

(No Model.)

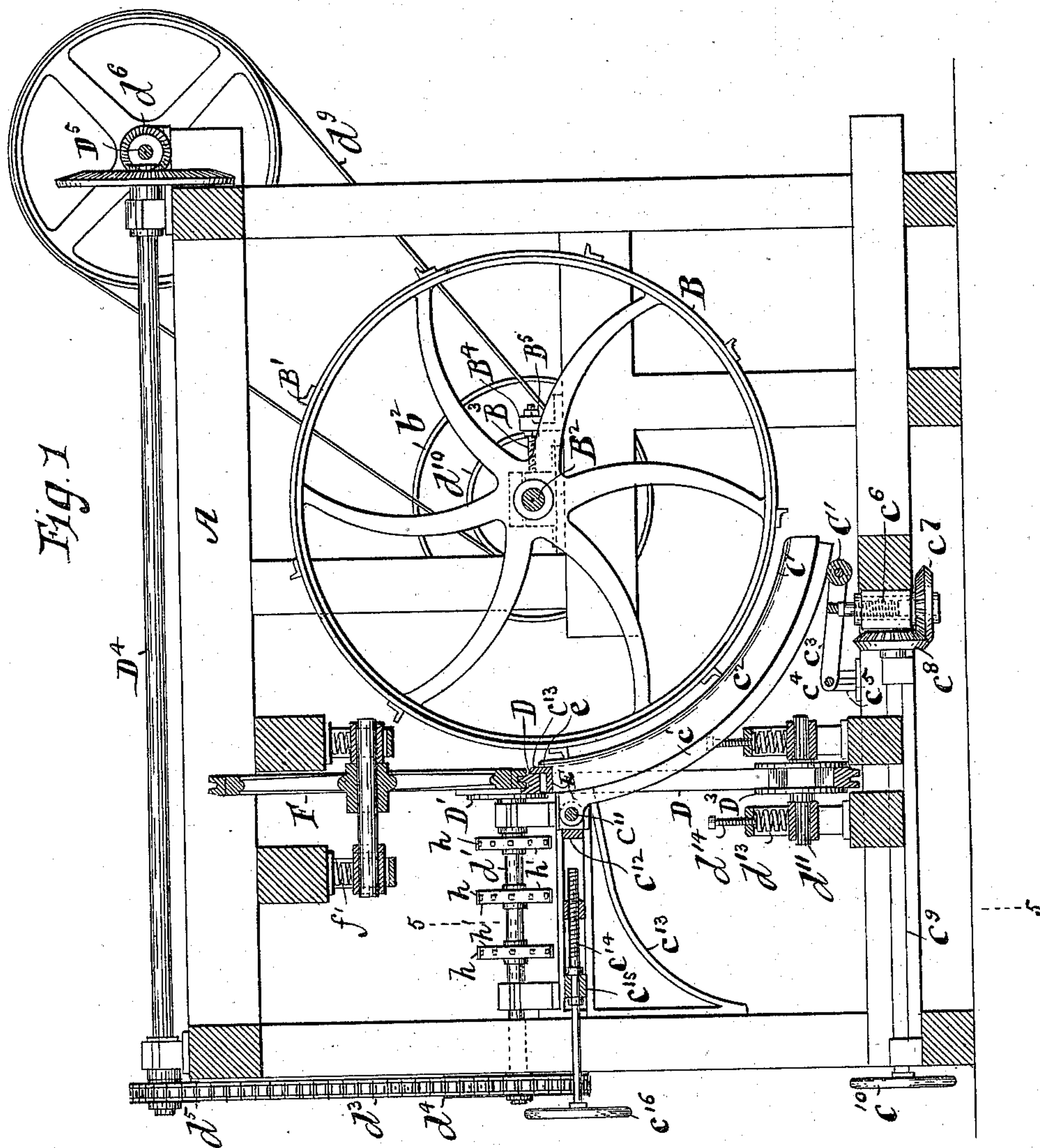
4 Sheets—Sheet 1.

T. VILLAMOR.

MACHINE FOR PREPARING VEGETABLE FIBER.

No. 559,009.

Patented Apr. 28, 1896.



WITNESSES:

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INVENTOR

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(No Model.)

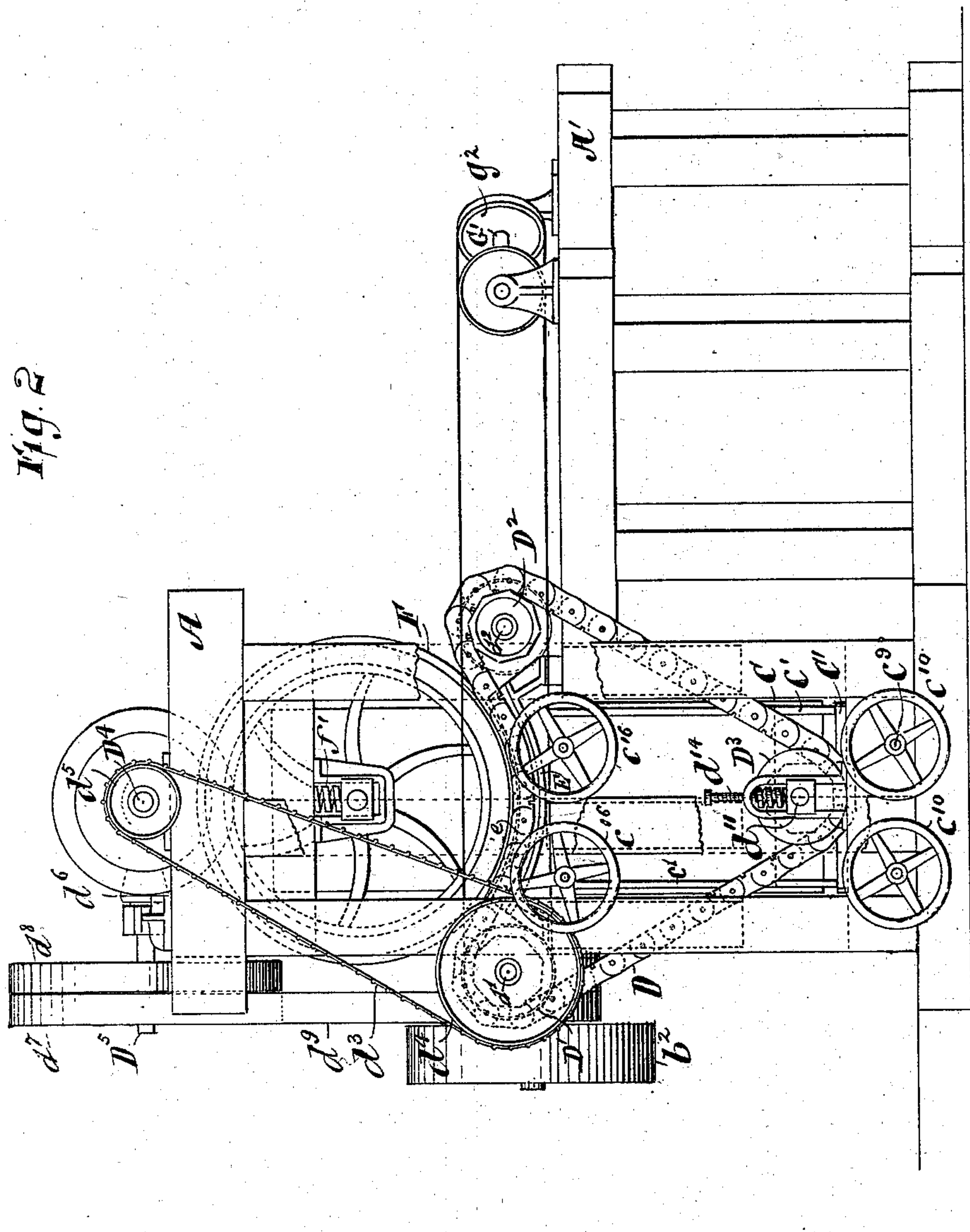
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Fig. 2



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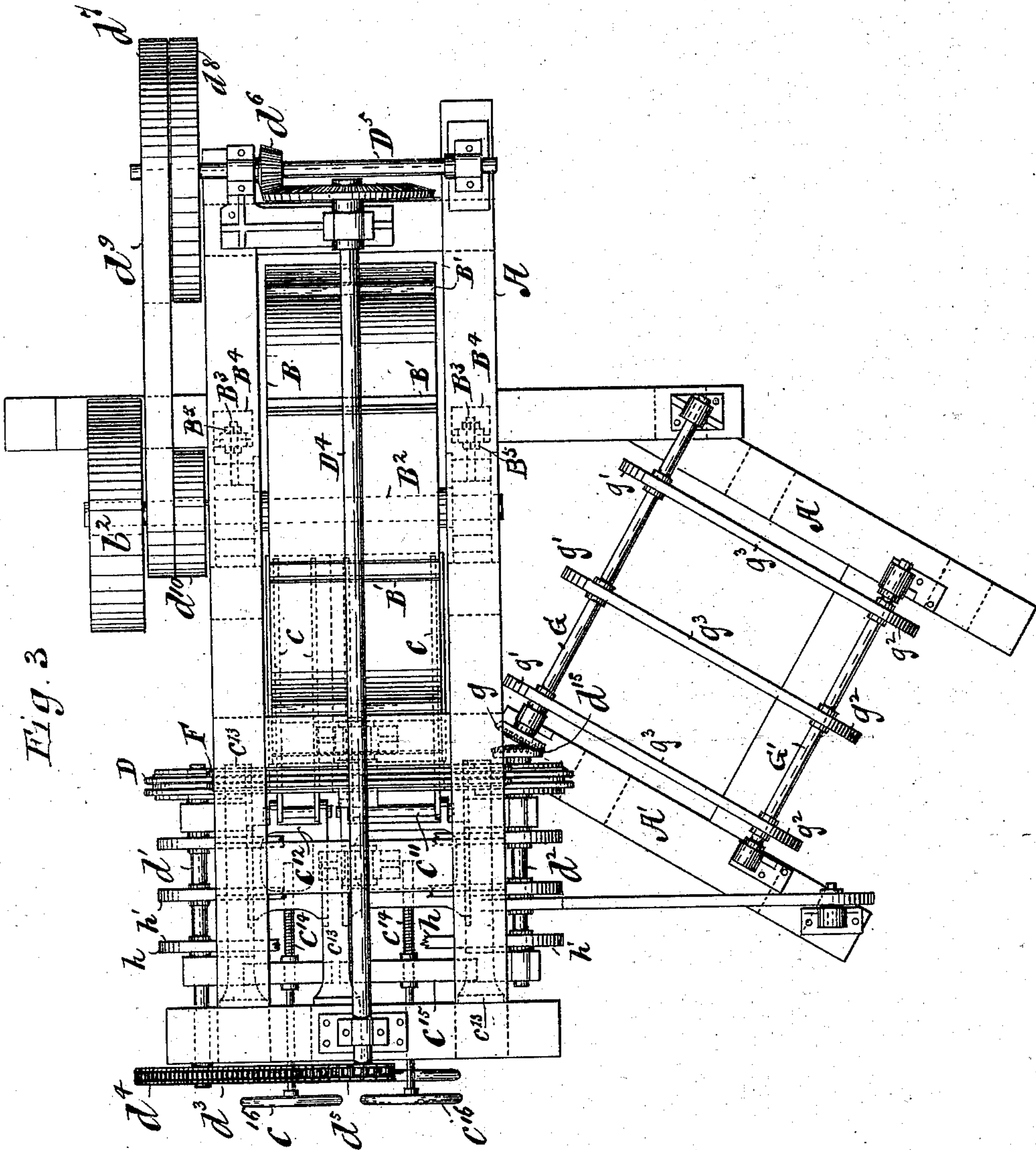
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MACHINE FOR PREPARING VEGETABLE FIBER.

No. 559,009.

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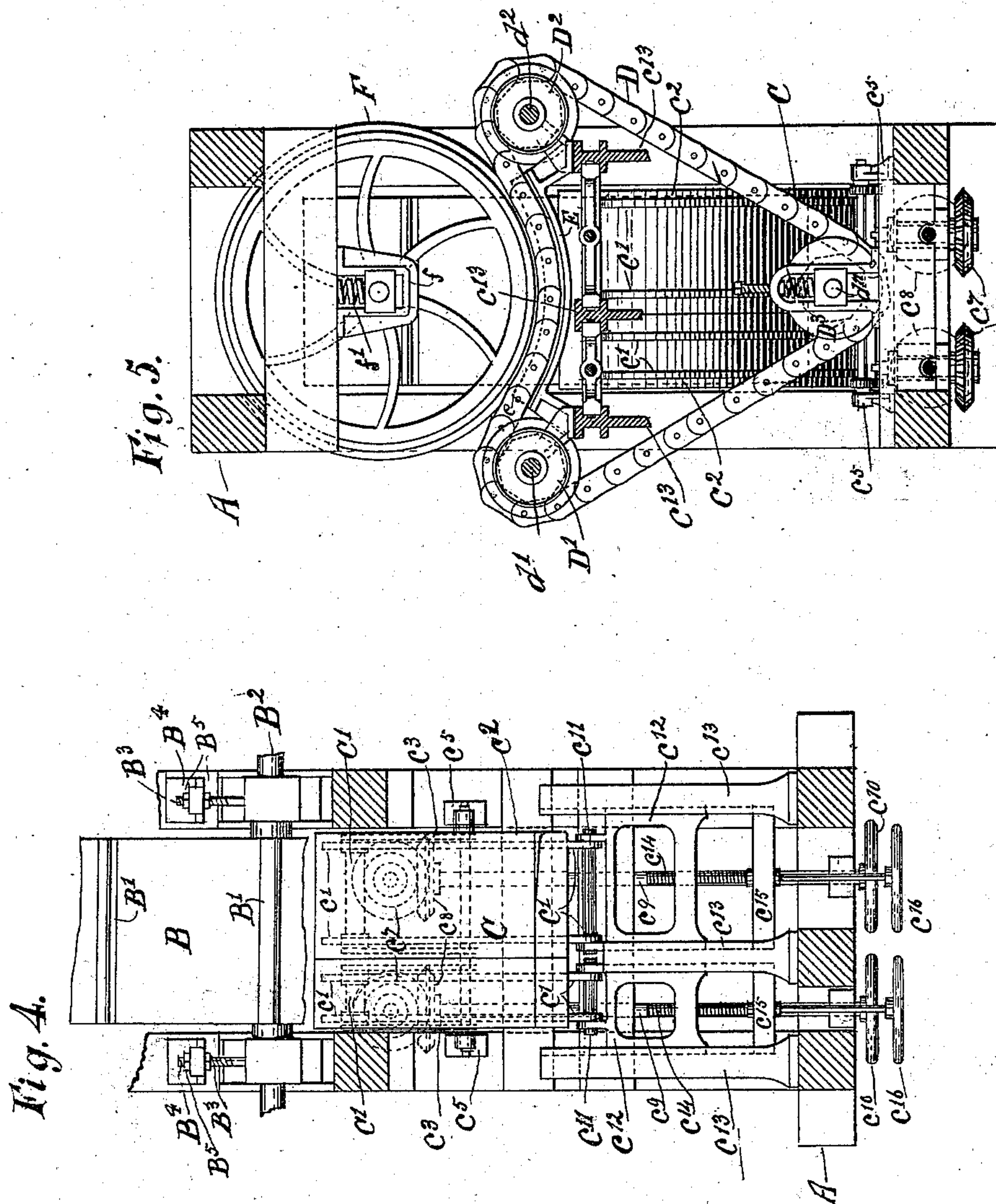
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WITNESSES:

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UNITED STATES PATENT OFFICE.

TIMOTEO VILLAMOR, OF MERIDA, MEXICO.

MACHINE FOR PREPARING VEGETABLE FIBER.

SPECIFICATION forming part of Letters Patent No. 559,009, dated April 28, 1896.

Application filed February 23, 1894. Serial No. 501,138. (No model.)

To all whom it may concern:

Be it known that I, TIMOTEO VILLAMOR, of Merida, Yucatan, Mexico, have invented a certain new and useful Improvement in Machines for Preparing Vegetable Fiber, of which the following is a specification.

I will describe a machine embodying my improvement, and then point out the novel features in the claims.

10 In the accompanying drawings, Figure 1 is a side elevation of a machine embodying my improvement. Fig. 2 is a front view of the same. Fig. 3 is a plan or top view of the same. Fig. 4 is a horizontal section of a certain portion of the machine. Fig. 5 is a vertical section at the plane of the line 5 5, Fig. 1.

Similar letters of reference designate corresponding parts in all the figures.

20 A designates the frame of the machine. It may be made of any suitable construction and material—as, for instance, suitable heavy timbers bolted or otherwise fastened together.

25 B designates a rotary support for the scrapers B', (here shown as made in the form of a wheel,) that may be of any suitable form and affixed to a shaft B², that is journaled in bearings in the frame A. Preferably the bearings may be adjustable horizontally under the influence of screws B³, impinging against the bearings and connected with fixed brackets B⁴ by means of nuts B⁵, arranged on opposite sides of the brackets.

30 C designates a curved table. It may be made of any suitable material—as, for instance, a metal backing c' and a facing of wood c², the wood facing being extended at the ends over the ends of the metal backing. This table is made in two independent sections, which are arranged side by side and curved longitudinally to substantially conform to the curve of the rotary support B, so that the edges of the scrapers will all pass equally distant from the table during the rotation of the rotary support B.

45 The table C is adjustable at both ends. Under the lower end of each section is a roller or bar C', which is supported in a frame c³, pivoted by means of a pin c⁴ to brackets c⁵, erected upon the frame A. The frame c³ may be adjusted upwardly or downwardly by means of a screw c⁶. The latter is driven through the agency of miter-wheels c⁷ c⁸ and

a shaft c⁹, extending to the front of the machine and provided at its extremity with a hand-wheel c¹⁰. The upper end of each section of the table is pivoted at the rear side by means of a pin c¹¹ to a block c¹², fitted to slide in brackets c¹³. This block may be adjusted forwardly and rearwardly by means of a screw c¹⁴, engaging with a tapped hole in the block and fitted in a bearing c¹⁵, supported by the brackets c¹³. The shank of the screw has a hand-wheel c¹⁶ at the front of the machine.

It will be seen that by the construction described a very perfect adjustment of the table and its two ends may be made, and that after adjustment the ends of the table will be held firmly in position.

70 Above the table C is an endless chain D, composed of links which are pivotally connected together by horizontal pins and each of which is provided with a groove in the upper surface. This chain runs around wheels or pulleys D' D² D³. The wheels D' D² are mounted upon shafts d' d², that are journaled in bearings supported by the brackets c¹³. Only the shaft d' is driven, the shaft d² being adapted to run idly.

80 Motion may be imparted to the shaft d' by means of a belt or sprocket-chain d³, extending from a pulley d⁴ on said shaft d' to a pulley d⁵, affixed to a shaft D⁴. The shaft D⁴ is driven by bevel-gears d⁶ from a shaft D⁵, supported in bearings fastened to the frame A. The shaft D⁵ is provided with fast and loose pulleys d⁷ d⁸, the pulley d⁷ being the fast pulley. A belt d⁹ extends from the pulley d⁷ or the pulley d⁸ to a pulley d¹⁰, affixed to the main shaft B².

90 A pulley b² on the shaft B² is intended to receive motion through a belt from any suitable source of power.

The wheel D³ is mounted upon a shaft d¹¹, journaled in bearings d¹², that are fitted in housings fastened to the frame A. Above these bearings are springs d¹³, which may be adjusted by means of screws d¹⁴, extended through the hub. These adjustable bearings allow for a yielding of the chain whenever necessary.

100 Preferably the pulleys D' D² D³ will be flanged, so as to hold the chain D in place laterally.

E designates a bridge extending between the brackets c^{13} and curved on its upper surface to correspond with the rotary support B and the scrapers affixed thereto. This bridge
 5 has an upwardly-extending flange e on the lower side, or, in other words, that side which is the nearer to the scrapers. It is not intended that the under side of the upper portion of the chain shall rest upon this bridge;
 10 but, on the contrary, it is intended that this portion of the chain shall be lifted above the bridge, the only purpose of the bridge being to prevent the chain from being drawn toward the scrapers and this function being
 15 fulfilled by the impingement of the flange e against the rear side of the chain.

F designates a wheel supported in bearings fitted in housings f and impelled downwardly by means of springs f' . This wheel is grooved
 20 in its periphery so as to intermesh with the groove of the chain D, as may be best understood by referring to Fig. 1. As the chain has one groove and the wheel another, it will be seen that I provide a number of bearing-
 25 surfaces for leaves which will be presented between the chain and wheel and subjected to the action of the scrapers.

The shaft d^2 derives motion from the chain D acting upon the wheel or pulley D^2 . On
 30 said shaft d^2 is affixed a bevel gear-wheel d^{15} , and this engages with a bevel gear-wheel g , affixed to a shaft G, journaled in bearings on an extension A' of the frame A.

The extension A' of the frame A will preferably be horizontal and about on the level with the meeting surfaces of the chain D and wheel F. A shaft G' is also journaled in the extension A' . The shafts G G' are provided
 35 with pulleys $g' g^2$, and belts or sprocket-chains g^3 pass around these pulleys, forming together a supporting-carrier for the leaves which are to be fed between the chain D and wheel F. The ends of the leaves will be fed automatically to the chain D and wheel F and will be
 40 carried along by the latter across the table C, and thus will be subjected to the scrapers. The portion of the leaves which projects from between the chain D and wheel F may be supported by a carrier consisting of belts or
 45 sprocket-chains h , passing around pulleys h' , affixed to the shafts $d' d^2$. As the leaves are carried by the chain and wheel to a point where they will be released they are taken
 50 by hand and, after being reversed end for end,

are placed upon the support consisting of the
 shafts G G' , pulleys g , and sprocket-chains. 55
 Thereafter they will be passed between the table and scrapers again, so that such portions as were left untreated before will now be
 treated. It will be seen that the chain D 60
 sinks down between the wheels or rollers D' D^2 , so as to conform to the curve of the wheel F. This is important, and, indeed, the several links of the chain will preferably be
 turned in a lathe, so that they may conform 65
 to the curve of the wheel more accurately. An important feature consists in so combining the chain and wheel that the flange of the chain which enters the groove of the wheel
 will not touch the bottom of such groove, and 70
 also so that the flange of the wheel that enters the groove of the chain will not reach the bottom of this groove. This feature enables the wheel and chain to grip the leaves with
 a wedging action. 75

The chain D and wheel F obviously constitute traveling grooved intermeshing grippers.

What I claim as my invention, and desire to secure by Letters Patent, is— 80

1. In a machine for preparing leaves or fibers, the combination of a rotary support provided with scrapers, a table adjacent thereto, pulleys journaled in bearings at the sides
 of the machine, a chain supported upon said 85
 pulleys, a wheel forcibly depressing the chain and extending between the pulleys and a resilient support for said wheel, the wheel and chain having engaging parts and forming
 traveling grippers to carry the leaves over the 90
 table and under the scrapers, substantially as specified.

2. In a machine for preparing leaves or fibers, the combination of the rotary support B, the scrapers B' secured thereto, the table 95
 C arranged adjacent to the support B, the chain D, the pulleys D' , D^2 , D^3 over which said chain runs and the wheel F, forcibly depressing the chain, one of the rotary members in contact with the chain having a resilient 100
 support, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

TIMOTEO VILLAMOR.

Witnesses:

ANTHONY GREF,
 WILLIAM A. POLLOCK.