

(No Model.)

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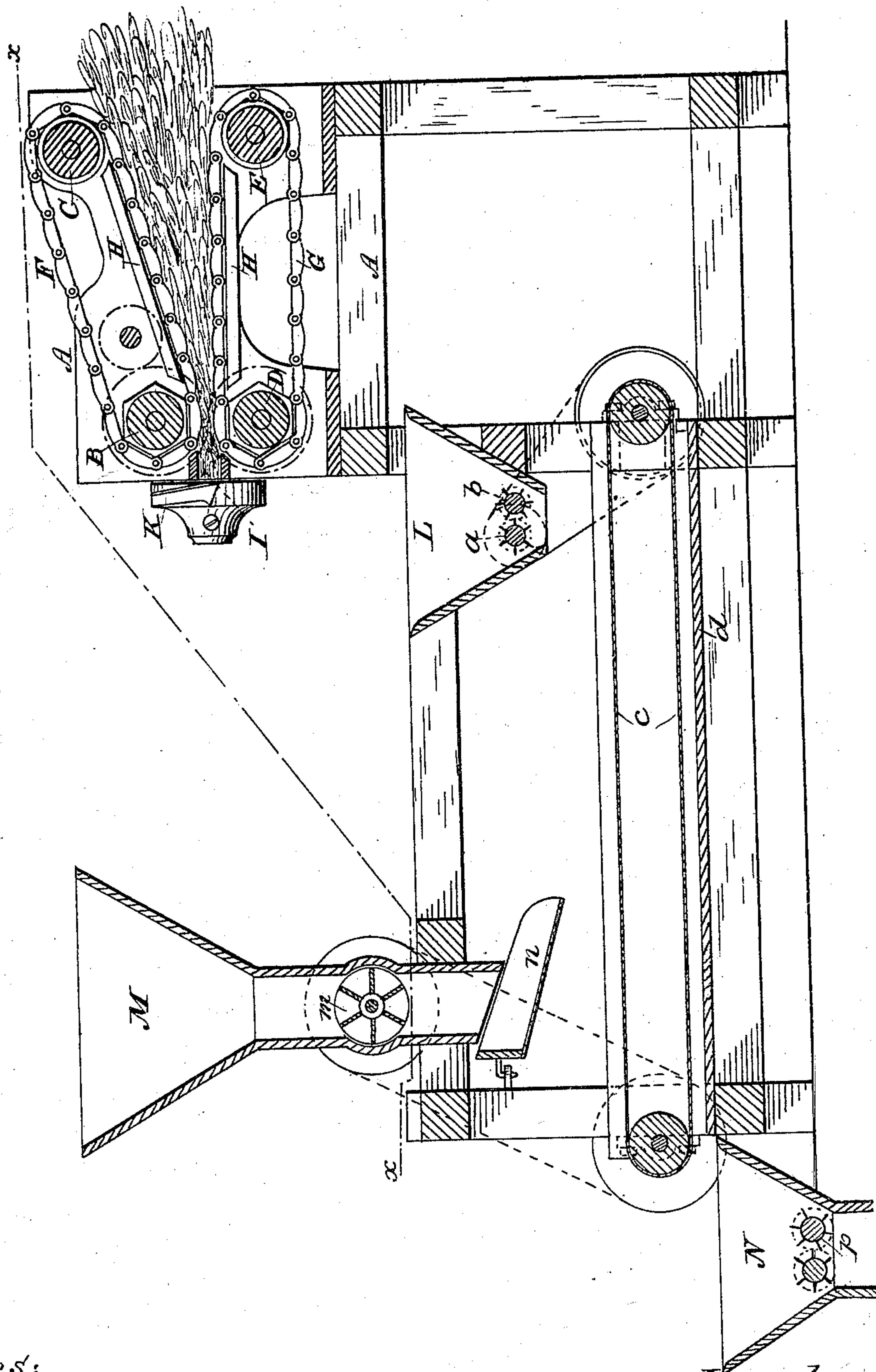
C. ABNER.

MACHINE FOR CUTTING, SEPARATING, AND MIXING TOBACCO.

No. 283,739.

Patented Aug. 28, 1883.

Fig. 1.



Witnesses:

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G. L. De Mott

Inventor:

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Attorney.

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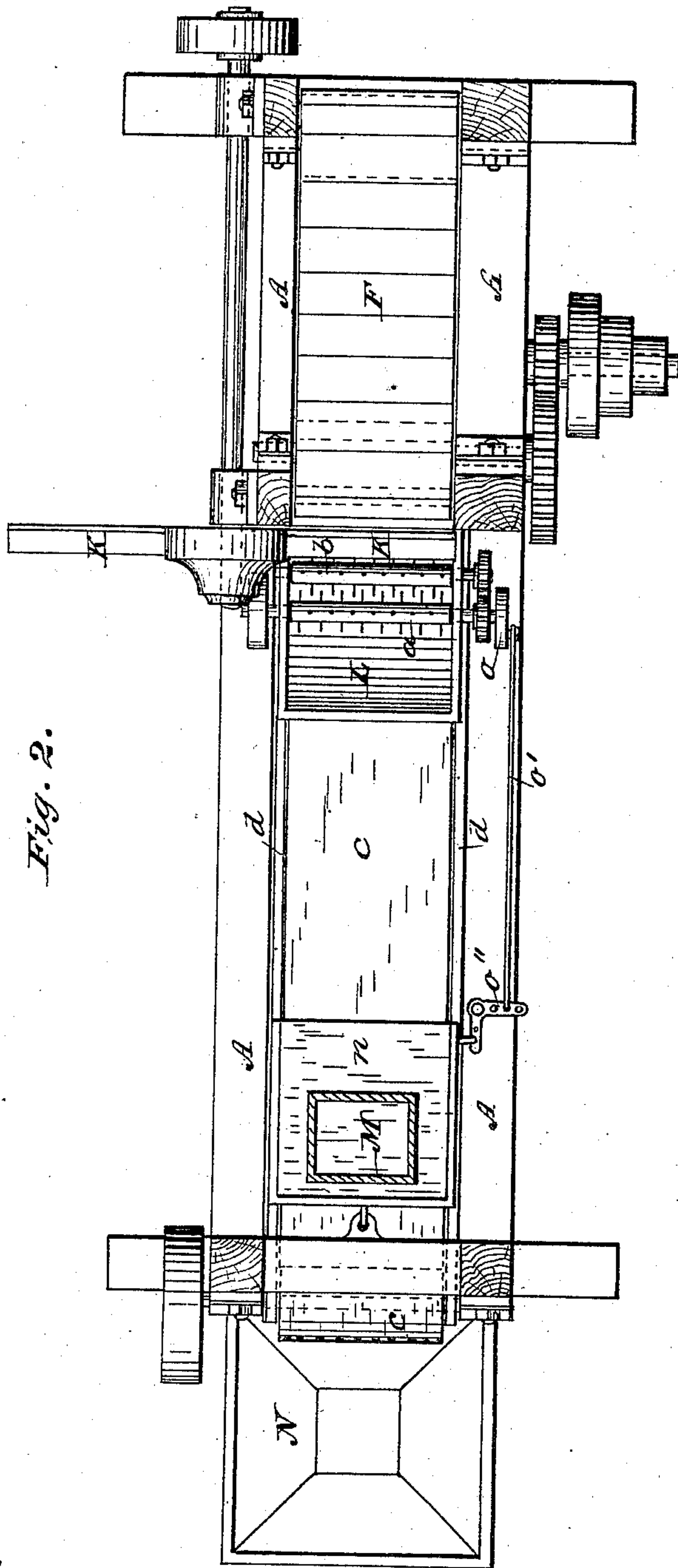


Fig. 2.

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UNITED STATES PATENT OFFICE.

CHRISTIAN ABNER, OF WASHINGTON, DISTRICT OF COLUMBIA.

MACHINE FOR CUTTING, SEPARATING, AND MIXING TOBACCO.

SPECIFICATION forming part of Letters Patent No. 283,739, dated August 23, 1883.

Application filed June 7, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN ABNER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Machines for Cutting, Separating, and Mixing Tobacco; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in combined tobacco cutting, distintegrating or separating, and mixing machines; and the object is to produce a machine by which long-cut and granulated or short-cut tobacco can be automatically mixed, and by which the long-cut tobacco is cut off a suitable length, separated or disintegrated, and mixed together with the short-cut tobacco automatically and in uniform quantities, for use as smoking-tobacco.

The invention consists in the construction and arrangement of certain parts, as will be more fully described hereinafter, and specifically pointed out in the claims, reference being had to the accompanying drawings and the letters of reference marked thereon.

Like letters refer to like parts in the different figures of the drawings, in which—

Figure 1 represents a longitudinal section of my improved machine. Fig. 2 is a plan view of the same on line *x x*.

In the drawings, A represents a frame of suitable construction, in which are journaled four rollers, B C and D E, two of which, B D, are provided with sprocket-wheels and suitable gear-wheels (shown in dotted lines) to operate the rollers, and for driving two endless belts or chains extending from side to side of the machine, and made of metal or other suitable material. The belt F passes around the rollers B C and the belt G around the rollers D E, so that they form a converging space between them, so as to feed the tobacco forward and gradually compress it as they approach each other. Said belts run upon longitudinal guides or surfaces H to prevent them from yielding or sagging by the pressure. The tobacco is then forced through a rigid throat, I, against one or more revolving cutting-knives, K, arranged as close as possible to said throat,

which gives a shearing cut to the tobacco. This cut tobacco is quite long in one direction, and fine, and falls into a hopper, L, in which are arranged two rollers, *a b*, provided with teeth or pins, by which the tobacco is picked apart or disintegrated and falls upon an endless belt, *c*, preferably placed in a trough, *d*, and driven by suitable pulleys. Toward the rear end of the machine is placed a hopper, M, having in its spout a bucket-wheel or measuring-wheel, *m*, to feed measured quantities of granulated or short-cut tobacco upon a pivoted chute, *n*. This chute is operated by a rod, *o'*, and elbow-lever *o''*, or in any other manner, from a crank or eccentric, *o*. The granulated or short-cut tobacco falls from the chute upon the tobacco on the endless belt *c*, coming from the hopper L, and is thus mixed or spread over the long-cut tobacco. When it arrives at the opposite end of the endless belt *c*, it drops into a hopper, N, which may also be provided with suitable mixers or stirrers, *p*, if desired, to more thoroughly mix both kinds of tobacco together. A spout may be attached to the hopper N and convey the mixed tobacco to a lower floor, or any other suitable receptacle. Suitable gearing, pulleys, and belts are arranged to impart proper motion to the different parts.

As a modification, the cutting-machine may, for instance, be arranged on an upper floor, and the hopper L be provided with a spout leading through the floor and onto the endless belt *c* on the mixing apparatus, which is arranged on a lower floor. The rollers B and D are geared together, as also the rollers *a b* in the hopper L and the rollers *p* in the hopper N, and are operated by suitable motive power.

The operation is as follows: The tobacco, in leafshape or otherwise, is fed between the endless belts F and G and gradually compressed until it reaches the throat I. It passes through this throat, and the revolving knives K cut the tobacco in long thin strips, when it drops into the hopper L, where the rollers *a b* loosen or disintegrate it, and it then drops on the endless belt *c*. When it passes under the chute *n*, the granulated tobacco is distributed over and among said long-cut tobacco in regulated quantities, mixing with it, and is conveyed into the hopper N, and from there to any suitable receptacle, and is ready for the market.

Having thus described my invention, what I

claim, and desire to secure by Letters Patent, is—

1. In tobacco-mixing machines, the combination of a hopper provided with toothed
5 rollers, and an endless belt upon which the separated tobacco falls, with a hopper provided with a measuring-wheel and a vibrating chute, all arranged to produce combined
10 long-cut and short-cut tobacco, substantially as specified.

2. A tobacco-cutting machine, in combination with a hopper, L, provided with toothed rollers, an endless belt, *c*, and a hopper, M, having a measuring-wheel and a vibrating
15 chute, all substantially as shown, and for the purpose set forth.

3. A tobacco cutting, separating, and mixing machine, consisting of a feed mechanism and cutting-knife, a separating-machine hav-

ing toothed rollers, and an endless belt, upon 20 which the separated long-cut tobacco drops, in combination with a hopper provided with a vibrating chute, by which the short-cut tobacco is distributed upon the long-cut tobacco and mixed with it, substantially as and for the 25 purpose described.

4. The combination of endless belts F G, knives K, hopper L, having toothed rollers *a* *b*, and endless belt *c*, with a hopper, M, provided with measuring-wheel *m* and vibrating 30 chute *n*, all substantially as specified.

In testimony whereof I hereby affix my signature in presence of two witnesses.

CHRISTIAN ABNER.

Witnesses:

M. M. ROHRER,
G. L. DE MOTT.