No. 656,481. Patented Aug. 21, 1900.

L. R. SCHOLTZ.

TOBACCO SEPARATING MACHINE.

(Application filed Feb. 16, 1900.)

(No Model.) 2 Sheets—Sheet 1.

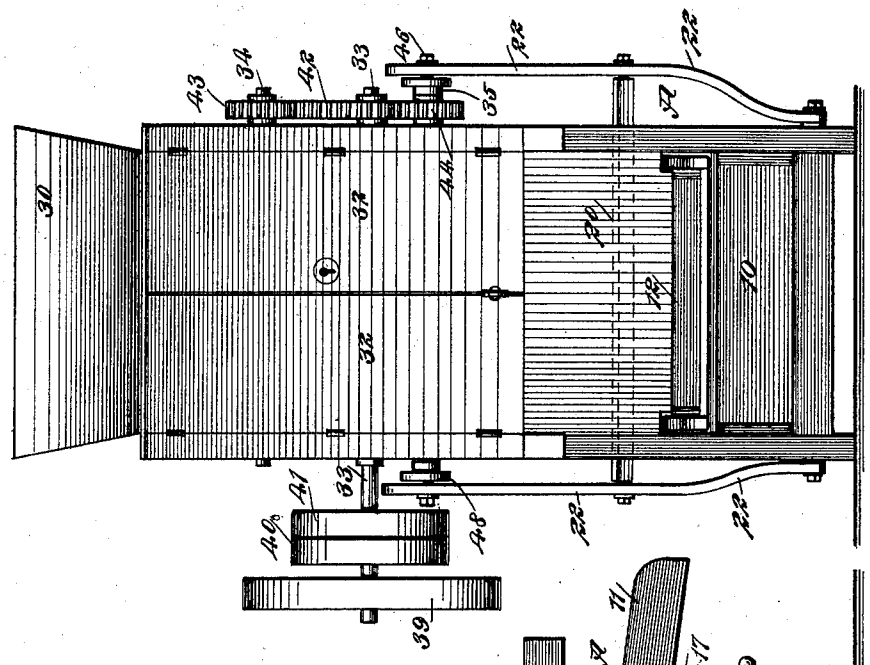


Fig. 2.

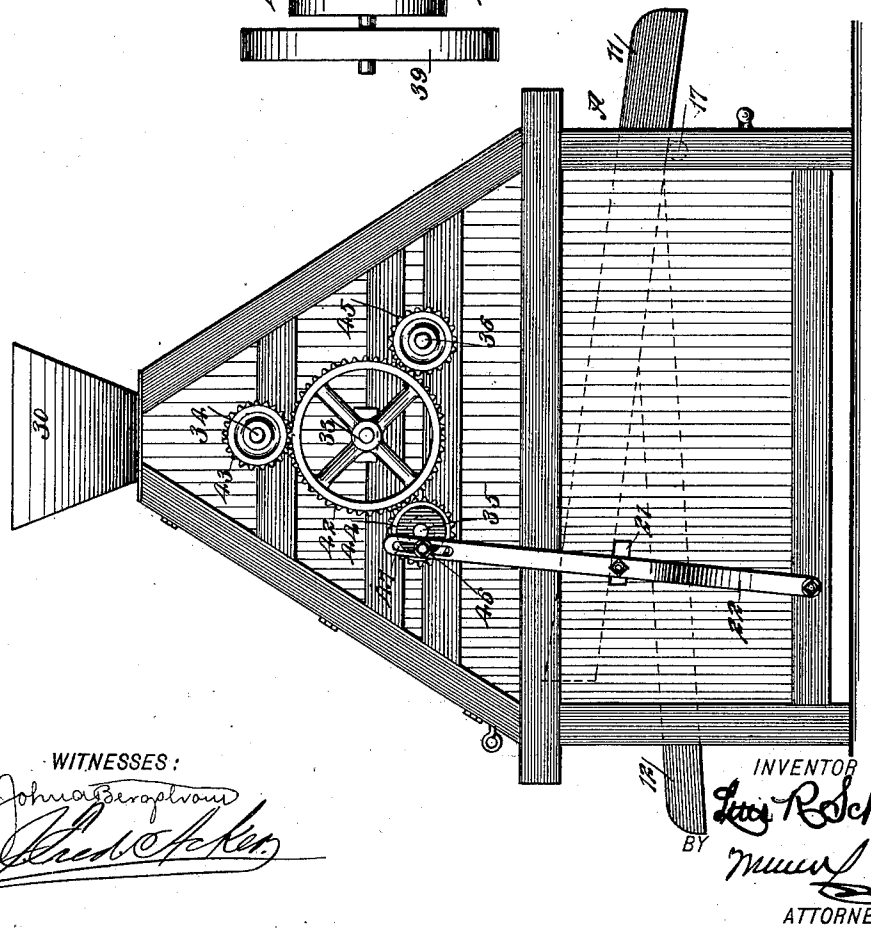


Fig. 1.

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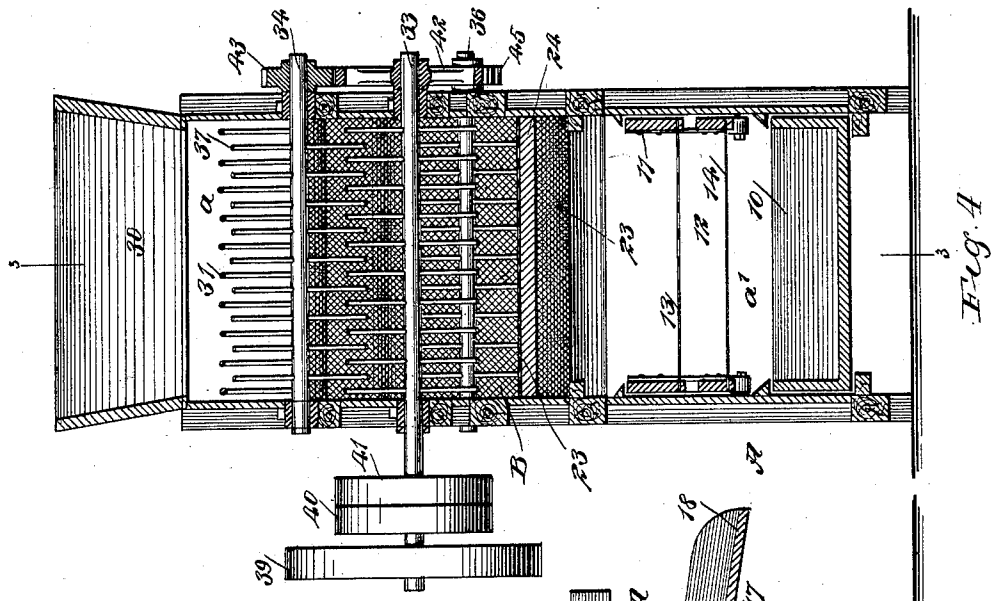


Fig. 4

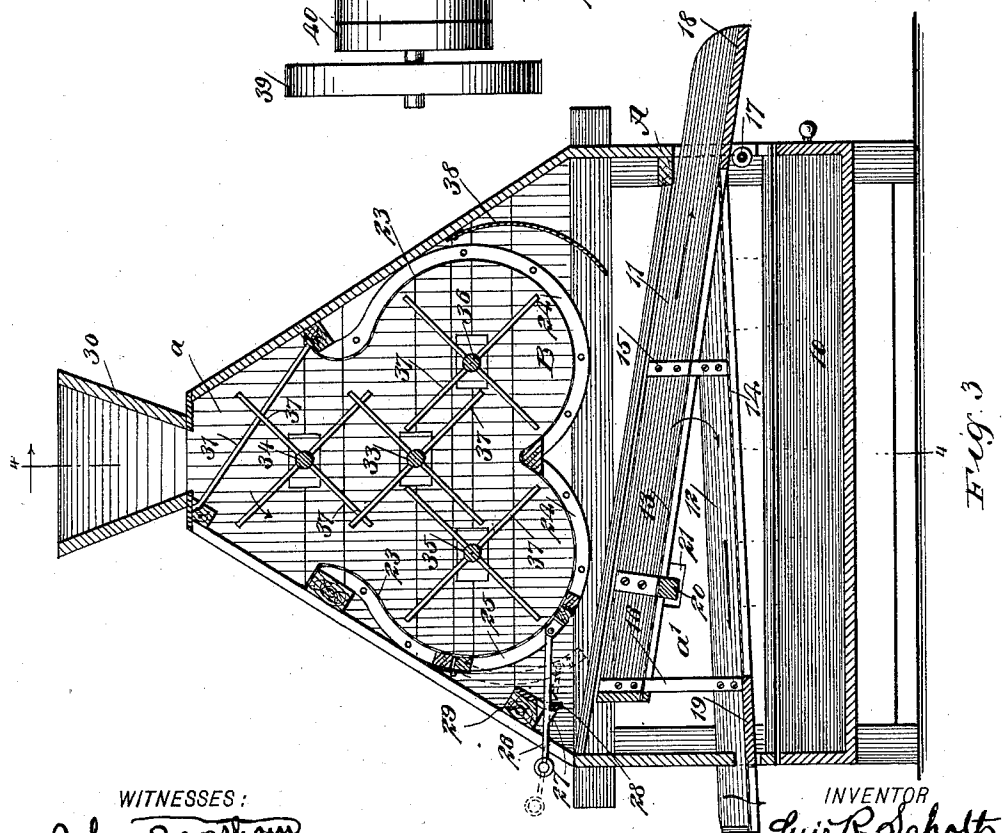


Fig. 3

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TOBACCO-SEPARATING MACHINE.

SPECIFICATION forming part of Letters Patent No. 656,481, dated August 21, 1900.

Application filed February 16, 1900. Serial No. 5,466. (No model.)

To all whom it may concern:

Be it known that I, LUIS ROBERTO SCHOLTZ, a citizen of Venezuela, and a resident of Carácas, Venezuela, have invented a new and Improved Tobacco-Separating Machine, of which the following is a full, clear, and exact description.

One object of the invention is to provide a machine especially adapted to separate tobacco or picadura from the wrappers of such cigarettes as are delivered from cigarette-making machines in a non-marketable condition, thus enabling the picadura to be again utilized and improving the same during the process of separation, as the picadura in such operation will be rendered comparatively free from dust.

Another object of the invention is to provide a machine of the character set forth which will be of simple construction, reliable in operation, and provided with means for collecting and retaining the tobacco-dust, which may be utilized in the manufacture of snuff.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is an end view of the machine. Fig. 2 is a front elevation of the same. Fig. 3 is a vertical section taken from front to rear and practically on the line 3 3 of Fig. 4; and Fig. 4 is a section through the machine at a right angle to the section shown in Fig. 3, being taken practically on line 4 4 of Fig. 3.

The casing A of the machine may be made of any deired material and of any suitable dimensions; but preferably the casing is so formed as to have a rectangular base and a tapered upper structure fitted to the base in any approved manner. Interiorly the machine consists of an upper chamber *a* and a lower chamber *a'*. In the lower chamber *a'* a drawer 10 or its equivalent is located, adapted to receive and retain any dust that may be sifted from the tobacco when separated from the wrappers. Two screens 11 and 12 are located over the drawer 10. These screens 11 and 12 incline in opposite directions. The lower one extends, preferably, beyond the front of the machine and the upper one beyond the back of the machine, the screens being inclined in direction of the parts of the casing beyond which they extend. The upper screen 11 is provided with a coarse mesh 13 and the lower screen with a finer mesh 14. The upper screen is adapted to carry off the paper separated from the tobacco and permit the tobacco to pass freely through it onto the lower screen 12, by means of which the tobacco is delivered to the exterior of the machine, the dust falling through the mesh 14 into the drawer or receptacle 10. The lower screen 12 is fitted at its inner end to the bottom portion of the upper screen 11, as shown in Fig 3, and the two screens are united by connecting-bars 15 and 16. Any desired number of such bars are employed.

The lower end of the upper screen 11 is made to rest, preferably, upon a roller 17, and the same provision may be made for the outer end of the lower screen 12, if desired. Preferably a board 18 constitutes the bottom portion of the outer or delivery end of the upper screen 11, while a board 19 is located near the delivery end of the lower screen 12, adapted for the delivery of the tobacco or picadura. The board 19 facilitates the rapid delivery of the tobacco to the outer end of the delivery-screen. A cross-bar 20 is secured in any suitable or approved manner to the bottom portion of the upper screen 11, near its upper end, and the ends of the cross-bar 20 extend out through suitable openings 21 in the sides of the base portion of the casing A, as shown in Figs. 1 and 3. The extremities of the cross-bar 20 are pivotally attached to pitmen 22, pivoted at their lower ends to the bottom portion of the base of the casing A, at the exterior of the same, as shown in Figs. 1 and 2.

A cage B is permanently constructed in the upper chamber *a* of the casing A. This cage is preferably in the form of two segmental sections connected at their lower portions, as shown in Fig. 3, the upper ends of the sections being attached in any suitable or approved manner to the front and rear portions of the upper structure of the casing A. Each section of the cage B consists of suitable curved ribs 24, which ribs serve to support a

sieve or screen-lining 23, of such mesh that the tobacco which is to be separated from the paper in the cage will readily pass out therefrom to the sieves 11 and 12. The front section of the cage B is provided with a door 25, opened or closed through the medium of a rod 26 or its equivalent, which passes out through the front of the casing A, as shown in Fig. 3, and the rod is provided with a latch extension 27, adapted for engagement with a suitable keeper 28, and when such engagement is made the door 25 is held closed. When the door 25 is opened, the paper that may have collected in the cage B will find its way out from the cage to the sieve 11, by means of which the paper will be conducted to the back of the machine or to any other desired point.

A hopper 30 is located at the top portion of the upper chamber *a*, and into this hopper the contents of one or more barrels of mutilated or injured cigarettes may be emptied. The feed of these cigarettes from the hopper into the upper chamber *a* is retarded to a suitable degree by placing rods 31 diagonally within the said chamber *a* below the outlet of the hopper 30, the rods extending, preferably, from the front side of the outlet of the hopper downwardly and rearwardly to a point just above the rear upper portion of the cage B, as is illustrated in Fig. 3. Usually the casing at the front of the upper chamber *a* is provided with doors 32, opening in opposite directions, so that convenient access may be gained at any time to the cage B and to the bottom portion of the hopper. A main drive-shaft 33 is centrally located within the upper chamber *a* and extends from side to side of the casing, and a driven shaft 34 is located above the main shaft 33, parallel therewith, as are also two lower shafts 35 and 36, one at each side of and below yet parallel with the main shaft 33.

Beater or separator arms 37 radiate from the upper shaft 34, within the chamber *a*, and similar arms radiate from each of the other shafts 33, 35, and 36. These arms are so placed on their several shafts that in the rotation of the shafts they will readily pass each other, and the arms of the upper shaft 34 will pass through the spaces intervening the feed-bars 31 below the hopper. When the cigarettes have been placed in the hopper and are fed into the upper chamber *a*, the wrappers are beaten off from the tobacco or picadura by means of the arms 37, and the paper remains in the cage until its door 25 is opened, as stated, while the tobacco sifts through the cage to the upper sieve 11 and through the upper sieve to the lower one 12, through the means of which it is delivered to any suitable receptacle, while the dust and fine particles are received in the drawer 10. A guard 38 is located at the back of the upper chamber *a*, at the rear of the cage, as shown in Fig. 3, and this guard insures all of the tobacco at the rear of the cage having a tendency when passing out from the cage to so strike the upper sieve 11 that the tobacco will quickly pass through said sieve to the lower or delivery one 12. The drive-shaft 33 is provided at one of its ends preferably with a balance-wheel 39 and a fast and a loose pulley 40 and 41. At the opposite end of the drive-shaft 33 a large gear 42 is secured, and this gear meshes with a pinion 43, carried by the upper shaft 34, and with pinions 44 and 45, carried by the lower shafts 36 and 35. The pinion 45, however, is provided with a wrist-pin 46, which enters a slot 47 in one of the pitmen 22, while at the opposite end of the shaft 35, carrying the pinion 44, a crank-disk 48 is secured, the wrist-pin whereof enters a slot in the upper end of the opposing pitman 22. In this manner the sieves 11 and 12 are laterally reciprocated, receiving their motion through the drive-shaft 33.

This machine is exceedingly simple, is capable of being economically and durably constructed, and will effectually separate tobacco from paper or other wrappers, distribute the wrappers in one direction and the tobacco in another, and preserve the dust and small particles that result from such separation.

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

1. In a separating-machine, reciprocating sieves arranged to deliver material one to the other, a foraminated cage, a plurality of beaters operating in said cage with the arms of one passing between the arms of the adjacent beater, and means for rotating the beaters.

2. In a separating-machine, reciprocating sieves inclined in opposite directions and arranged to deliver material one to the other, a receptacle located beneath the lowermost sieve, a fixed foraminated cage located above the upper screen, beaters mounted to rotate in the said cage, and feed-regulators located above the uppermost beaters, as and for the purpose specified.

3. In a separating-machine, the combination, with a casing, sieves mounted to reciprocate in the said casing, extending out therefrom in opposite directions and having opposite inclination, one sieve being adapted to deliver material to the other and to retain certain material, of a foraminated cage located above the upper sieve, adapted to deliver material thereto, a door for the cage, arranged to open over the upper sieve, a locking device for the door, shafts mounted to revolve within the said cage, arms radiating from said shafts, the arms of one shaft being adapted to pass the arms of the adjacent shaft, a hopper located above the cage, and feed-bars diagonally placed below the outlet of the hopper, the arms of the uppermost shaft being arranged to pass within the spaces between the feed-bars, for the purpose specified.

4. In a separating-machine, the combination, with a casing, sieves mounted to reciprocate in said casing, extending out there-

from in opposite directions and having opposite inclination, one sieve being coarser than the other whereby it is adapted to deliver material to the other and to retain certain material, of a foraminated cage located above the upper sieve, adapted to deliver material thereto, a door for the cage, arranged to open over the upper sieve, a locking device for the door, shafts mounted to revolve within said cage, arms radiating from the shafts, the arms of one shaft being adapted to pass the arms of the adjacent shaft, a hopper located above the cage, feed-bars diagonally placed below the outlet of the hopper, the arms of the uppermost shaft being arranged to pass within the spaces between the feed-bars, a guard located at the rear of said cage, arranged to direct material from the back of the cage to the uppermost sieve, and a reciprocating connection between one of said shafts and the sieves, for the purpose described.

5. In a tobacco-separating machine, the combination with a casing, and rotary beaters mounted therein, of a foraminated cage below the beaters and having a door, and means for operating the door from the outside of the casing, substantially as described.

6. In a tobacco-separating machine, the combination with a casing, and rotary beaters therein, of a foraminated cage below the beaters and having a hinged door, a rod secured to the free edge of the door and extending out through the casing, and provided with a latch, and a keeper through which said rod passes, substantially as described.

7. In a tobacco-separating machine, the combination with a casing having an inlet-opening at its top, of rods extending diagonally across the casing below the inlet-opening thereof, and a plurality of beaters mounted in the casing, the arms of one of the beaters passing between the said rods, substantially as described.

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

LUIS ROBERTO SCHOLTZ.

Witnesses:

J. B. GARCIA,

M. ORGUVELO.