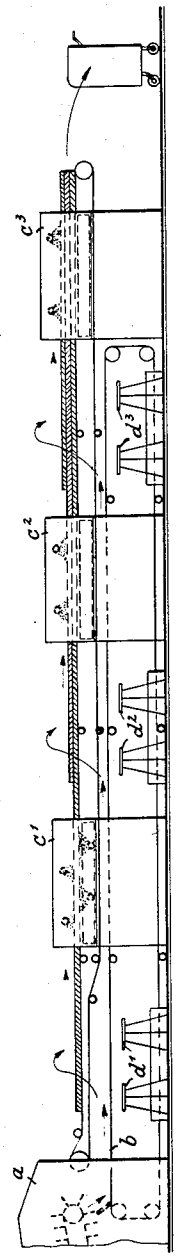
March 12, 1935. E. QUESTER 1,993,857

LOOSENING, MIXING, AND MOISTENING TOBACCO LEAVES

Filed July 7, 1933



INVENTOR
Eduard Quester
BY S. Sokal
ATTORNEY

Patented Mar. 12, 1935 1,993,857

UNITED STATES PATENT OFFICE

1,993,857

LOOSENING, MIXING AND MOISTENING TOBACCO LEAVES

Eduard Quester, Cologne-Lindenthal, Germany

Application July 7, 1933, Serial No. 679,392
In Germany July 15, 1932

8 Claims. (Cl. 131—55)

Application has been filed in Germany July 15, 1932.

It is known to stack tobacco bundles before carrying out the loosening operation, upon a stationary conveying band constituting the base of a container. The bundles are stacked in layers and after a layer has been laid the bundles are moistened. After a stack of a certain height has been laid the base of the container, that is the conveyor band, is moved and discharged. This method and arrangement has the disadvantage that the operation cannot be continuously carried out. Every time when the moistening operation has to be carried out, the operation of depositing further tobacco bundles must be interrupted. Moreover, the delivery of the tobacco takes place at long time intervals, namely only after the whole container has been filled. Consequently the delivery takes place in very considerable quantities which cannot be completely further treated in one operation.

As compared with this known method and arrangement, the present invention provides a method and arrangement by means of which tobacco can be continuously laid out and delivered without interruption, this being a great advantage, inasmuch as according to modern working methods all individual operations should follow each other without interruption.

The invention may be used for moistening and, if necessary, simultaneously mixing loosened tobacco leaves as well as not previously loosened tobacco bundles. Both small cigarette leaves and large pipe tobacco leaves may be treated by the improved method.

The accompanying drawing shows diagrammatically in elevation a plant particularly suitable for treating tobacco, the leaves of which are to be delivered as far as possible all parallel to each other to a cutting machine.

Tobacco bundles which have been previously moistened in a preliminary moistening apparatus a to a degree sufficient to permit of subsequent loosening, are conveyed upon a conveyor or transporting band b past a series of working stations d^1, d^2, d^3, and moistening apparatus c^1, c^2, c^3, arranged between the working stations. At the working stations the bundles are loosened by the operator or operators and separated into individual leaves.

Above the conveyor or transporting band b and parallel thereto there is arranged a second also continuously moving conveyor or transporting band e, preferably made of a perforated material, which passes through the moistening apparatus c^1, c^2, c^3. Upon this second conveyor band e the loosened leaves are placed by the operators so that they lie parallel to each other and transversely to the direction of the movement of the conveyor band. The tobacco layer laid out by the operator or operators of the first station d^1, is moistened in the first moistening apparatus c^1 both from below and from above. The layers laid out by the following stations or groups d^2, d^3 and so on, are moistened in the moistening apparatus c^2 and c^3 only from above.

It will be understood that the tobacco to be loosened may be conveyed to the working stations d^1, d^2, d^3, also by other means than a common conveyor band b. The tobacco can, for instance, be conveyed to the various stations by transverse conveyor bands, carriages or by pneumatic means. Different kinds of tobacco may be conveyed separately to the individual working stations, and by this means mixing of the tobacco of a predetermined kind will be effected upon the common second conveyor band e. Even if tobacco bundles are not conveyed selectively to the individual working stations, but are conveyed upon a common conveyor band b, a very satisfactory mixing of the tobacco will be effected by the laying out upon the second band e, particularly if the two bands b and e are caused to travel with different speeds so that a relative displacement or staggering takes place by the operation of taking off the tobacco from the band b and placing same upon the band e.

I claim:

1. A method of mixing and moistening tobacco in the form of loose leaves or bundles, consisting in placing a horizontal layer of the tobacco upon a continuously travelling conveyor band; subjecting the layer to a moistening treatment; and successively superposing further horizontal layers of tobacco upon said first named layer, the first layer and the superposed layers being subjected to a moistening treatment before the superposition of the next succeeding superposed layer, and all the layers being carried through the operations on a single conveyor band, substantially as described.

2. A method of mixing and moistening tobacco in the form of loose leaves or bundles, consisting in placing a horizontal layer of tobacco of a first kind upon a continuously travelling conveyor band; subjecting the layer to a moistening treatment; successively superposing further horizontal layers of tobacco of different kinds from said first kind upon said first named layer; and moistening the first layer and the succeeding layers

on each occasion previous to the superposition of a new layer; all the superposing and moistening operations being carried out while the layers are located upon the one said conveyor band, substantially as described.

3. A method of mixing and moistening tobacco in the form of leaves or bundles upon a continuously travelling conveyor band consisting in placing a first horizontal layer of tobacco upon the band; subjecting the said first layer on the band to the action of moistening means operating from above and below; superposing successively further horizontal layers of tobacco on said first layer on the band; subjecting the layers after each superposing operation to the action of moistening means operating only from above; all the superposing and moistening operations being carried out while the layers are located upon the one said conveyor band, substantially as described.

4. A plant for mixing and moistening tobacco in the form of leaves or bundles, comprising in combination: a single conveyor band continuously travelling in an uninterrupted longitudinal path and carrying horizontal layers of tobacco; a plurality of working stations adjacent to said conveyor band for placing layers of tobacco successively on said band; and a plurality of moistening apparatuses arranged between said working stations; whereby each layer of tobacco is moistened after being placed on said band, substantially as described.

5. A plant for mixing and moistening tobacco in the form of leaves or bundles, comprising in combination: a single conveyor band continuously travelling in an uninterrupted longitudinal path and carrying horizontal layers of tobacco; a plurality of working stations adjacent to said conveyor band for placing layers of tobacco successively on said band; a plurality of moistening apparatuses arranged between said working stations; whereby each layer of tobacco is moistened after being placed on said band; and means for conveying tobacco to said working stations.

6. A plant for mixing and moistening tobacco in the form of leaves or bundles, comprising in combination: a single conveyor band continuously travelling in an uninterrupted longitudinal path and carrying horizontal layers of tobacco; a plurality of working stations adjacent to said conveyor band for placing layers of tobacco successively on said band; a plurality of moistening apparatuses arranged between said working stations; whereby each layer of tobacco is moistened after being placed on said band; and means for conveying tobacco to said working stations, said means consisting of a second conveyor band.

7. A plant for mixing and moistening tobacco in the form of leaves or bundles, comprising in combination: a single conveyor band continuously travelling in an uninterrupted longitudinal path and carrying horizontal layers of tobacco; a plurality of working stations adjacent to said conveyor band for placing layers of tobacco successively on said band; a plurality of moistening apparatuses arranged between said working stations; whereby each layer of tobacco is moistened after being placed on said band; and means for conveying tobacco to said working stations and improving the mixing of the tobacco comprising a second conveyor band running parallel to but at a different speed from said first named band.

8. A method of mixing and moistening tobacco in the form of loose leaves or bundles, consisting in placing a horizontal layer of the tobacco upon a continuously travelling conveyor band so that they lie parallel to each other and transversely to the direction of movement of the conveyor band; subjecting the layer to a moistening treatment; and successively superposing further horizontal layers of tobacco upon said first named layer, the first layer and the superposed layers being subjected to a moistening treatment before the superposition of the next succeeding superposed layer, and all the layers being carried through the operations on a single conveyor band, substantially as described.

EDUARD QUESTER.