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Patented Aug. 1, 1899.

A. GROUVELLE & E. BELOT.
TOBACCO DISTRIBUTING DEVICE.

(Application filed Nov. 29, 1898.)

(No Model.)

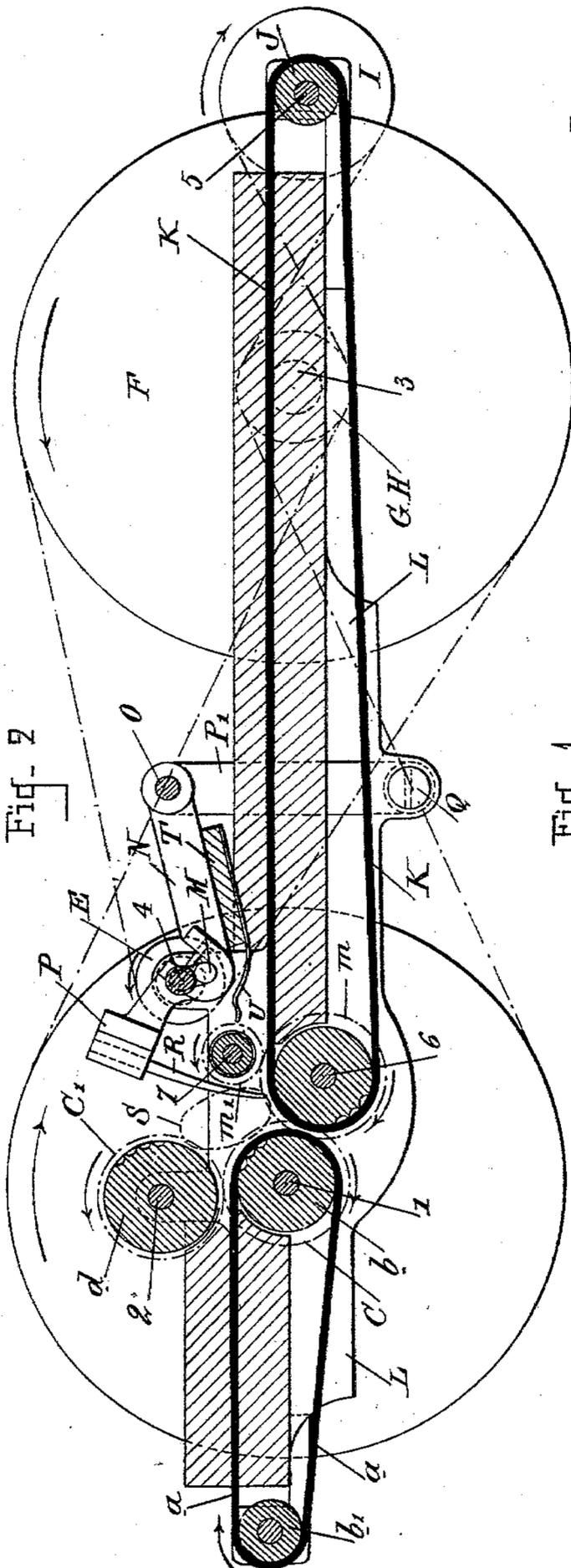


FIG. 2

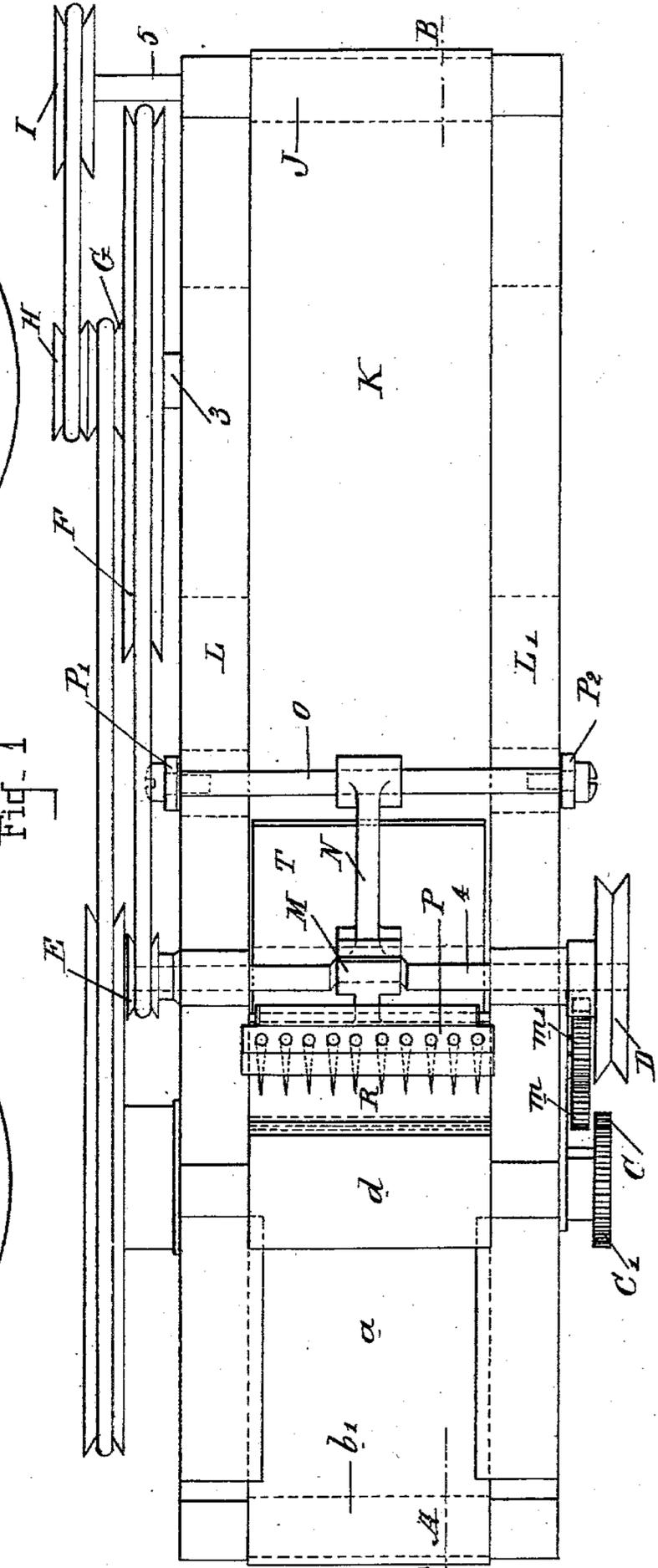


FIG. 1

Witnesses:
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By *[Signature]*
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UNITED STATES PATENT OFFICE.

ANTOINE GROUVELLE AND EMILE BELOT, OF PARIS, FRANCE.

TOBACCO-DISTRIBUTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 629,960, dated August 1, 1899.

Application filed November 29, 1898. Serial No. 697,777. (No model.)

To all whom it may concern:

Be it known that we, ANTOINE GROUVELLE and EMILE BELOT, citizens of France, residing at Paris, in the Department of the Seine, France, have invented Improvements in Tobacco-Distributing Devices, of which the following is a specification.

In every cigarette-machine the tobacco is placed by hand on an endless band conveying it into the machine. The difficulty of the distribution consists in the equalization of the layer of tobacco to be placed on the band, more particularly when the layer of tobacco is of little thickness and the tobacco contains agglomerated pieces.

The new mechanical arrangement which forms the object of our invention and which is shown in Figures 1 and 2 of the annexed drawings is applicable to the distribution of tobacco in any existing cigarette-machine and produces this distribution by means of a simultaneous drawing and combing of the tobacco fibers.

Fig. 1 is a plan view, and Fig. 2 a sectional view on the line A B of Fig. 1, of an apparatus arranged especially for cigarette-machines in which the cigarette is made in a non-continuous manner by filling or rolling.

a is the endless distributing-band on which the tobacco is placed by hand in a thick layer and without disintegrating the agglomerated parts.

b and b' are rollers for drawing and returning the band a . b is keyed on a shaft 1, which communicates its movement by equal gearings C C' to a shaft 2, on which a roller d is keyed.

Two grooved pulleys D E are keyed on the shaft 4. A shaft 3, which is fixed, receives three grooved pulleys F G H, firmly connected one with another. A shaft 4 receives its movement from the cigarette-machine by a driving-pulley D and transmits it by the pulleys E F G H and suitable belts or chains to several shafts of the machine. On the other hand, the pulley H transmits the movement to a pulley I, keyed on a shaft 5, on which a roller J, carrying an endless band K, is fixed. The second band K is, similarly to the former one a , enframed by cheeks L L', serving as support for all of the shafts of the machine. The proportions of the various pulleys are such

that the second belt K has a linear advance in the direction of the arrows at a speed greater than the distributing-belt a .

The driving-shaft 4 is formed with a crank M. The piece N, operated by this crank, carries a plate P and a spindle O, the latter being pivoted at its ends by levers P' P², pivoting on lower fixed points Q. The plate P carries a comb R, formed of teeth, the end of which comb describes an oval curve S (shown in dotted lines) by the action of the mechanism just described.

The belt K revolves a roller fixed on a shaft 6, which by means of gearing $m m'$ operates a small roller 7.

A flat piece T, prolonged by a flat spring U, is fixed under the piece N.

The working of the apparatus is as follows: The tobacco, charged in a thick layer onto the distributing-band a , is drawn between it and the roller d . On emerging from the roller d it is engaged by the teeth of the comb traveling through the lower part of the curve S. The proportions of the various parts of the apparatus are such that while the belt a advances one centimeter the comb effects at least three times the drawing and combing of the tobacco fibers. The band K receives the drawn and disintegrated tobacco, which is immediately engaged by the roller 7, which draws it at once under the pieces U and T, acting as beaters on the thin layer of tobacco received by the belt K. The roller 7 has also the function of disengaging the teeth of the comb from the tobacco which tends to rise up with it. The final result is to obtain on the band K a thin layer of tobacco, well unraveled and very equal as regards thickness.

The suitable proportions of speed between the various shafts of the machine may be attained by means of gearing instead of belts or chains.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is—

1. In a tobacco-distributing machine, the comb with the endless feeding-apron a , and belt or apron K, said belts having their ends adjoining each other, the rollers d and 7 located in proximity to the respective ends of said belts, the comb R extending between said

rollers, and means for giving said comb an alternating movement whereby its teeth are caused to describe a curve while remaining substantially tangential to said rollers and 5 belt ends, substantially as described.

2. In combination with endless belts and rollers supporting the same, the roller *d* above the end of one belt, the roller 7 above the other, the crank-shaft 4, the plate journaled 10 on the crank-shaft having one portion linked to a stationary part of the apparatus and having a comb projecting into proximity to said

rollers, and a spring-piece U connected with said plate and extending into proximity to the roller 7 on the rear side thereof, substantially 15 as described.

In witness whereof we have hereunto set our hands in presence of two witnesses.

ANTOINE GROUVELLE.
EMILE BELOT.

Witnesses:

J. ALLISON BOWEN,
JULES DAYOLLET.