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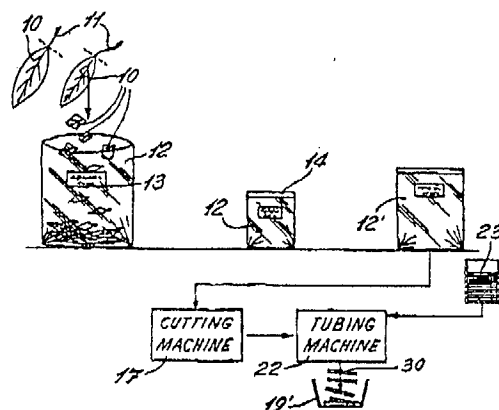
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54 Titre: Method of fabricating cigarettes in a dispensing-type machine operated by a user person.

57 Abrégé:

A method of fabricating cigarettes through a dispensing-type machine and from a predetermined quantity of tobacco leaves (10) selected by a user person. The method comprises storing predetermined quantities of tobacco leaves in hermetically sealed bags (12) wherein the tobacco leaves are prevented from drying out. One or more bags are selected by the user person and inserted, one at a time. In a receiving opening (16) of the machine. The machine cuts the tobacco leaves and provides a predetermined quantity of fine-cut tobacco. The fine-cut tobacco is transferred to a tubing station where the fine-cut tobacco is automatically disposed in cigarette tubes (23) to form cigarettes which are ejected or dispensed for reception by the user.



METHOD OF FABRICATING CIGARETTES IN A  
DISPENSING-TYPE MACHINE OPERATED BY A USER PERSON

TECHNICAL FIELD

5           The present invention relates to a method of  
fabricating cigarettes in a dispensing-type  
machine, and which is operable by a user person  
whereby the user can select a particular type of  
tobacco leaves or flakes packaged in a  
10       predetermined quantity, and insert these leaves or  
flakes in a machine which will immediately produce  
cigarettes and dispensed to the user in bulk form.

BACKGROUND ART

15           It is known to fabricate cigarettes by the  
use of hand-operable devices which permit the  
insertion of tobacco in bulk or plug form into  
cigarette tubes. An example of such device is  
disclosed in Canadian Patent 1,271,389. These  
20       devices are for domestic use and permits a person  
to produce cigarettes in a more economical fashion.  
These types of devices and machines have been known  
for several decades, but with the majority of these  
devices only a single cigarette can be produced at  
25       a time and the production thereof is labor  
intensive. Dispensing machines are also known to  
dispense packages of cigarettes preselected by the  
user. However, the cigarettes are pre-packaged and  
such cigarettes are even more expensive than those  
30       conventionally bought over the counter.

          In German Patent DE-U-8711945.5, there is  
disclosed a machine capable of cutting tobacco  
leaves to form fine-cut tobacco which can then be  
packed in cigarettes tubes. This patent however  
35       does not disclose forming individual or selected  
blends by the user by selecting leaves or flakes

stored in predetermined quantities in storage means  
to prevent the tobacco from drying out and then  
inserting them in a machine where the tobacco is  
cut and transferred to a tubing station where  
5 cigarettes are then discharged.

There is a need, however, to provide a novel  
concept and method as well as a machine to  
automatically produce cigarettes in predetermined  
quantities, and quickly from bulk tobacco leaves or  
10 flakes which are preselected by a user.

SUMMARY OF INVENTION

A feature of the present invention is to  
provide such a method and machine to serve a need  
which has heretofore not been provided by the prior  
15 art discussed hereinabove.

Another feature of the present invention is  
to provide a method of fabricating cigarettes  
through a dispensing-type machine and from a  
predetermined quantity of tobacco leaves or flakes  
20 selected by a user person. The method comprises  
storing predetermined quantities of tobacco leaves  
or flakes in storage means wherein the tobacco  
leaves or flakes are prevented from drying out, and  
in a hermetically protected fashion to retain a  
25 certain percentage of humidity in the leaves or  
flakes.

Another feature of the present invention is  
to provide a method of fabricating cigarettes in a  
dispensing-type machine and from a predetermined  
30 quantity of tobacco leaves or flakes selected by a  
user person, wherein the machine is solely operated  
by the user and comprises a cutting station to  
produce fine-cut tobacco from the leaves or flakes,  
and a tubing station to pack the fine-cut tobacco  
35 into cigarette tubes which are then dispensed to  
the user.

Another feature of the present invention is to provide a novel method of fabricating cigarettes in a dispensing-type machine which can be conveniently mounted in small convenient stores and other larger type merchandising stores, and which machine is easy to use and easy to service.

According to the above features, from a broad aspect, the present invention provides a method of fabricating cigarettes in a dispensing-type machine and from a predetermined quantity of tobacco leaves or flakes selected by a user person. The method comprises storing predetermined quantities of tobacco leaves or flakes in storage means wherein the tobacco leaves or flakes are prevented from drying out. One or more of the predetermined quantities of tobacco leaves or flakes are selected and inserted in a receiving opening of the machine. The tobacco leaves or flakes placed in the opening are cut by the machine to produce a predetermined quantity of fine-cut tobacco. The fine-cut tobacco is transferred to a tubing station where the fine-cut tobacco is automatically disposed in cigarette tubes to form cigarettes which are dispensed for reception by the user.

BRIEF DESCRIPTION OF DRAWINGS

A preferred embodiment of the present invention will now be described with reference to the drawings in which:

FIG. 1 is a flow diagram showing the process of producing cigarettes in accordance with the present invention; and

FIG. 2 is a front view showing a display unit incorporating therein a typical example of the manner in which the machine to carry out the method

of the present invention may be provided for ease of use by an end user.

DESCRIPTION OF PREFERRED EMBODIMENTS

5 Referring now to the drawings, and more particularly to Fig. 1, there is shown some of the steps in the process of the present invention for the fabrication of cigarettes. The cigarettes are manufactured starting from tobacco leaves or flakes 10 of which the stems 11 are cut prior to the placement thereof, in predetermined quantities, in bags 12. The bags 12 may be transparent or non-transparent and carry printed matter 13 thereon to identify the type of tobacco leaves placed therein. 15 The tobacco could also be stored differently in sealed containers.

The bags 12 are then sealed at 14 to provide hermetically sealed bags to retain humidity in the tobacco leaves. These bags 12 may be provided in 20 different sizes, such as bags 12 and 12', to hold predetermined quantities of tobacco cuttings, herein 20g or 200g-packages to fabricate two or twenty cigarettes.

25 With additional reference to Fig. 2, it can be seen that these bags are conveniently stored in a display cabinet 15 for selection by an end user. The user selects the type of tobacco that he wishes and the size of the bag depending on the quantity of cigarettes that he also desires to obtain. He 30 opens the bag and inserts the tobacco cuttings into the receiving chute or receiving opening 16 of a tobacco cutting machine 17 where the tobacco is cut or slit by cutting means (not shown), for example reciprocating blades disposed in a predetermined 35 manner, to provide fine-cut tobacco. The fine-cut tobacco is then discharged, as it is slit, through

a discharge opening 18 and received in a receptacle 19 placed adjacent the opening 18 by the user.

5 The user then transfers the fine-cut tobacco 20 contained within the container 19 into the receiving chute or opening 21 of a tubing machine 22. The tubing machine processes the fine-cut tobacco and inserts same into a predetermined number of cigarette tubes 23 which are loaded into the tubing machine by the end user or by another person who services the machine. Preferably, the 10 tubing machine holds a large quantity of these cigarette tubes. The machine inserts a predetermined quantity of this tobacco within the tube and simultaneously discharges them through a discharge gate 24 where the cigarettes are 15 collected within the receptacle or bag 19' placed thereunder by the user. Alternatively, the machine may dispense all of the cigarettes into a receiving compartment which is visible to the user, provided at the base of the machine, so that when all the 20 cigarettes have been dispensed the user merely opens the compartment by opening a door or other obvious means and removes the cigarettes.

25 The display case 15 is also fabricated to contain supplies of cigarette tubes disposed in boxes 25 as well as supplies of bags 26 or cigarette packages 27 in which the bulk cigarettes that are dispensed from the tubing machine may be placed by the user person.

30 It is pointed out that with this type of method of fabrication of cigarettes the cost for producing cigarettes can be greatly reduced. The machine can also be fully automated whereby the fine-cut tobacco produced by the cutting machine is 35 automatically fed to a tubing station within a single machine housing so that the user only needs

to place the tobacco leaves or flakes within the receiving chute 16 and collects the manufactured cigarettes 30 in an outlet recipient or compartment. The machine should be capable of producing cigarettes at a speed of about one cigarette per second.

It is within the ambit of the present invention to cover any other obvious modifications of the present invention, provided such modifications fall within the scope of the appended claims.

CLAIMS

1. A method of fabricating cigarettes (30) through a dispensing-type machine (17, 22) and from a predetermined quantity of tobacco leaves or flakes (10) selected by a user person, said method comprising the steps of:

(i) dispensing in a display case of said dispensing machine different types of tobacco leaves or flakes (10) stored in hermetically sealed containment means (12, 12') to prevent said tobacco leaves from drying, and providing an identification means for selection of one or more of said containment means by a user person;

(ii) selecting one or more of said predetermined quantities of tobacco leaves or flakes;

(iii) inserting said selected one or more predetermined quantities of tobacco leaves or flakes in a receiving opening (16) of said machine (17);

(iv) cutting said tobacco leaves or flakes placed in said opening to produce a predetermined quantity of fine-cut tobacco;

(v) transferring said fine-cut tobacco to a tubing station (22) where said fine-cut tobacco is automatically disposed in cigarette tubes (23) to form cigarettes (30); and

(vi) dispensing (24) said cigarettes (30) for reception by said user.

2. A method as claimed in claim 1 wherein after step (iv) there is further provided the step of dispensing said fine-cut tobacco for reception in containment means (19) for reception by said user.

3. A method as claimed in claim 2 wherein said step (v) comprises manually transferring said fine-

cut tobacco to a tubing machine (22) to produce said cigarettes (30).

5 4. A method as claimed in claim 3 wherein before said step (vi) there is provided the step of placing a receptacle (19') at a dispensing outlet (24) of said tubing machine (22) to receive said cigarettes (30).

10 5. A method as claimed in claim 4 wherein there is further provided the step of placing said cigarettes received in said receptacle (19') in a cigarette package container (26,27).

15 6. A method as claimed in claim 1 wherein prior to step (i) there is comprised the steps of removing the stems (11) from tobacco leaves (10) to be placed in said storage means (12).

20 7. A method as claimed in claim 6 wherein said step (i) comprises placing said tobacco leaves or flakes (10) in predetermined quantities, in hermetically sealable bags (12,12').

25 8. A method as claimed in claim 7 wherein after said step (i) there is provided the step of displaying different types of tobacco leaves or flakes (10) stored in said bags (12,12') in a display case (15), and providing an identification means (13) for selection by a user person.  
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9. A method as claimed in claim 1 wherein said step (v) comprises automatically conveying said fine-cut tobacco to said tubing station.

10. A method as claimed in claim 1 wherein there is further provided the step of loading a predetermined quantity of cigarette tubes (23) in said dispensing-type machine (22).

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11. A method as claimed in claim 7 wherein said tobacco leaves or flakes (10) have a certain percentage of humidity therein, and further wherein different quantities of said tobacco leaves or flakes (10) are placed in bags (12,12') of different sizes for the fabrication of different quantities of cigarettes (30) by said machine (17,22).

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12. A dispensing-type cigarette making machine (17,22) comprising a display cabinet having a plurality of storage means for displaying hermetically sealed containment means (12,12') each containing a predetermined quantity of tobacco leaves or flakes (10), there being different types of leaves or flakes (10), and identification means (13) to identify such different types for selection by a user person, a tobacco cutting and tubing machine (17) in said display cabinet (15) and having a receiving opening (16) in which a selected quantity of said tobacco leaves or flakes (10) are inserted; said machine (17,22), when activated by said user person, cutting said tobacco leaves or flakes (10) to provide fine-cut tobacco; transfer means to transfer said fine-cut tobacco to a receiving means (21) of a tubing machine (22) in said display cabinet (15), said tubing machine (22) capable of holding a predetermined quantity of hollow cigarette tubes (23) and filling said tubes with a predetermined quantity of fine-cut tobacco, and a discharge gate (24) for said user person to

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collect said cigarette tubes filled with said fine-cut tobacco.

- 5 13. A machine as claimed in claim 12 wherein there is further provided storage means in said display cabinet (15) for storing predetermined supplies of cigarette tubes for selection by a user person.
- 10 14. A machine as claimed in claim 12 wherein said means to transfer is a receptacle (19) which is transferable to said receiving means by said user person.
- 15 15. A machine as claimed in claim 12 wherein said fine-cut tobacco is discharged from an opening (18) in said machine for transportation by said user person to said receiving means (21).

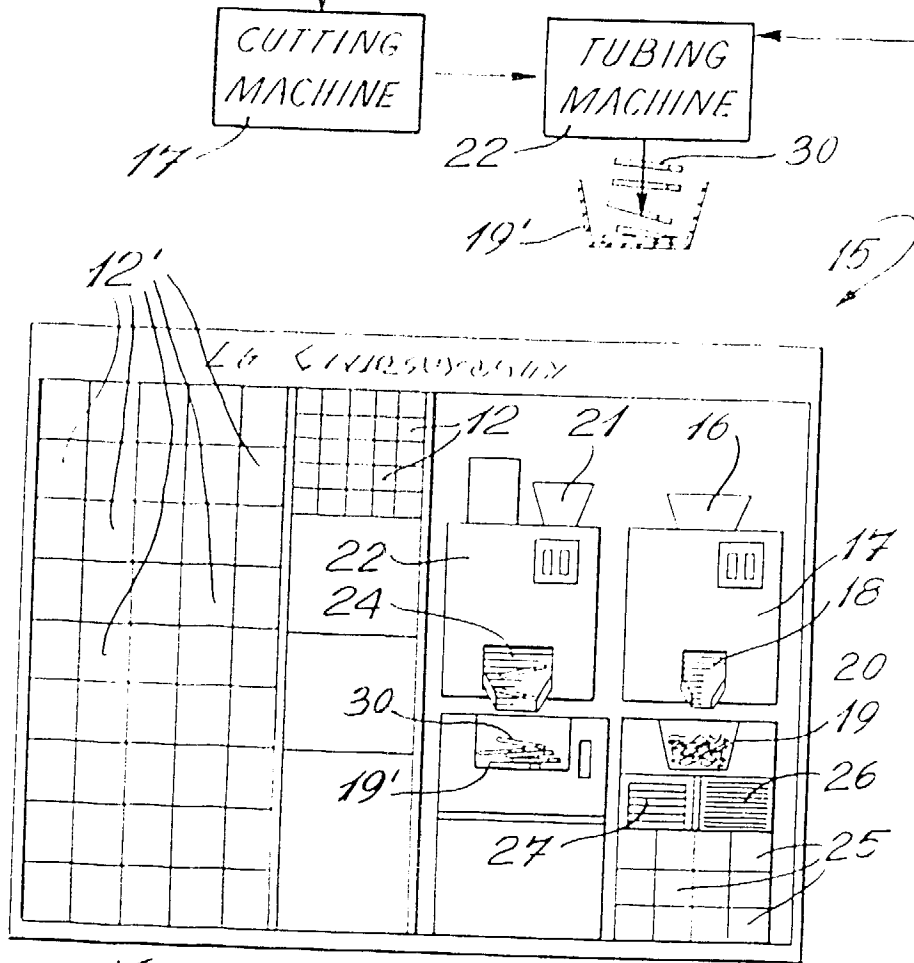
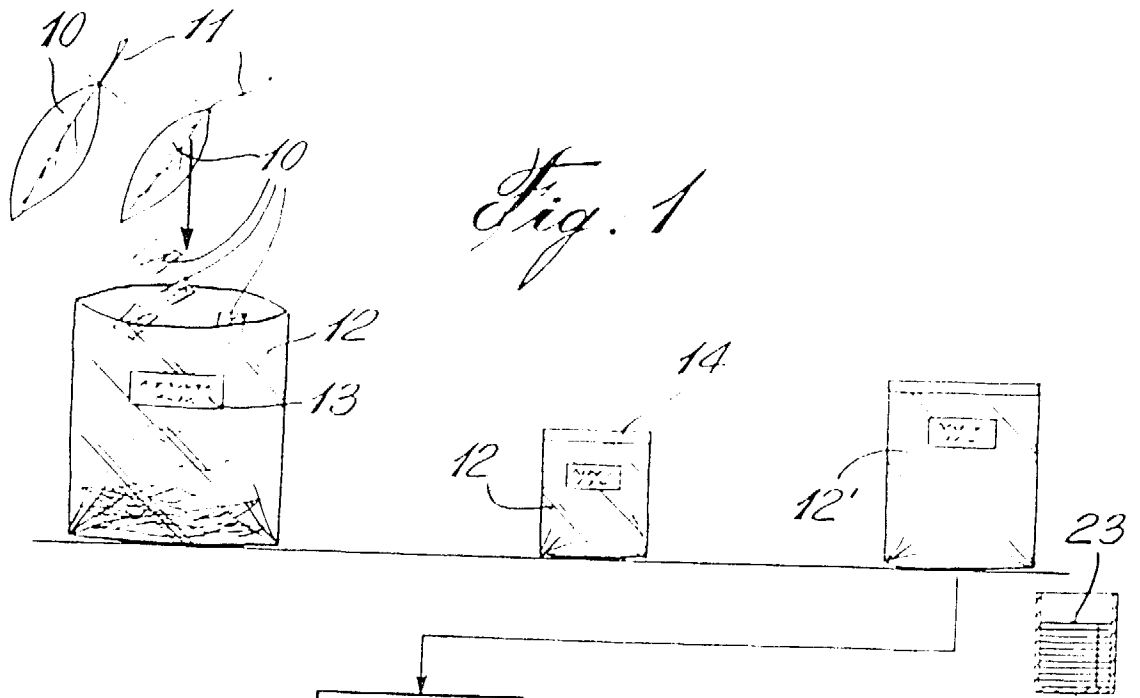


Fig. 2