Feb. 20, 1940. V. HEIDELBERG 2,190,785

TOBACCO MIXING AND DISTRIBUTING DEVICE

Original Filed Dec. 16, 1935

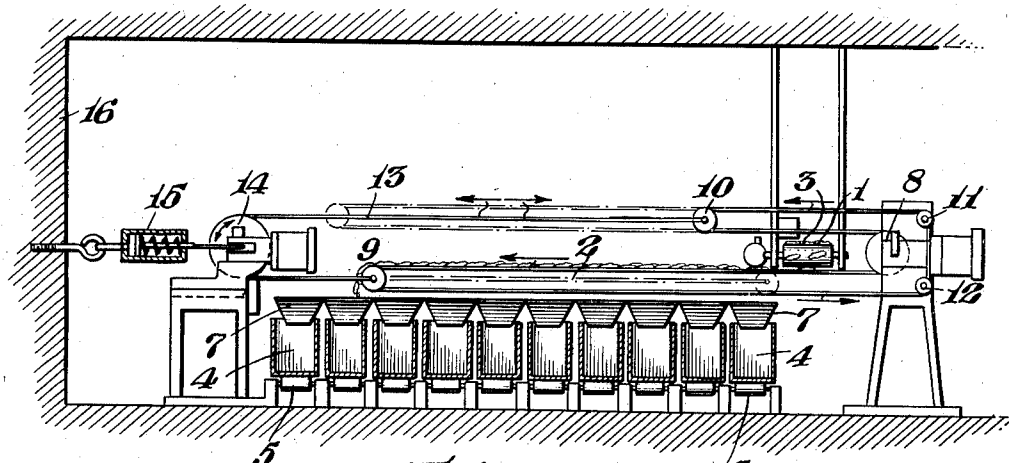
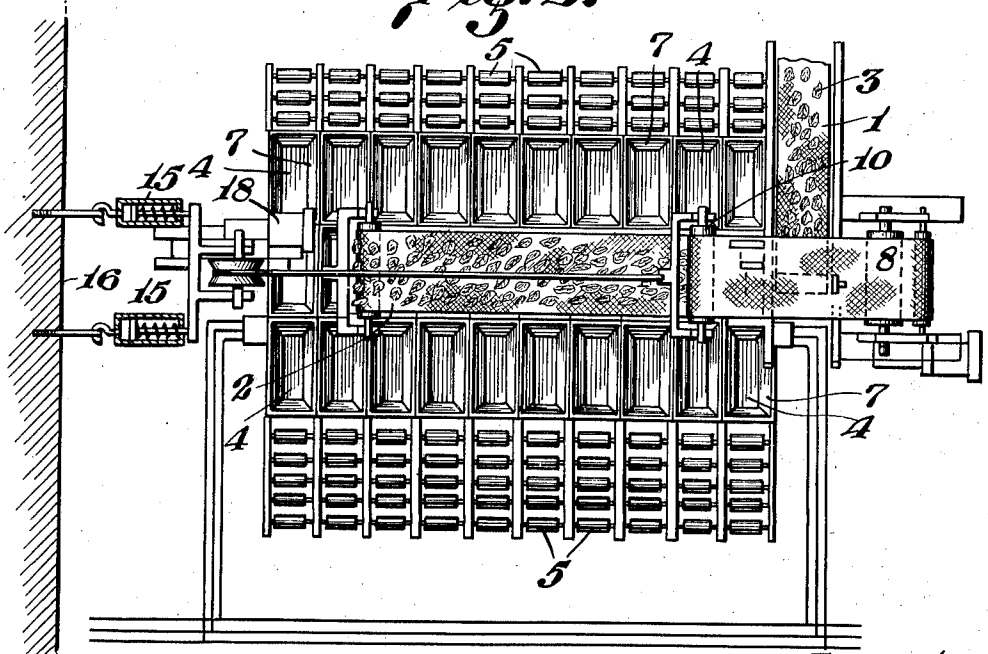


Fig. 1.

Fig. 2.



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TOBACCO MIXING AND DISTRIBUTING DEVICE

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Original application December 16, 1935, Serial No. 54,703. Divided and this application July 6, 1937, Serial No. 152,167. In Germany December 16, 1935

4 Claims. (Cl. 131—149)

This invention relates to a device for mixing and distributing tobacco, and the present application is a division of my copending application Ser. No. 54,703, filed December 16, 1935.

Various devices have been proposed for mixing tobacco leaves and distributing them into different containers. Some of these devices are roller conveyors arranged in wedgelike fashion for moving collecting containers above which a feeding belt for the tobacco is provided. Arrangements of this type fail, however, to permit good utilization of space in angular working rooms. It has further been suggested to arrange the collecting containers in a single row one after the other, but this arrangement is open to the objection that the conveyor above the containers has to be moved to and fro in a longitudinal direction and that consequently larger rooms are required, since at the ends of the containers some extra space is needed for the conveyor. A further drawback of the known devices is that during exchange of the containers the work has to be stopped.

The invention eliminates the drawbacks of the known devices by providing a mixing and distributing device capable of continuous operation. According to the invention, the receiving containers for the tobacco are arranged in groups several of which are disposed on a reversible carrier and alternately cooperate with a joint tobacco charging station, reversal being effected in such manner that one group of containers is charged with tobacco whilst the other one is exchanged for empty ones.

To save space an intermediate conveyor reciprocating in longitudinal direction and distributing the tobacco into the collecting containers preferably is so arranged that a portion thereof not participating in the conveying operation is taken out of the working plane thereof. This can be done by providing at the end of the device a roller arrangement for the intermediate conveyor, over which the conveyor portions are passing. For the turned over end of the conveyor a tension roller may be provided.

By way of example, the invention is illustrated in the accompanying drawing which shows one embodiment of the invention.

Figs. 1 and 2 are elevational and plan views, respectively, of the invention.

Referring to the drawing, the tobacco to be mixed is supplied by a main conveyor 3 which passes over stationary guide pulleys 1. The tobacco is distributed by means of an intermediate conveyor 2 into the collecting containers 4 which in the construction shown are arranged in a row one after the other. The conveyor 2 moves to and fro over this row of containers in a manner that will be described below. A number of such rows of containers are disposed side by side on a joint carrier 6 provided with the rollers 5 and being displaceable transversely to the direction of motion of the intermediate conveyor 2 so as to permit alternate cooperation of the conveyor with one or the other of the rows of containers.

To facilitate charging of the containers with tobacco hoppers 7 are provided above them.

Motion of the conveyor 2 is derived from the roller 8 which is connected with a drive, not shown. The ends of the band 2 pass over loose rolls 9, 10, and guide rollers 11, 12 are provided also. The rolls 9, 10 are interconnected by a traction member 13, such as a rope, which is placed over a roll 14 suspended from a tension spring 15 or from a stationary part of the machine frame. By means of the roller 8 the conveyor 2 is continually moved in the direction of the arrow shown, whilst by a reciprocatory rotary motion of the member 14 the ends of the conveyor 2 are displaced relative to one another. The roll 9 passes over the entire length of the row of containers 4, so that the tobacco delivered by the main conveyor 3 to the intermediate conveyor 2 is successively thrown into the individual containers. The portion of the conveyor 2 disposed directly above the row of containers 4 carries out a continual to and fro motion to insure uniform distribution of the tobacco to all containers 4.

As clearly indicated in the drawing, the device can be arranged in a relatively short space, since the portion of the conveyor not participating in working is taken out of its operative plane. It is not absolutely necessary to bend back the portion in U-shape, as bending to the extent of 90° with the aid of suitable guide rollers will be sufficient.

I claim:

1. In an apparatus for conveying material to containers in a row in succession, an endless belt conveyor, rollers at the ends of said conveyor, and means connected to said rollers for reciprocating said rollers simultaneously in opposite directions in paths parallel to the row of containers, whereby as said conveyor reciprocates, one end thereof will be adapted to deposit material carried thereon into said containers in succession.

2. In an apparatus according to claim 1 means for deflecting the conveyor portion projecting beyond the containers from its working plane.

3. In an apparatus according to claim 1 means for deflecting the conveyor from its working

plane, said means substantially comprising reversing rolls for the two sides of the conveyor and a traction member reversible in its direction of motion for moving the ends of the conveyor in working rhythm during mixing and distributing of the tobacco.

4. In an apparatus according to claim 1 means for deflecting the conveyor from its working plane, said means substantially comprising reversing rolls for the two sides of the conveyor and a traction member reversible in its direction of motion for moving the ends of the conveyor in working rhythm during mixing and distributing of the tobacco, said traction member being formed as tension roller.

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