Sept. 20, 1955 A. SERAGNOLI 2,718,331

ROTARY DISC FEED DISTRIBUTING MECHANISM

Filed April 15, 1952

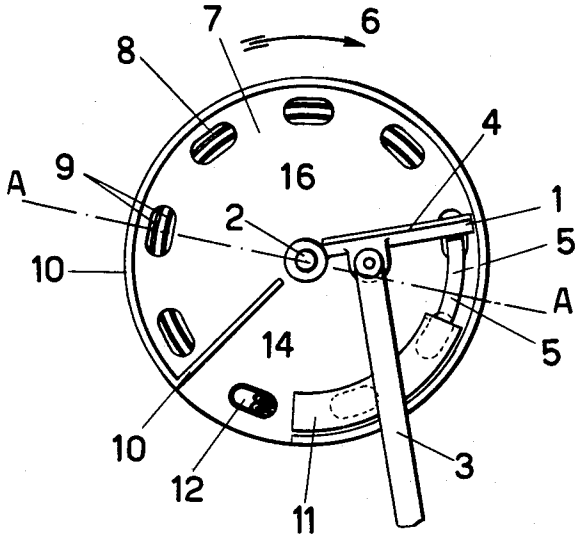


FIG. 1

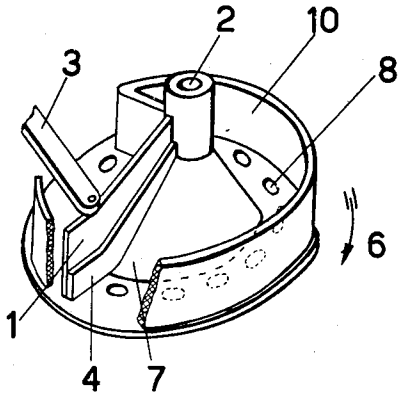


FIG. 3

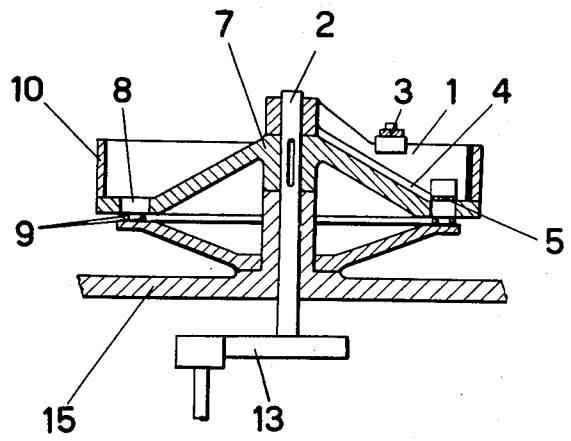


FIG. 2

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ROTARY DISC FEED DISTRIBUTING MECHANISM

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Application April 15, 1952, Serial No. 282,301

3 Claims. (Cl. 221—200)

In the pending patent application Ser. No. 219,613 filed on April 6, 1951, is described a distributing mechanism consisting of a rotating disc on which special borders, walls and brushes, delimit an area wherein lie the articles loaded in bulk which, owing to the movement, place themselves in the pockets machined in the disc. The arangement of the articles in the pockets can be facilitated manually or by brushes or other systems indicated.

It has been noticed that the arrangement of the articles in the pockets is facilitated and rendered automatic by the mechanism which forms the scope of this patent, described in the following text and in the drawings which are an integral part thereof and in which:

Fig. 1 is a view from above of the distributing mechanism;

Fig. 2 is a vertical section of the distributing mechanism according to plane AA of Fig. 1.

Fig. 3 is a schematic perspective view partly in section of the mechanism.

The invention comprises a disc **7** with a raised central portion and pockets **8** distributed on its periphery, each for receiving an article therein which entirely fills it up; means **13**, schematically shown as a Maltese cross mechanism, for making the disc advance intermittently while rotating in the direction of arrow **6**; a wall **10** fixed to the stationary frame **15** of the mechanism and an oscillating means **1** dividing the area above the said disc **7** into an encircled area **16** containing the articles loaded in bulk, and an outside area **14** for removing the articles; means **3** to make the oscillating means oscillate forward and backward; means **12** for the removal of the articles from the pockets of the disc; means **9** to sustain the articles in the pockets **8** as long as they are in the encircled area and until they reach the removing means **12** in the removal area.

The mechanism operates as follows: The articles to be distributed are loaded in bulk in the encircled area **16**. The pockets are shaped to contain each only one of said articles and are bottomless. The sustaining means **9** are rails fixed to the stationary frame of the mechanism or other similar devices, over which slide the articles placed into the pockets. Each article that entirely falls into a pocket is brought by the disc, passing under oscillating means **1**, from the encircled area **16** to the removing area **14** where it is removed from the pocket by the removing means **12**, consisting in an elevator which lifts the article to the mechanisms of the machines served by the distributing mechanism, which is not shown in the drawings. The disc is intermittently rotated in order to allow the said removing means **12** to pass through the bottomless pocket during the pausing phase of the disc and raise the article above the disc and bring it to the following parts of the machine served by the distributing mechanism.

The encircled area is encircled by a stationary wall **10**, the purpose of which is to prevent articles to fall

out of the encircled area, and by the oscillating means **1**, the purposes of which are both to prevent the articles that have not placed themselves into the pockets to pass to the removal area and to agitate the bulk of articles in the encircled area in order to help them to fall and ordinately place themselves in the pockets.

In the preferred manner of accomplishment of the invention referred to in this specification, the oscillating means include a vane hinged on shaft **2** of the disc, and a rod **3** operated either by eccentrics or cams or other suitable means, and connected to the vane so that to make it oscillate.

The lower part of the vane facing the encircled area, has a gasket **4** of suitable material chosen according to the nature of the articles to be distributed, to push back into the encircled area the articles which have not found place into the pockets without damaging them: the opposite lower portion of the vane facing the outer area is fitted with an oscillating covering device **5**, constituted by a blade fixed to the vane and oscillating with it, which covers the pockets after they have reached the removing area passing under the vane; another stationary covering device **11** is fixed to the stationary frame of the distributing mechanism and cooperates with the said oscillating covering device **5** to keep the pockets covered until they reach the removing means, so as to prevent the articles to come out from the pockets. Obviously, the stationary covering device has a groove into which enters and slides the oscillating blade or vice versa.

It is obvious and expressly understood that alterations and variations can be made without deviating from the spirit and scope of the invention, such as substituting the connecting rod **3** with other suitable means for obtaining the oscillation of the oscillating means, with an appropriate setting of the amplitude and period of oscillation of these means; making the oscillating means of various materials; giving them combined rotary and up and down motion on the forward or return stroke, etc., etc.

Having thus described the invention in its details with reference to a preferred manner of accomplishment it will be obvious to experts in this field, after having understood the invention, that other changes and alterations can be made without deviating from the spirit and scope of the invention and it is intended, in the following claims, to patent also all those changes and alterations which enter into the spirit and scope of the invention and in the following claims.

1. In a rotating disc feeding mechanism provided with a rotatably mounted disc, having pockets each for entirely receiving an article therein; means for advancing the disc intermittently; a wall, and oscillating means positioned over said disc, dividing the area above said disc into an encircled area containing the articles in bulk, and an outside open removal area, said oscillating means forming a moving closure in said encircled area for repelling and agitating the bulked articles; said disc subsequently moving said filled pockets under said closure to said removal area where the articles are removed from the pockets.

2. In a mechanism according to claim 1, an oscillating covering device, connected with the oscillating means, to cover the pockets after they have passed under said oscillating means, for preventing the exit of the articles which are contained in the pockets.

3. In a mechanism according to claim 1, an oscillating blade connected with the oscillating means and a stationary cover cooperating therewith, whereby the articles are retained in their pockets after they have passed under said oscillating means.

(References on following page)

