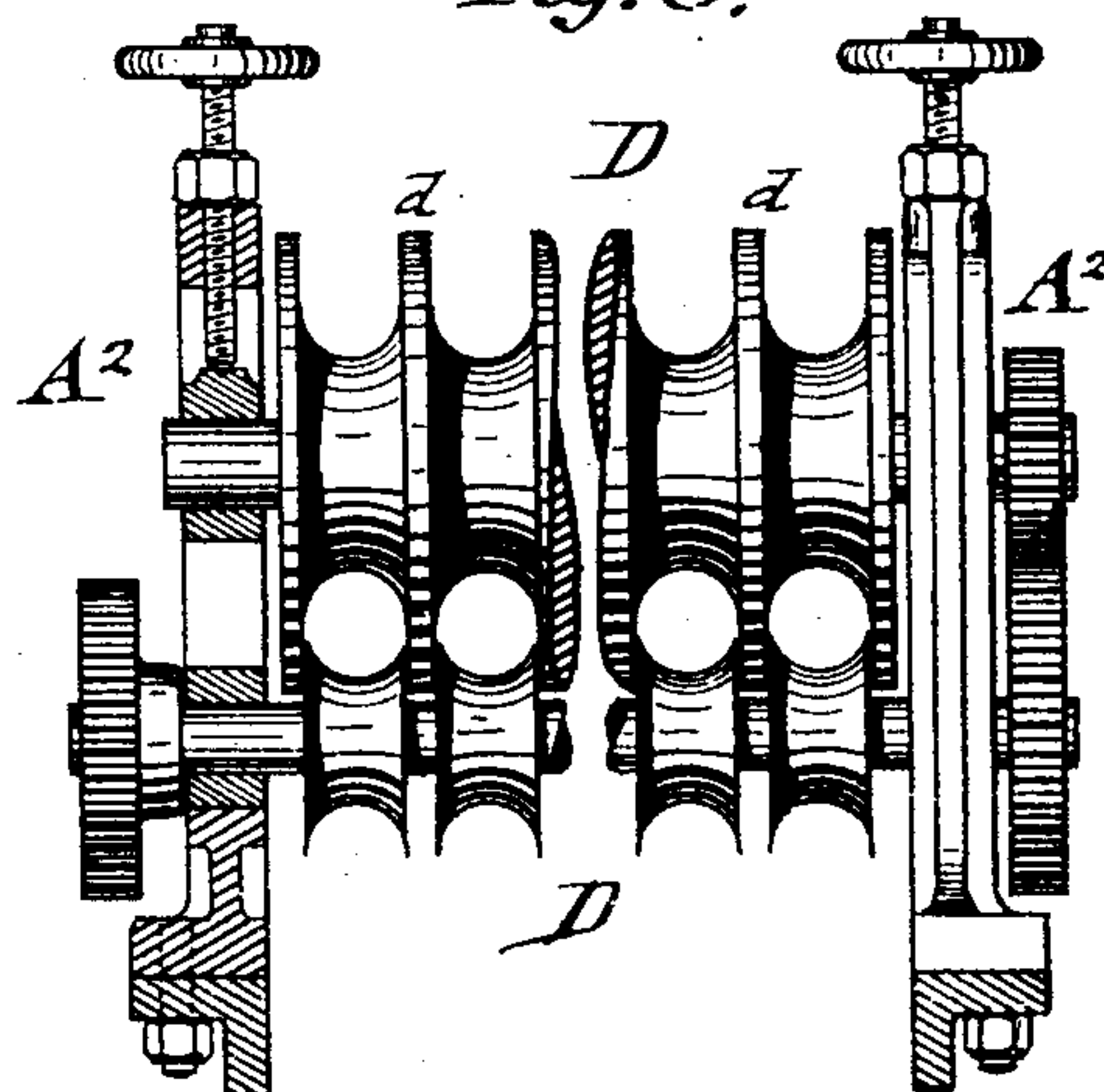


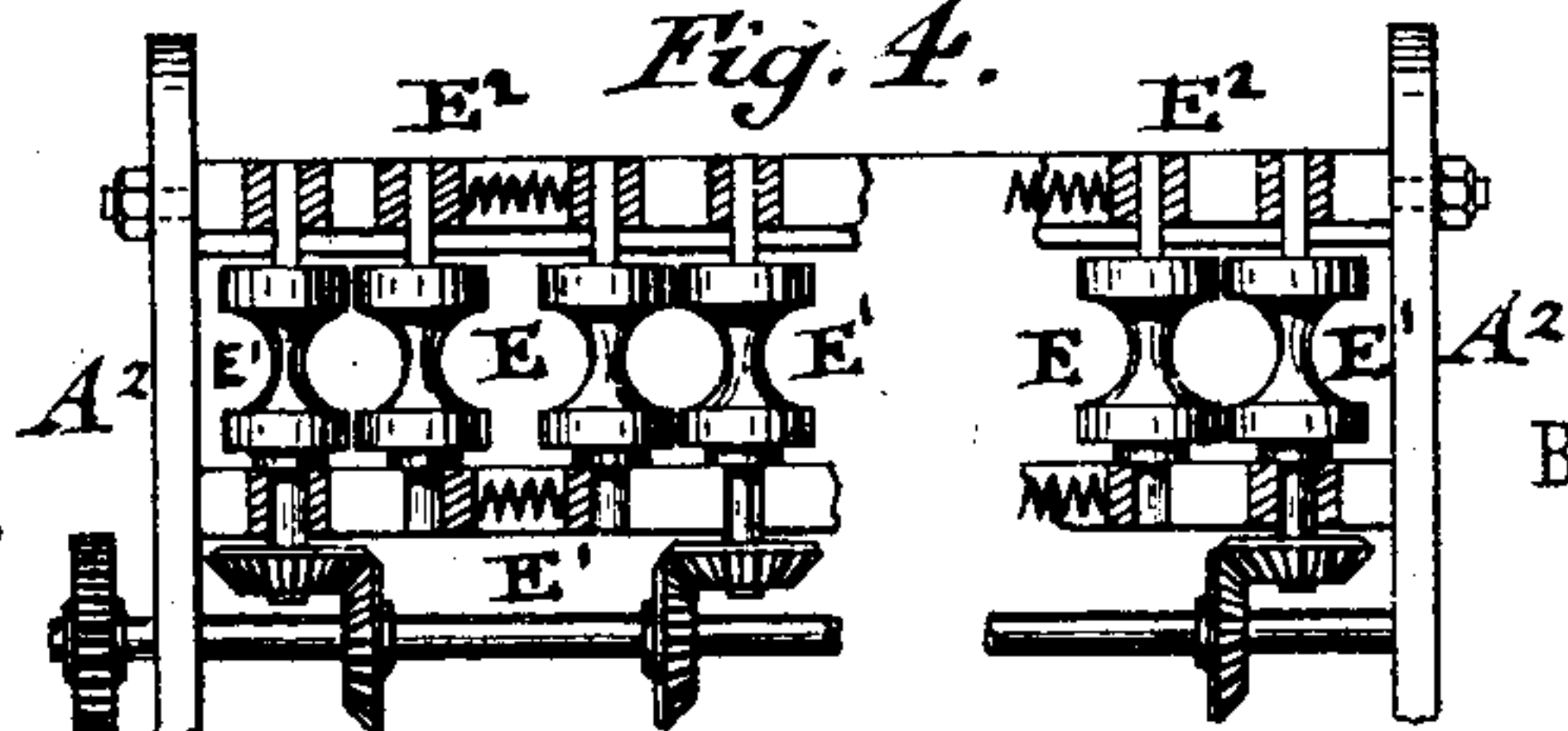
Fig. 3.



WITNESSES:

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Fig. 4.



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MACHINE FOR TREATING TIGHTLY-ROLLED CIGARS.

SPECIFICATION forming part of Letters Patent No. 274,554, dated March 27, 1883.

Application filed July 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, JACOB BERES, of the city, county, and State of New York, have invented certain new and useful Improvements in Machines for Treating Tightly-Rolled Cigars, of which the following is a specification.

In the manufacture of cigars, especially those of the cheaper kinds, it happens frequently that the fillers of the cigars are too tightly rolled, and that consequently the cigars have not the proper degree of draft in smoking them. This is still more the case with the so-called "mold-cigars," which are pressed in molds. Many attempts have been made to make tightly rolled or pressed cigars draw better, either by perforating the tips in the direction of the center line of the cigars or by rolling the cigars, but without great success. The most natural way to make a tightly-rolled cigar draw is to press upon the same with the fingers at that point which does not give, so as to break up the hard part and render it loose and yielding.

The object of this invention is to imitate this simple method of giving draft to cigars by means of a machine which so presses upon the cigars in different directions that their tobacco filling is loosened throughout, so as to admit of an easy draft, and which imparts, furthermore, a better appearance to the cigars, as their exterior surface is smoothened and polished to some extent in their passage through the machine.

The invention consists of a grooved and inclined table, along which the cigars are fed to a pair of annularly-grooved rolls which are adjusted to the proper degree of pressure, the grooves being of less height than the diameter of the cigars, so that a pressure transversely to the axis of the cigars is exerted thereon, and thence through a second pair of grooved rolls, which are so constructed that a pressure at right angles to the direction of the former is exerted thereon, and thereby the original shape of the cigars restored, while by their passage through the rolls the fillers of the cigars are loosened and the exterior surface smoothened.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of my improved machine for treating tightly-rolled cigars. Figs. 2 and 3 are detail views of the

rolls employed for pressing the cigars transversely to their axis, and Fig. 4 is a modified form of the rolls for imparting the second pressure.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the supporting-frame of my improved machine for treating tightly-rolled cigars, which frame supports at its upper end an inclined table, B, that is provided with a number of grooves parallel to the center line of the machine. The cigars that are to be passed through the machine are placed into the grooves by simply spreading a bundle, tips forward, over them by hand. The cigars slide, with their tips forward, along the grooved and inclined table B by their own weight and by the vibrations of the machine. They are then delivered to a pair of annularly-grooved rolls, C, of which one is arranged above the table, the other below the table, their shafts turning in bearings supported in standards A' of the frame A. The bearings of the lower rolls are fixed, while the bearings of the upper roll C may be adjusted in the standards A', either by means of set-screws or by a weighted lever, or by means of strong pressure-springs, so that a strong vertical pressure is exerted upon the cigars passing through the rolls. The number of grooves of the rolls C corresponds with the number of grooves of the feed-table B, the grooves of the former being of arc shape, while the rolls are set at such a distance from each other that by the pressure exerted on the cigars the latter are somewhat flattened and simultaneously their surface smoothened. The cigars are then passed onto a second set of rolls, D, having also a corresponding number of annular grooves. The shafts of the rolls D are supported in bearings guided in standards A², the bearings of the upper roll D being made adjustable by screws or otherwise. The second set of rolls, D, are intended to impart a pressure upon the cigars in a transverse direction, but at right angles to the pressure exerted by the first pair of rolls, C, for which purpose the upper roll D is formed with deeper grooves than those of the rolls C, to admit of the vertical expansion of the cigars. The upper roll D is provided with disk-shaped ribs d, intermediately between the grooves, which disks project into annular

guide-recesses of the lower roll D, as shown in Fig. 3, so as to close the sides of the grooves. The horizontal diameter of the opening formed by the grooves of the upper and lower rolls, D, is less than that of the horizontal diameter of the pressed and horizontally-bulged cigar after it has passed through the rolls C. In passing between the rolls D said cigars are therefore compressed laterally and restored to their normal shape.

In place of the rolls D shown in Fig. 3, a number of small vertical rolls, E E', may be used, the bearings of which are supported side-wise of each other in transverse guide-rails E². The rolls E are arranged in sets or pairs, the roll E of each pair turning in fixed bearings, while the second roll, E', of each pair turns in laterally-sliding and spring-pressed bearings guided in the rails E². Motion is transmitted by a transverse shaft and bevel-gears to the fixed rolls E', which carry the movable rolls E along by friction. The space between the grooved rolls E E' is of circular shape, so that the cigars in passing through them are pressed upon from opposite sides in a direction at right angles to the pressure exerted by the first rolls, C, by which their round form is restored and a smooth and uniform appearance imparted to the surface of the cigars.

If desired, more than two pairs of rolls C and D may be used, though for most purposes the two pairs C and D will be sufficient. The successive pressures which are exerted upon the cigars loosen the fillers and arrange the intermediate parts in such a manner that they

assume a more even relative position toward each other. To unevenly-rolled cigars a perfectly-uniform condition is imparted, so that they can all be smoked without difficulty and annoyance for want of draft.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A machine for loosening tightly-rolled cigars, consisting of an inclined feed-table, having grooves adapted to receive cigars, and two or more pairs of annularly-grooved pressure-rolls, of which the first pair exerts a pressure upon the cigars transversely to their axis, while the second pair exerts a pressure in a direction at right angles to that of the first rolls, substantially as and for the purpose set forth.

2. A machine for loosening tightly-rolled cigars, which consists of a feed-table having channels or grooves adapted to receive cigars, a pair of revolving rolls for vertical pressure, having arc-shaped annular grooves adapted to fit cigars, and a second set of rolls parallel with the first set, having circular grooves, the latter exerting a lateral pressure in a direction at right angles to the pressure exerted by the grooves of the first set of rolls, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JACOB BERES.

Witnesses:

PAUL GOEPEL,
SIDNEY MANN.