

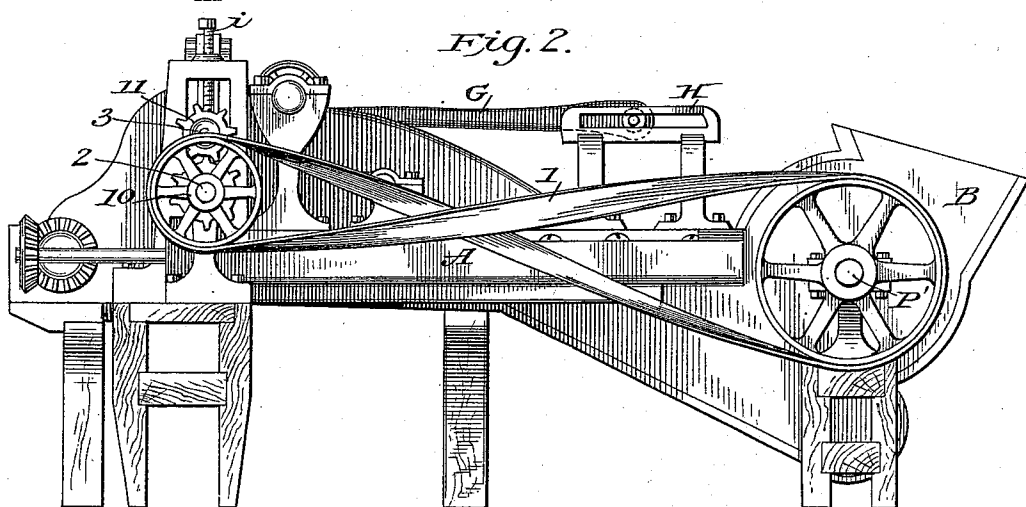
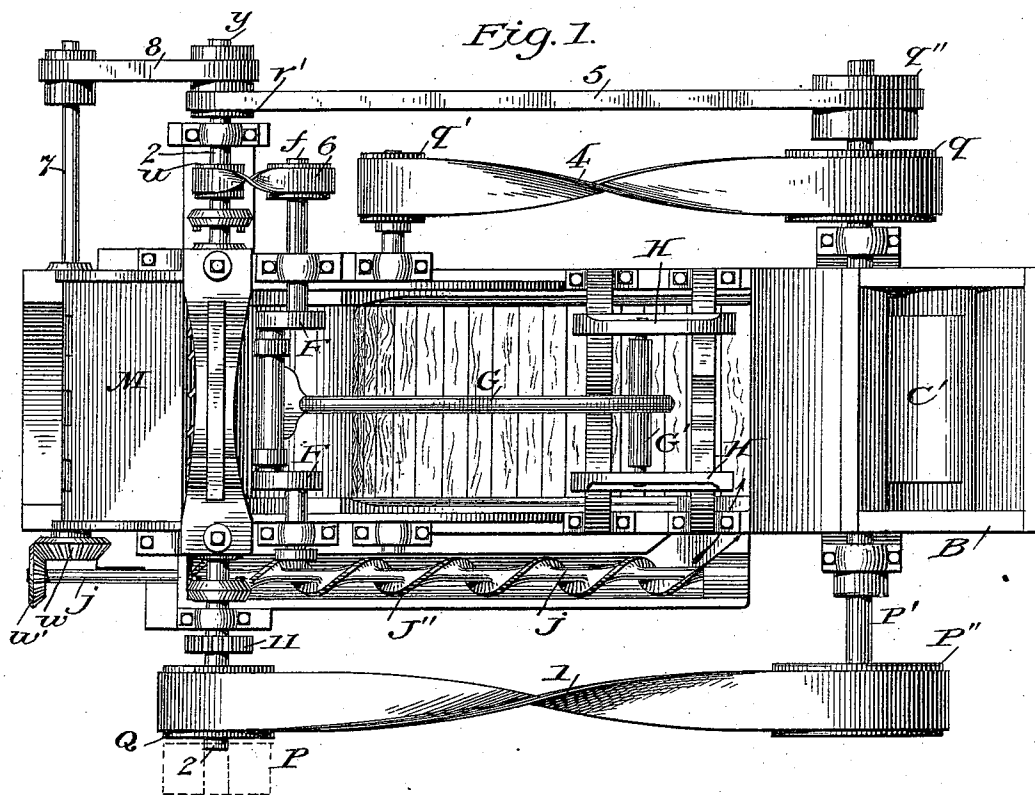
(No Model.)

2 Sheets—Sheet 1.

J. B. & W. A. MILLER.
TOBACCO DIPPING MACHINE.

No. 532,892.

Patented Jan. 22, 1895.



Witnesses.

J. R. Collier
J. A. Daugherty

Inventors.

J. B. Miller
W. A. Miller

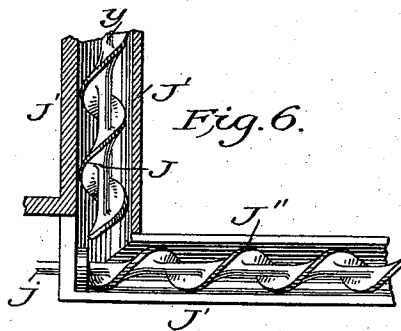
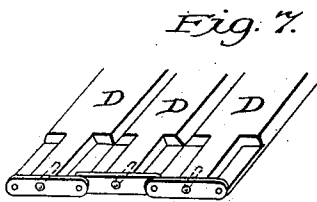
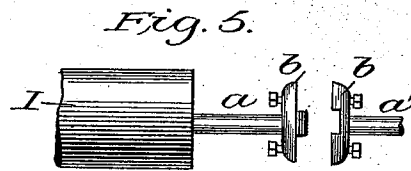
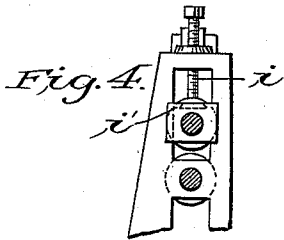
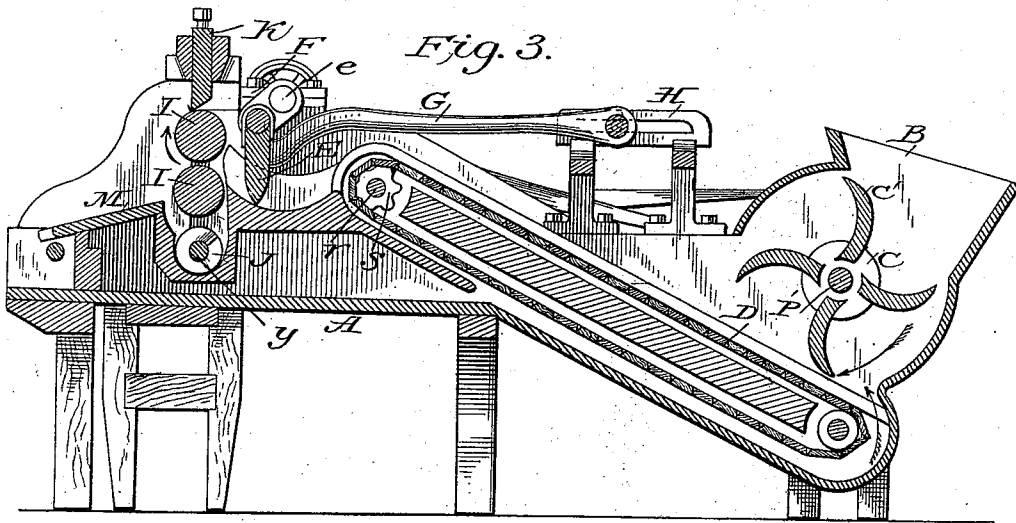
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2 Sheets—Sheet 2.

J. B. & W. A. MILLER.
TOBACCO DIPPING MACHINE.

No. 532,892.

Patented Jan. 22, 1895.



Witnesses:
J. B. Collier
J. A. Deane

Inventors:
J. B. Miller
W. A. Miller

UNITED STATES PATENT OFFICE.

JOHN B. MILLER AND WILLIAM A. MILLER, OF LOUISVILLE, KENTUCKY.

TOBACCO-DIPPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 532,892, dated January 22, 1895.

Application filed November 6, 1893. Serial No. 490,129. (No model.)

To all whom it may concern:

Be it known that we, JOHN B. MILLER and WILLIAM A. MILLER, of Louisville, in the county of Jefferson and State of Kentucky, have invented new and useful Improvements in Tobacco-Dipping Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

10 This invention relates to new and useful improvements in machines for handling tobacco in the leaf, and especially in the dipping of leaf tobacco preparatory to manipulating the same and forming it into the plug tobacco of commerce, and it consists in certain peculiarities of detail, construction and operation of parts, all as hereinafter more fully set forth and specifically pointed out in the claim.

20 In the annexed drawings similar letters and figures of reference denote corresponding parts in all the views, wherein—

Figure 1 is a top plan view of our improved machine. Fig. 2 is a side elevation of the same. Fig. 3 is a longitudinal sectional view. Fig. 4 is a view in detail showing the means of adjustment for the top one of the compression rollers —I— of the machine. Fig. 5 is a detail view showing the manner in which the said compression rollers are secured to the shafts upon which they are carried, and illustrates the ready means adopted to permit of their removal for repairs or renewal when occasion requires. Fig. 6 is a detail showing the manner in which the conveyers and conveyor troughs are brought into coincidence at the side of the machine, and Fig. 7 is a detail of the conveyer device used to carry the tobacco from the liquid bath to the rake which feeds the rolls —I—I—. 35 40

In the manufacture of plug tobacco it is customary to dip the leaf tobacco into a suitably prepared liquid composed of flavors and ingredients used for flavoring the finished product, and this is now generally prepared and placed into a tank or suitable receptacle into which the leaf tobacco is dipped entirely by hand and then passed through compression rollers to express the surplus liquid remaining in contact with the tobacco leaf before the other steps are carried out.

The present method of handling entails

more or less waste of material and is lacking in that cleanliness which should characterize work of the sort, and in addition to these causes we have produced our machine so that the liquid may be kept at a greater degree of heat, which is very desirable in working leaf tobacco but impracticable at the present time because such great heat will prevent the operator handling with his hands the tobacco leaf. 55 60

In the drawings —A— is a liquid receptacle into which liquid is placed, the greater portion of which naturally finds its way to the lower end beneath the paddle wheel —C—. 65

B— is a hopper into which tobacco leaf may be introduced, the said leaves falling onto the paddles —C'— and being carried by them down and into the liquid within the receptacle —A—. 70

D— is a slat-conveyer designed to raise the leaf from the liquid to the rake —E— which projects it into and between the rollers —I—, and G— is the reciprocating rod which produces movement back and forth of the rake —E— being connected by the pitman —F— to the shaft —e— thereby converting the rotary motion of the shaft —e— to the required reciprocating motion required for said rake —E—, the opposite end of said reciprocating rod being suitably supported in the horizontal slide —H— adapted to support and carry the same. 75 80

The rollers —I— are so set that they may be adjusted vertically by means of the adjusting screw —i— which carries the sliding bearing —i'— into which the upper roller —I— is journaled, and said rollers are set as shown in detail at Fig. 5 so that they may be readily removed from the machine by detaching the collars or clutches —b—b'— as shown in Fig. 5 thereby permitting withdrawal of the rollers —I— when required. 85 90

It will be noticed that there is a scraper —K— above the top roller —I— which bears constantly against it so as to prevent return of any tobacco leaves which may pass between the rollers. A similar scraper —M— is provided at the outside of the machine though this scraper is left a very slight distance away from the lower roller so as to leave it possible for any broken leaves to fall into the conveyer trough —J— and be carried by the 95 100

conveyers —J— to the hopper end of said trough —J'— from whence small bits of tobacco and liquid will pass through as indicated by the arrow at the right of Fig. —1— into the receptacle —A— from which place they may be again carried by the conveyer —D— to the rolls —I—.

It will be observed that the conveyer —J— running longitudinally of the machine is secured to the conveyer shaft —j— which has a bevel gear —x— on its extreme outer end meshing with a corresponding beveled gear —x'— on the lateral shaft —j'— while the lateral conveyer —J— is driven by the shaft —y.

In operation the machine works as follows: The leaf tobacco is fed into the hopper —B— and is carried by the paddles —C'— into the liquid in the lower part of the receptacle beneath the same where it is sufficiently saturated with the flavoring material after which it is carried up the link conveyer and dropped off at the upper end thereof. The rake —E— being constantly reciprocating carries the leaf to the rolls —I— through which the same is drawn, thus expressing the surplus moisture and leaving the tobacco in condition to be immediately worked into plugs. The surplus moisture falls into the conveyer troughs —J'— and is carried back to the receptacle —A— to be used again.

It is desirable that a steam pipe enter the receptacle —A— so as to heat the flavoring liquid therein, and this pipe may be run in at any convenient point to accomplish this purpose. A plug may be provided also at the lowest point in the said receptacle for drawing off the contents when desired.

A driving pulley —P— is provided on the shaft —2— which latter carries the lower roll —I— provided with the gear —10—, which gear meshes with the corresponding gear —11— of the upper roll and drives the said upper roll. On said shaft —2— is the pulley —Q— and the belt —1— runs from said pulley —Q— to the pulley —P''— on the shaft —P'—. The paddle-wheels —C'— are rigid with and are rotated by the shaft —P'—. The pulley —q— on the same shaft drives the belt

—4— which runs from the pulley —q— to the pulley —q'— on the shaft —r— on which the sprocket —s— is secured so that said sprocket may actuate the slat-conveyer —D—. The rake —E— gets its motion through the pitman —F— from the belt —6— which runs over the pulley —t—, said belt receiving its motion in turn from the pulley —u— on the shaft —2—. The screw —J— receives its motion from the belt —5— actuated by the pulley —q''— and running over the pulley —r'— on the shaft —y— placed vertically beneath the shaft —2—, thus driving the screw —J—, while the belt —8— transmits rotary motion to the shaft —7—, on the end of which is a beveled gear —w— meshing with a corresponding gear —w'— on the shaft —j—, which latter drives the screw —J''— running longitudinally of the machine.

Having described our invention, what we claim is—

In a machine of described class a liquid receptacle, a feed hopper above the same, revolvable paddles adapted to force the contents of said hopper into the liquid receptacle, an endless conveyer entering said liquid receptacle and rising therefrom at an oblique angle to a point above said liquid receptacle, a platform near the upper terminus of said conveyer, a reciprocating rake near the upper end of said conveyer passing along the line of said platform, a pair of compression rolls at the extreme end of said platform, an adjustable scraper bearing on the upper roll of said rolls, a supplemental liquid receptacle beneath the lower roll and a screw conveyer leading from said supplemental receptacle to said liquid receptacle substantially as specified.

In testimony whereof we have hereunto signed our names, in the presence of two attesting witnesses, at Louisville, in the county of Jefferson, in the State of Kentucky, this 30th day of August, 1893.

JOHN B. MILLER.

WILLIAM A. MILLER.

Witnesses:

FREDERICK H. GIBBS,
M. S. KICE.