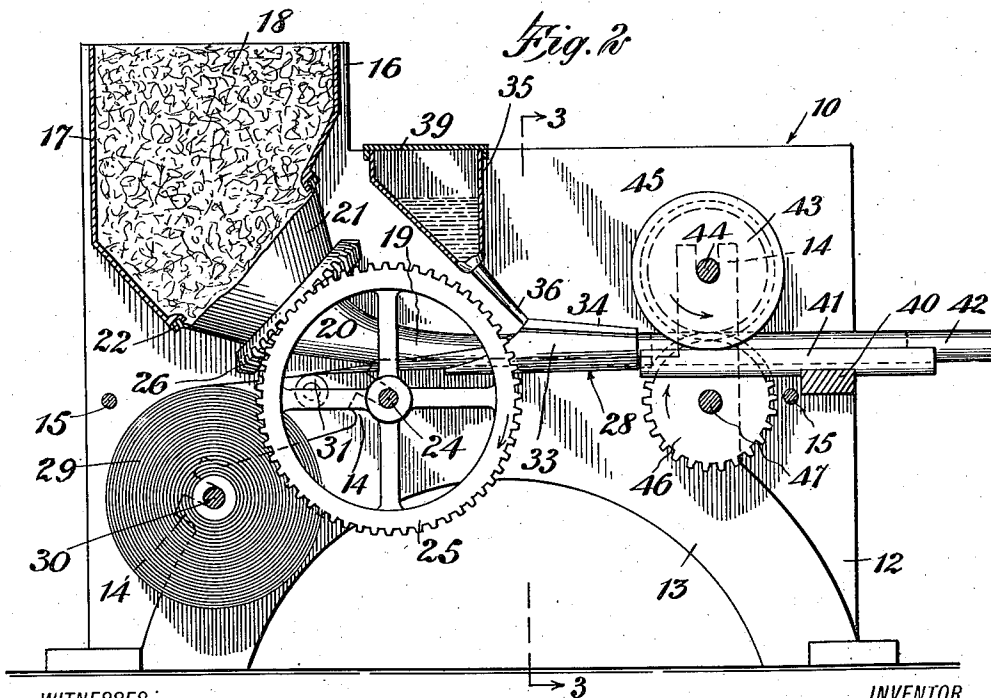
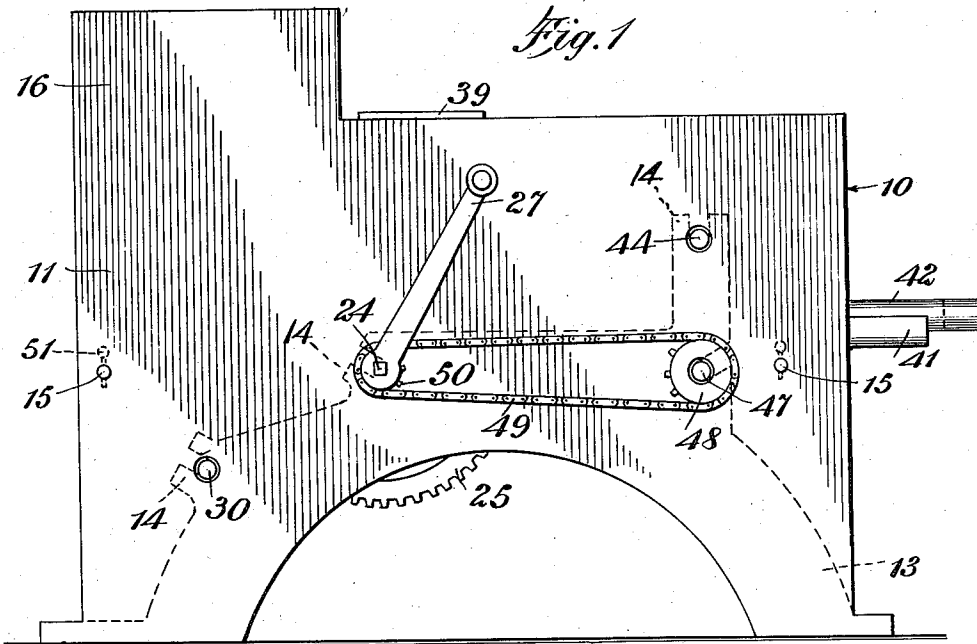


E. C. GALLUP.
CIGARETTE MACHINE.
APPLICATION FILED JUNE 2, 1914.

1,133,951.

Patented Mar. 30, 1915.

2 SHEETS—SHEET 1.



WITNESSES
F. D. Sweet
J. M. Burch

INVENTOR
Ethel C. Gallup
BY *Mumford*
ATTORNEYS

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Fig. 3

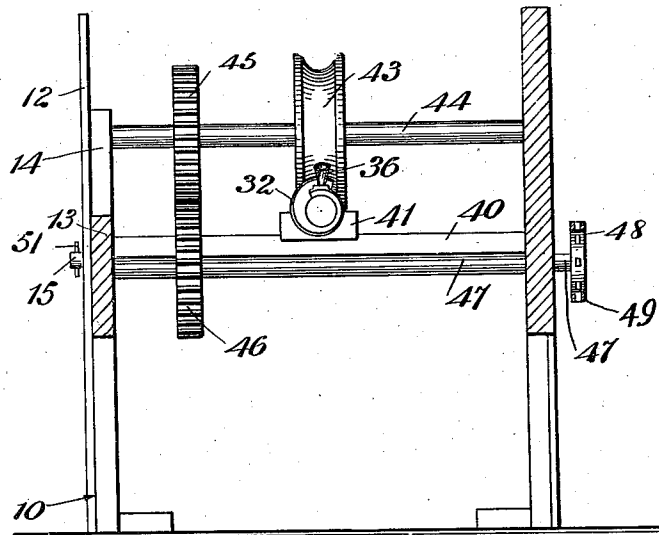


Fig. 4

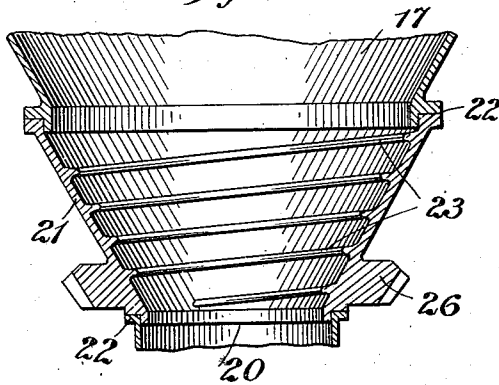
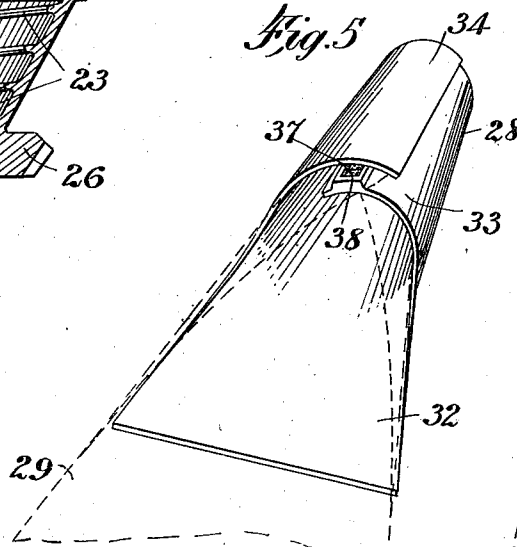


Fig. 5



WITNESSES
F. D. Sweet
W. E. Burch

INVENTOR
Ethel C. Gallup
BY *Wm. C. Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

ETHEL C. GALLUP, OF NEW YORK, N. Y.

CIGARETTE-MACHINE.

1,133,951.

Specification of Letters Patent.

Patented Mar. 30, 1915.

Application filed June 2, 1914. Serial No. 842,349.

To all whom it may concern:

Be it known that I, ETHEL C. GALLUP, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Cigarette-Machine, of which the following is a full, clear, and exact description.

This invention relates to improvements in cigarette machines and has for its object more particularly to provide a simplified structure for the making of cigarettes from a continuous strip rolled to provide a wrapper and continuously filled with tobacco or the like, while the longitudinal edges of the strip are united so that the cigarettes may be cut off the proper lengths as the filled wrapper is fed from the machine.

A further object of the invention is to provide an improved cigarette machine in which novel means are provided for feeding the tobacco to a filler tube for subsequently discharging the tobacco into a wrapper which is closed and fed in a novel way from the machine.

A still further object of the invention is to so construct a machine that one side of its frame is removable so as to permit the removal of certain of the operating parts to initially feed the strip forming the wrapper into position or to thread the paper strip so that it will subsequently continuously operate until a new supply is required, while the complete filled wrapper will be positively fed from the machine.

With the above and other objects in view, the invention resides more particularly in the peculiar combination and arrangement of parts to be hereinafter more fully illustrated, described and claimed, it being also an object to provide a device which is simple in construction, durable and efficient in operation and not likely to get out of working order.

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 views, and in which—

Figure 1 is a side elevation of my improved cigarette machine; Fig. 2 is a vertical sectional view thereon longitudinally of the machine; Fig. 3 is a cross sectional view taken on the line 3—3 of Fig. 2; Fig. 4 is an enlarged sectional view of the tobacco feeding device; Fig. 5 is a perspective view

of the former for rolling the strip to produce the wrapper.

As illustrated, the improved machine embodies a supporting frame 10 including a permanent side 11 and a removable side 12 held in juxtaposition to a removable side portion 13 which is provided with a plurality of slotted bearings 14 to removably support parts of the mechanism for operating shafts. These parts of the frame are held in assembled position and in spaced relation by transverse clamping rods 15 disposed in any desired relative positions but preferably near the ends of the frame. At the feed end of the machine the sides are provided with vertical extensions 16 adjacent to which a stationary hopper 17 is supported to receive the tobacco 18 in such quantities as to constitute a supply for the making of a considerable number of cigarettes or otherwise.

Supported longitudinally of the machine between the sides thereof and about midway of its height is a feed tube 19 having a funnel end 20 rotatably supporting a hopper section 21 in turn bearing against the discharge end of the stationary hopper as shown at 22. The rotatable hopper section is provided with an interior spiral flange 23 serving as means to catch and feed or force the tobacco into the feed tube 19 in the form of a continuous filler. For this purpose a shaft 24 is rotatably journaled in the side 11 and in one of the slotted bearings 14, in addition to protruding through the parts 12 and 13, and inwardly of the frame carries a beveled gear 25 which is fixedly mounted thereon or held against rotation independent of the shaft to engage a beveled gear 26 carried by or formed integral with the rotatable hopper section 21 so that as the shaft is rotated by suitable means, as for instance a hand crank 27, said hopper section 21 will be rotated at the proper speed depending upon the ratio of the gears. Also supported longitudinally of the machine to receive the discharge end of the feed tube 19 is a former 28 which is designed to receive a continuous strip of paper from a roll 29 carried by a shaft 30 also journaled in the frame beneath the hopper. This strip passes over a feed roller 31 which acts as a guide therefor, and as is more particularly shown in Fig. 5 of the drawings, the former comprises a plate portion 32 with one side portion 33 curved gradually inward and co-

operating with a similarly curved side portion 34 outwardly thereof to form a restricted discharge throat of the required diameter as the diameter of the cigarette to be produced.

A tank 35 is supported in the frame above the feed tube and has an inclined bottom to feed paste through a discharge tube or nozzle 36 to a felt section 37 mounted in a recessed support 38 in the top of the side or section 33 of the former, or if one edge of the paper is covered with an adhesive, water so supplied to said felt will moisten the adhesive and cause the longitudinal edges of the strip which are brought into overlapped relation in passing through the former, to be sealed and thus form a continuous wrapper. A cover 39 is provided for the tank or reservoir 35 which is adapted to contain the paste or water constituting a moistening medium, so as to partly open or totally close the tank to regulate the feeding of said paste or water, by allowing the entrance of air under atmospheric pressure or preventing the entrance of air and causing the paste or water to feed solely by gravity against the action of a vacuum tending to be created in the tank above the liquid therein.

Supported longitudinally of the machine in front of the feed tube and former as upon a transverse support 40, is a guide 41 which has a concaved groove in its upper face to receive and conform to the cigarette material 42 including the wrapper filled as above described and which is sealed by means of a cooperating grooved feed roller 43 from above. This roller is fixed to a shaft 44 removably journaled in the frame and in turn driven simultaneously with the rotation of the hopper section 21 and the feeding of the paper or cigarette strip. For this purpose a pinion 45 is fixed to the shaft 44 and meshes with a pinion 46 fixed to a shaft 47 also journaled in the frame and which at one end carries a sprocket 48 outwardly of the stationary side of the frame. An endless drive member or chain 49 is engaged around the sprocket 48 and a sprocket 50 removably fixed to the shaft 24 inwardly of the crank handle so that by turning the crank to feed the tobacco the feed roller 43 will be rotated to frictionally contact with the cigarette material and in drawing the same through the machine simultaneously seal the strip for forming the wrapper.

Due to the provision of the flanges at the joints or co-acting edges of the rotatable hopper section 21 with the stationary hopper section 17 and the funnel end 20 of the feed tube 19, the tobacco fed into the machine is prevented from escaping between these parts and will be grasped by the spiral flange 23 constituting a forced feed and thus projected through the feed tube and into the

wrapper. While I have shown and described means for positively rotating the feed roller 43 I do not consider this absolutely necessary and if desired I may omit these connections and permit the roller to rotate and shape the cigarette material under the action of the tobacco forced into the wrapper. In the latter case the roller is made only of sufficient weight to seal and not heavy enough to retard the movement of the cigarette as it passes out of the machine. It will also be observed that I have provided no special means for cutting the cigarettes into lengths owing to the fact that the different grades of tobacco would not pass through the tube at the same speed, but if desired the paper could be perforated to the required lengths and cut off after being fed from the machine or otherwise severed. By means of the removable side 12 and bearing portion 13, the parts of the machine may be readily disassembled and particularly the shaft 44. This shaft is removed after the side 12 is detached by removing the cotter pins 51 engaged through the rods 15, so as to displace the feeding and sealing roller 43 and permit the strip for forming the wrapper to be initially fed into position or threaded through the machine.

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

1. In a cigarette machine, the combination with a forming device receiving a strip fed in continuous form thereto, said forming device rolling the strip to provide a wrapper; of means for sealing the edges of the strip thus rolled, a hopper for receiving a filler, a discharge tube having a funnel end, a rotatable hopper section having an interior spiral flange for grasping the filler and forcing the same through the tube and into the wrapper, said hopper section being mounted between the hopper and discharge tube, and means for rotating the hopper section.

2. In a cigarette machine, the combination with a forming device; of means for supporting a strip to be fed in continuous form thereto, said forming device rolling the strip to provide a wrapper, means for sealing the edges of the strip thus rolled, said sealing means including a liquid supplying tank having a discharge nozzle and an absorbent member carried by the forming device to moisten the wrapper by the liquid supplied thereto from the tank, and means for supplying tobacco to the wrapper and simultaneously feeding the same from the machine in a continuous length.

3. In a cigarette machine, the combination with a forming device adapted to receive a strip fed in continuous form thereto, said forming device rolling the strip to provide a wrapper, means for sealing the edges

of the strip thus rolled, said sealing means including a liquid supplying tank having a discharge nozzle and an absorbent member carried by the forming device to moisten the wrapper by the liquid supplied thereto from the tank, means for feeding and forcing tobacco into the wrapper, and additional means simultaneously operated therewith to seal the wrapper and coöperatively feed the filled wrapper from the machine.

4. A cigarette machine, comprising a frame including a permanent side, a supporting portion having slotted bearings and a removable side detachably connected in spaced relation to the permanent side, a hopper mounted in the frame, a discharge tube having a funnel end, a rotatable hopper section journaled between the hopper and funnel end and having an interior spiral conveyer, a shaft journaled in the frame and operatively geared to the hopper section to rotate the conveyer, a forming device, a shaft supporting a wrapper forming strip, said strip being passed into the former and rolled thereby, wrapper sealing means carried by the frame, a grooved guide beyond the former and receiving the filled wrapper thereon when the filler is fed through the tube by the conveyer, and means for additionally feeding said filled wrapper in the form of a continuous section from the machine.

5. A cigarette machine, comprising a frame including a permanent side, a supporting portion having slotted bearings and a removable side detachably connected in spaced relation to the permanent side, a hopper mounted in the frame, a discharge tube having a funnel end, a rotatable hopper section journaled between the hopper and fun-

nel end and having an interior spiral conveyer, a shaft journaled in the frame and operatively geared to the hopper section to rotate the conveyer, a forming device, a shaft supporting a wrapper forming strip, said strip being passed into the former and rolled thereby, said former having a recessed part, a moisture holding element in said part, liquid feeding means coöperating with the moisture holding element to apply adhesive to one edge of the wrapper, a grooved roller journaled in the frame beyond the former to seal the edges of the wrapper as it is fed from the former filled, and hand operated means for simultaneously operating the conveyer and roller.

6. In a cigarette machine; the combination with a forming device receiving a strip fed in continuous form thereto, said forming device rolling the strip to provide a wrapper; of means for sealing the edges of the strip thus rolled, said sealing means including a liquid supply tank having a discharge nozzle, a cover for the tank to be opened or closed for regulating the discharge from the tank and an absorbent member carried by the forming device to moisten the wrapper by the liquid supplied thereto from the tank, a hopper for receiving a filler and having a discharge tube and a feeding device for forcing the tobacco through the discharge tube and into the wrapper.

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

ETHEL C. GALLUP.

Witnesses:

JOHN E. BURCH,
PHILIP D. ROLLHAUS.