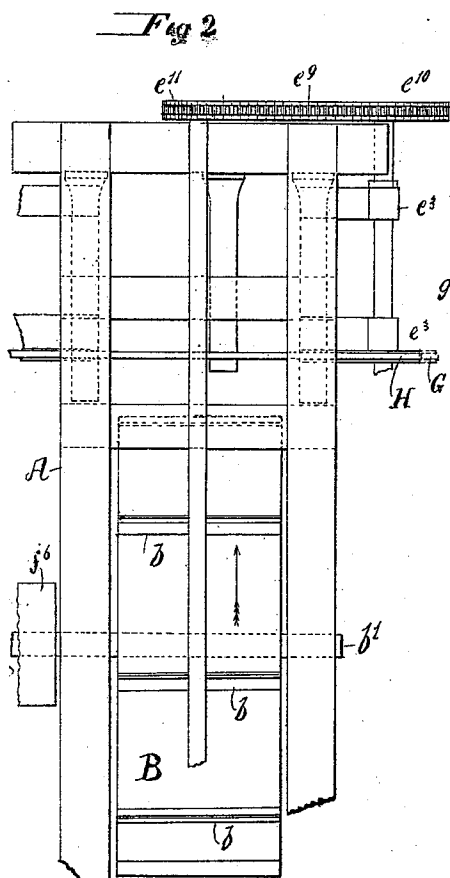
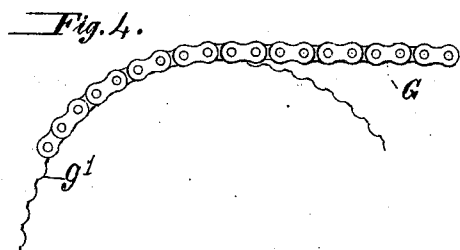


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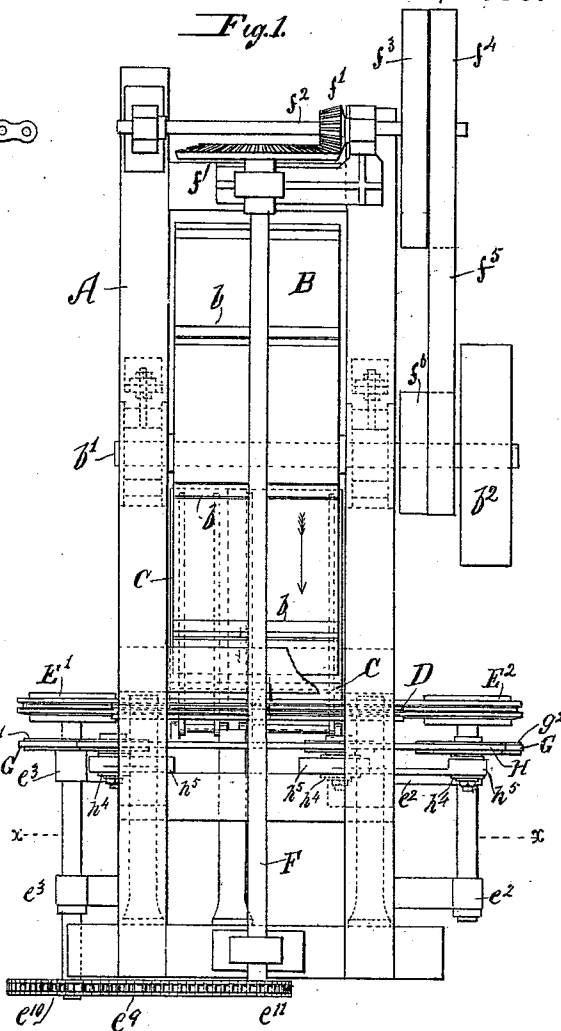
No. 551,801.

Patented Dec. 24, 1895.



WITNESSES:

Jas A. Billen
J. M. A. Pollock



INVENTOR

Timoteo Villamor

BY Edwin H. Browne

HIS ATTORNEY

(No Model.)

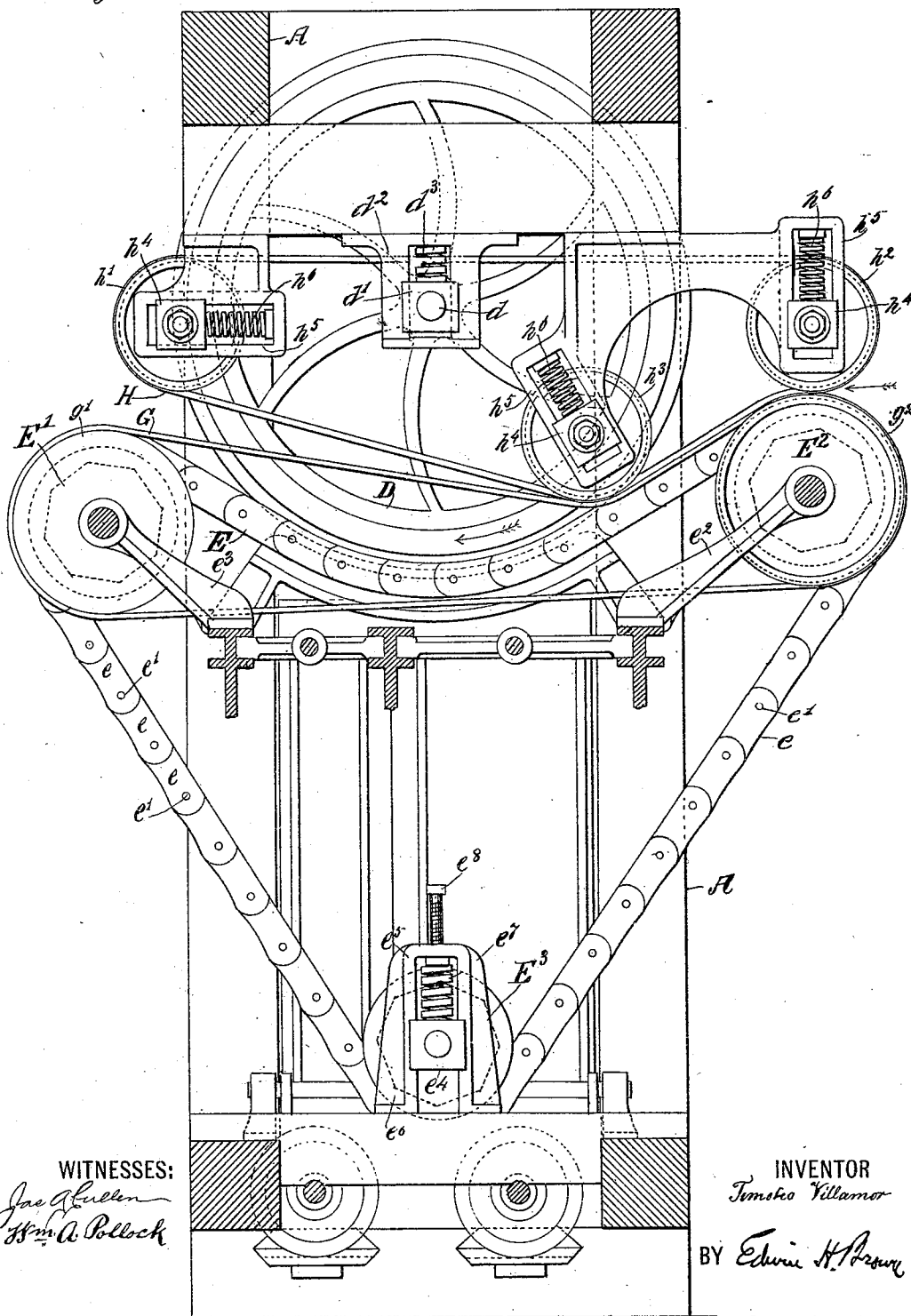
2 Sheets—Sheet 2.

T. VILLAMOR.
MACHINE FOR PREPARING VEGETABLE FIBER.

No. 551,801.

Patented Dec. 24, 1895.

Fig. 3.



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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. 551,801, dated December 24, 1895.

Application filed February 23, 1894. Serial No. 501,139. (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 Fibers, 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 plan or top view of a machine embodying my improvement. Fig. 2 is a plan or top view of a portion of a similar machine reversed in position, this view being made in addition to
15 Fig. 1 for the purpose of showing how two machines embodying my improvement may be arranged in relation to each other for conjoint use. Fig. 3 is a vertical section on an enlarged scale, taken at the plane of the dotted line *x x*, Fig. 1. Fig. 4 is a still further enlarged view of certain parts, taken in the same plane as Fig. 3.

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

25 A designates the frame of the machine. It may be made of any suitable style and materials.

B designates a scraping-wheel, which consists, as here shown, of a wheel having a number of scrapers *b* arranged radially upon it. This wheel is supported on a shaft *b'* which is driven in any suitable manner—as, for instance, by a belt applied to a pulley *b²*. Opposite a portion of the wheel is an apron or support which sustains the leaves that are intended to be scraped by the scraping-wheel for the purpose of preparing fiber. This support is curved concentrically, or approximately so, to the scraping-wheel. It may be made of any suitable materials and preferably will be adjustable at both ends, toward and from the scraping-wheel. This portion of the apparatus forms no part of my present invention, such a construction being shown in a former patent, No. 362,683, granted to me May 10, 1887, to which reference may be had for a fuller description. The leaves which are to be scraped are grasped between a wheel D and a chain E, and while so grasped are carried between the scraping-wheel B and the support C.

The wheel D is affixed to a shaft *d* that is

journaled in boxes *d'* fitted to housings *d²* formed in brackets supported by the frame A of the machine. Springs *d³* are interposed between the boxes *d'* and the tops of the housings so as to hold the wheel D downwardly with a yielding pressure.

The chain E is composed of a number of links *e* pivoted by means of pins *e'*. It passes around pulleys *E'* *E²* *E³*. The pulleys *E'* *E²* are journaled in brackets *e³* *e²*, respectively. The pulley *e³* is journaled in boxes *e⁴* fitted in housings *e⁵* formed in brackets *e⁶*. Within the brackets *e⁶* and above the boxes *e⁴* are springs *e⁷* and these may be adjusted by means of screws *e⁸* for the purpose of holding down the pulley *E³* with any desired force, but in a yielding manner. The brackets *e⁶* are fastened to the frame A of the machine.

Motion is imparted to the chain E by means of a chain *e⁹* engaging with a sprocket-wheel *e¹⁰* affixed to the shaft of the pulley *E'* and a sprocket-wheel *e¹¹* affixed to a shaft F. The shaft F runs lengthwise of the machine and is provided at one end with a bevel gear-wheel *f* with which engages a bevel-pinion *f'* affixed to a shaft *f²* provided with fast and loose pulleys *f³* *f⁴*. With these fast and loose pulleys *f³* *f⁴* is combined a belt *f⁵* which also fits a pulley *f⁶* affixed to the shaft *b'* of the scraping-wheel B. Motion is thus imparted from the shaft of the scraping-wheel to the chain E. The wheel D runs idly.

Preferably the exterior of the chain E will be grooved and the wheel D will be provided with a circumferential tongue for coacting with said groove to firmly grasp the leaves which are to be treated.

The parts already described may be of a construction shown in my Patents No. 362,683, granted May 10, 1887, and No. 399,802, granted March 19, 1889, and hence I make no claim to them here.

I will now describe a means whereby the leaves will be presented to the chain E and wheel D.

G H designate two endless belts or chains running opposite to each other, one above the other, for the purpose of taking the leaves by the stalks and moving them along, as indicated by the arrow in Fig. 3, until an adjacent portion of the stalks is passed between the chain E and wheel D, after which the

endless belts or chains G H separate, so as to release the stalks of the leaves.

The endless belt or chain G passes around pulleys g' g^2 , affixed to the same shafts as the pulleys E' E^2 , and rotating therewith. The pulley g' imparts motion to the endless belt or chain G, the periphery of the pulley and said chain being constructed to interlock in any suitable manner—as, for example, in the manner shown in Fig. 4. The pulley g^2 is, however, smooth on the periphery, so that the endless belt or chain may slip upon it.

The endless belt or chain H passes around pulleys h' h^2 h^3 , which are severally journaled in boxes h^4 , fitted to housings h^5 and combined with springs h^6 . The journal-boxes of the pulley h' are fitted to move horizontally outward under the influence of their springs h^6 for the purpose of producing a tension upon the endless belt or chain H. The journal-boxes h^4 of the pulley h^2 are fitted to move vertically and their springs h^6 force them toward the pulley g^2 , so that the belts G H at the point where they come together to receive the stalks of the leaves are capable of a relative movement against the resistance of the springs. The journal-boxes h^4 of the pulley h^3 are capable of movement transversely of the line of the two belts G H and are moved by their springs, as may be understood by reference to Fig. 3. Thus a tension is produced upon both the belts or chains G H. The pulley h' is so far elevated above the pulley g' that the endless belt or chain H after leaving the pulley h^3 will be caused to move upwardly away from the belt G.

Obviously the stalks of leaves presented to the belts or chains G H will be gripped between these belts or chains and carried until the belts or chains separate beyond the pulley h^3 , whereupon they will be released. By this time the stalks of the leaves will have been grasped between the endless chain E and the wheel D.

It will, of course, be understood that the endless belts or chains G H are in a different vertical plane from that in which the endless chain E and wheel D are located, or, in other words, are arranged to one side of the latter, this arrangement being necessary to enable the endless belt or chain E and wheel D to grip the stalks of the leaves before they are released from the endless belts or chains G H.

The endless belt or chain G will preferably be composed of a number of links pivoted together and curved inwardly between the ends, as illustrated in Fig. 4, and when so made the periphery of the driving-pulley g' will be provided with alternate peripheral projections and recesses, as shown in the same fig-

ure, so as to positively interlock the chain. The endless belt or chain H may be similarly made, but as it is only intended to run idly it is unnecessary that it should be so constructed as to interlock with any of its pulleys.

The frame of the machine may be lengthened and another scraping-wheel B mounted in this lengthened portion, the chain E and wheel D and adjuncts thereto as already described being duplicated. I have shown in Fig. 2 this added portion as being detached from the machine represented in Fig. 1.

In forming the machine having two scraping-wheels, the shaft F will be extended to the end of the machine and provided with a second sprocket-wheel e^{11} from which is driven a shaft supporting a second pulley E' as already described.

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

1. In a machine for preparing vegetable fiber, the combination with scrapers, a traveling belt or chain and an opposite traveling part for carrying leaves past the scrapers, of the endless belts or chains G, H, the pulleys g^2 and h^2 for causing the belts or chains G and H to approach each other, and the auxiliary pulley h^3 for deflecting said belts so as to cause them to travel together under pressure, substantially as specified.

2. In a machine for preparing vegetable fiber, the combination with scrapers, a traveling belt or chain and an opposite traveling part for carrying leaves past the scrapers, of the endless belts or chains G, H, the pulleys g^2 and h^2 for causing the belts or chains G and H to approach each other, and the auxiliary pulley h^3 for deflecting said belts so as to cause them to travel together under pressure, the pulley being resiliently supported, substantially as specified.

3. In a machine for preparing vegetable fiber, the combination with scrapers, a traveling belt or chain and an opposite traveling part for carrying the leaves past the scrapers, of the endless belts or chains G, H, the pulleys g' , g^2 and the pulleys h' , h^2 , h^3 , the pulley h^2 being close to the pulley g^2 , the pulley h^3 being in a position to deflect both belts or chains G, H, and the pulley h' being sufficiently elevated above the pulley g' to cause a separation of the belts, 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.