

A. GRODSKY.
TOBACCO STEMMING MACHINE.
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901,000.

Patented Oct. 13, 1908.

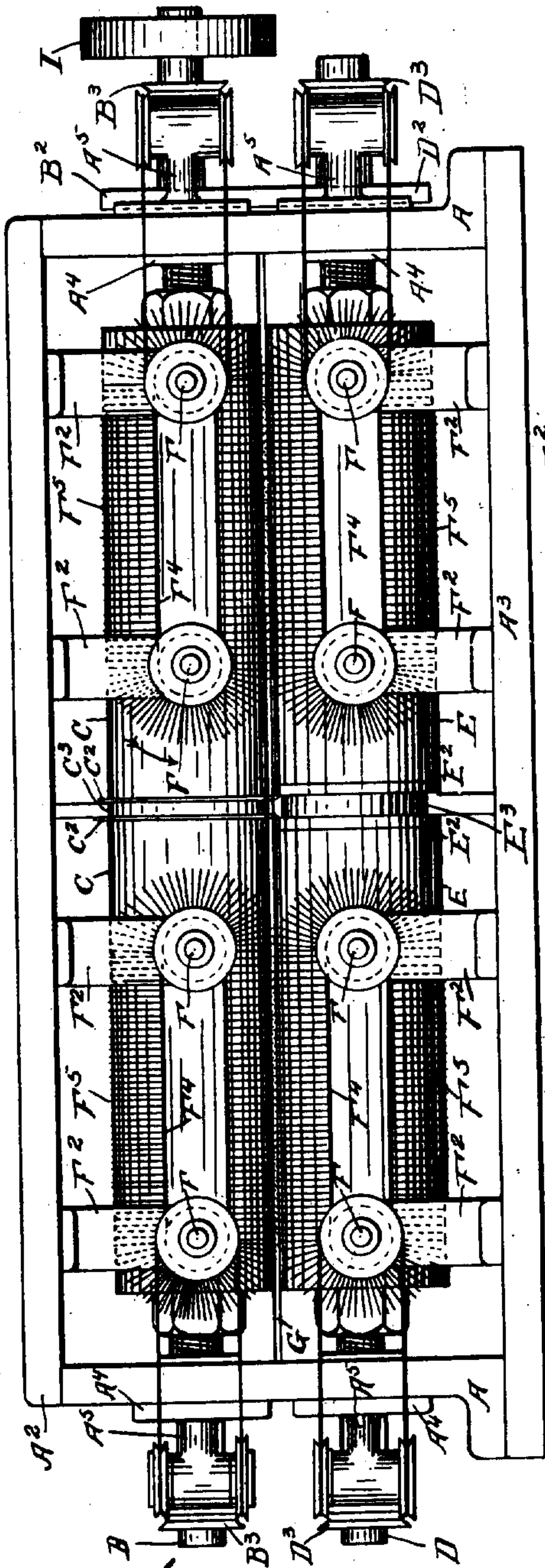


Fig. 1.

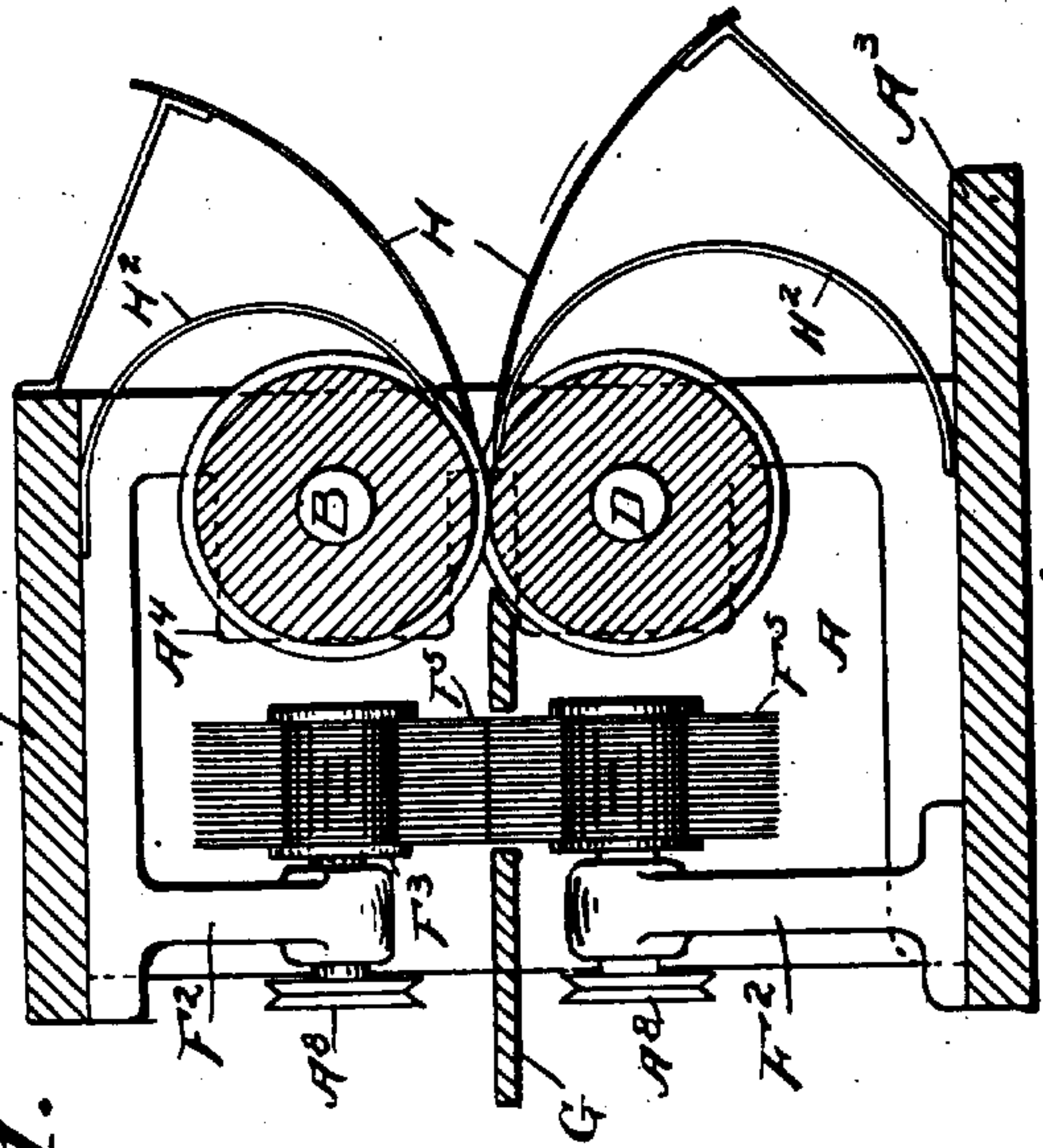


Fig. 2.

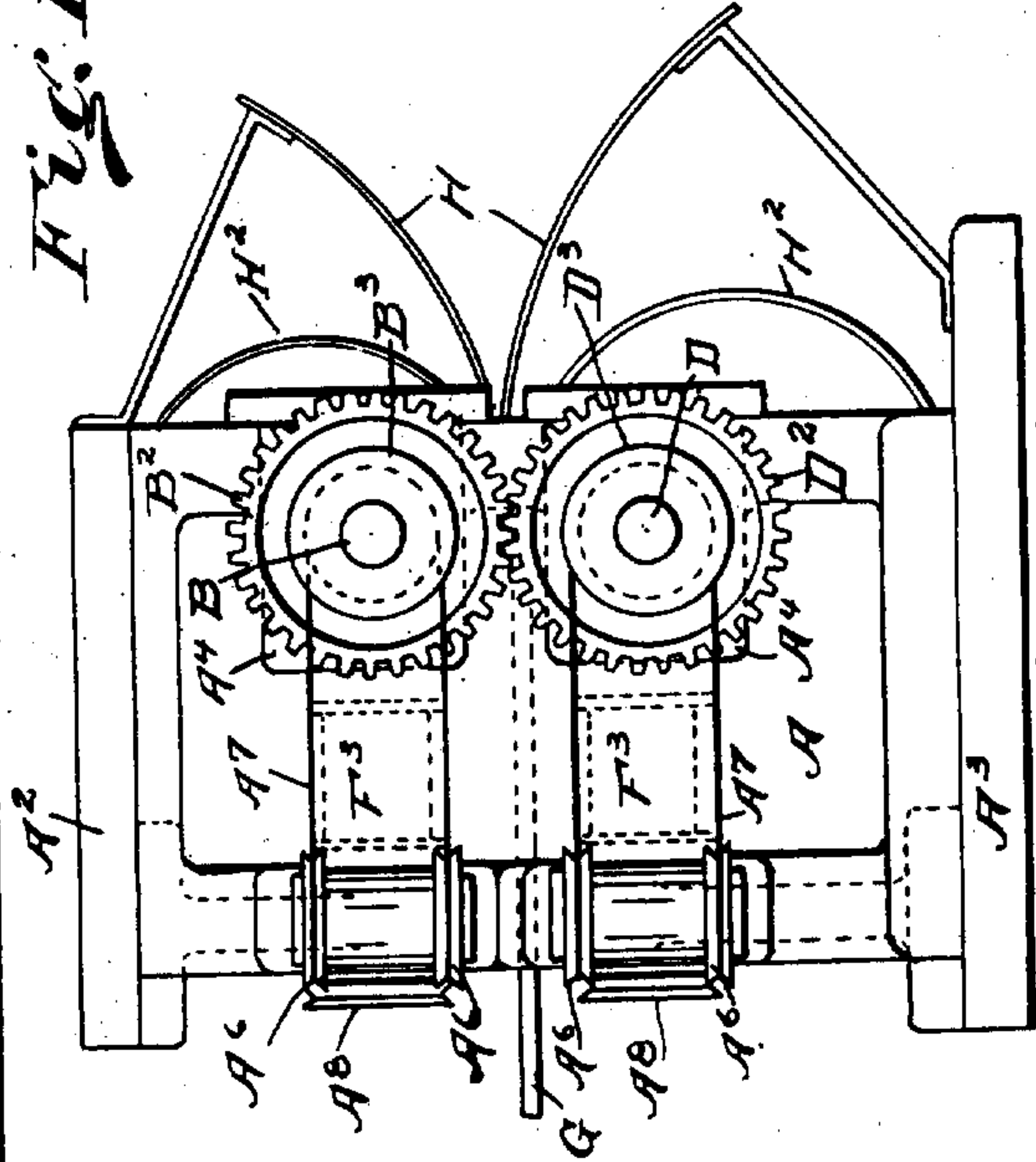


Fig. 3.

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TOBACCO-STEMMING MACHINE.

No. 901,000.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, AARON GRODSKY, a citizen of the United States of America, residing in the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Tobacco-Stemming Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to tobacco stemming machines, and has for its object the improvement in the construction of such devices whereby they are simplified and rendered more efficient in action.

The novelty of my invention consists in the combination and sub-combination of the parts as will be hereinafter set forth and specifically pointed out in the claims.

In the drawings, Figure 1 is a front elevation. Fig. 2 is a transverse sectional view. Fig. 3 is an end elevation.

The invention includes, generally, means for feeding a tobacco leaf lengthwise of its stem and removing the latter, and mechanism operating in advance of said means for spreading out the tobacco leaf and cleaning the same, the latter mechanism comprising leaf engaging devices movable transversely of the direction of the feed of the leaf through the stemming mechanism and operating in substantially the same plane throughout their entire engagement with the leaf.

The leaf feeding mechanism disclosed herein comprises a pair of lower rollers E E, and a pair of superimposed rollers C C, both sets of rollers being journaled in a suitable frame preferably including a base A³, end plates A and a top A². The rollers C C are secured upon a shaft B journaled in the end plates A and their adjacent ends are separated by a space block C³ of the width of the strip containing the stem intended to be cut from the leaf.

The stem remover illustrated consists of a pair of disk cutters C² held between the ends of the rollers C C and the space block C³ which disks cooperate with a pair of disks E² held between the inner ends of the rollers E and a space block E³. Rollers E E with the cutter disks E² are clamped upon a shaft D, journaled in the end plates A and driven from the shaft B by means of intermeshing gears B² D². The rollers C are fast on the shaft B and the disk cutters C² are fixed with

respect to said rollers. The shaft B is directly driven by a pulley I secured thereto. A set of clearers, designated H, is associated with the rollers for preventing the tobacco leaf adhering thereto and a similar set of clearers H² cooperate with the space blocks for insuring the discharge of the removed stems.

For spreading out the leaves transversely in advance of their entrance between the feed rollers and cutters and for effectually cleaning the leaves, I provide flexible leaf engaging devices movable transversely of the direction of the feed of the leaves which devices have the parts thereof contacting the leaf movable in the same plane throughout the entire extent of their engagement with the leaf.

As will be understood, it is impossible to subject tobacco leaves to other than very gentle treatment without rupturing or tearing the same and thereby largely destroying their value and so far as I am advised, all attempts to profitably spread and clean tobacco leaves by circular or cylindrical brushes have resulted in failure due to this characteristic of the leaf. As will be appreciated, it is impossible to obtain a uniform pressure of the bristles or hairs of a circular or cylindrical brush throughout the entire extent of its engagement with the leaf when such brush is used to spread out the leaf and to clean the same. I deem it of great importance that the pressure of the cleaning device shall be uniform throughout its entire engagement with the leaf and in order to obtain this result I have provided, in the particular embodiment of my invention illustrated herein, suitable brushes in the form of traveling belts, the rollers over which the belts run being so arranged that the entire surface or reach of the brush which engages the leaf will move in a uniform plane and contact the leaf with a uniform pressure.

As shown herein, the belts are guided about rollers journaled in brackets F² extending inwardly from the base A³ and top A² respectively. As shown, two pairs of belts F⁴ are employed arranged respectively to engage the leaf on opposite sides of its central stem and the members of each pair are so arranged as to contact the leaf upon the upper and under sides thereof. As herein illustrated, the drive and guide rollers for the belts are mounted on the inner ends of short shafts F journaled in the brackets F²

and suitable drive pulleys A⁸ are secured to the outer ends of these shafts. The shafts F are preferably driven from the shafts B D by suitable transmitting mechanism. As disclosed, each belt F⁴ is carried about a pair of rollers, the outermost of which is driven from the adjacent end of the shaft B or D by means of a suitable belt A⁷. The shafts B D are provided with suitable pulleys B³ D³ over each of which the drive belt, which is connected to the adjacent pulley A⁸, runs, each of the belts being guided around suitable pulleys carried by one of a number of brackets A⁵ secured to the end plates of the machine.

It will be observed that upon the rotation of the pulley I in the required direction, the feed rolls C and E are rotated to feed the leaf over the table G, and the respective pairs of brush belts F⁵ are driven so that the leaf engaging reaches of each pair of belts are moved in the same direction and the reaches on each side of the table are moved over the leaf outwardly from the median line of the leaf.

A suitable feed table G is provided having its upper surfaces disposed substantially in the horizontal plane of the feed of the leaf through the rollers B D, this table having a section in advance of the brushes and a section arranged between the latter and the rollers with an interrupted part between two sections in which the brushes work. The bristles of the brushes may consist of soft hair or other suitable material which will not be likely to puncture or rupture the tobacco leaves.

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

1. In a tobacco treating machine, the combination with a table over which the tobacco leaf is fed, of brush-belts arranged in pairs on each side of the median line of the table and extending transversely the path of the leaf, said brush-belts providing leaf engaging reaches lying in a plane substantially parallel with the plane of the upper surface of the table, means for feeding the leaf, and means for driving the brush-belts whereby the leaf engaging reaches at each side of the table are moved in an outwardly direction from the median line of the leaf.

2. A machine of the character described having two spreaders in the form of traveling belts provided with brushes—one above and the other below the leaf-plane—serving to act upon the leaf in the same direction, and two more spreaders also in the form of traveling belts provided with brushes—one above and the other below the leaf-plane—serving to act upon the leaf in an opposite direction to the action of the first named spreaders, those belts that act upon and

above the leaf having flat stretches adjacent to the leaf-plane substantially parallel to said plane and to the stretches of the belts beneath the leaf-plane, substantially as described.

3. In a tobacco treating machine, the combination with a table provided with an opening over which the leaf is fed, of brush-belts arranged in pairs at each side of the table and extending transversely the path of the leaf at said opening, said brush-belts providing leaf engaging reaches between which the leaf is fed, means for feeding the leaf, and means for driving the brush-belts whereby the leaf engaging reaches at each side of the table are moved in an outwardly direction from the median line of the leaf.

4. In a tobacco stemming machine, the combination with a table over which the leaf is fed, of means for feeding and means for stemming the leaf, pairs of brush-belts arranged adjacent an edge of the table and on each side of the median line thereof, said brush belts extending transversely the path of the leaf and providing leaf engaging reaches between which the leaf is fed, and means for driving the brush-belts whereby the leaf engaging reaches on the respective sides of the table are moved in an outwardly direction from the median line of the leaf.

5. In a tobacco treating machine, the combination with a table over which the tobacco leaf is fed, of brush-belts arranged in pairs on each side of the median line of the table and adjacent an edge thereof, said brush-belts extending transversely the path of the leaf and providing leaf engaging reaches between which the leaf is fed, means for feeding the leaf, and means for driving the brush-belts whereby the leaf engaging reaches at each side of the table are moved in an outwardly direction from the median line of the leaf.

6. In a tobacco stemming machine, the combination with a table provided with an opening over which the leaf is fed, of brush-belts arranged at said opening in pairs on opposite sides of the table and extending transversely the path of the leaf, said brush-belts providing leaf engaging reaches between which the leaf is passed, means at the end of the table in rear of the brush-belts for feeding the leaf, leaf stemming means carried by said feeding means, and means for driving the leaf feeding and stemming means and the brush-belts whereby the leaf is fed through the machine and stemmed and the leaf engaging reaches at each side of the table are moved in an outwardly direction from the median line of the leaf.

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Witnesses:

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