

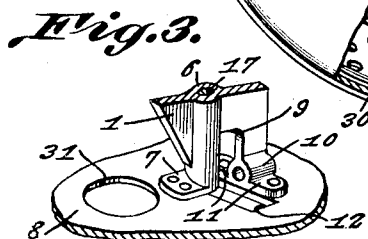
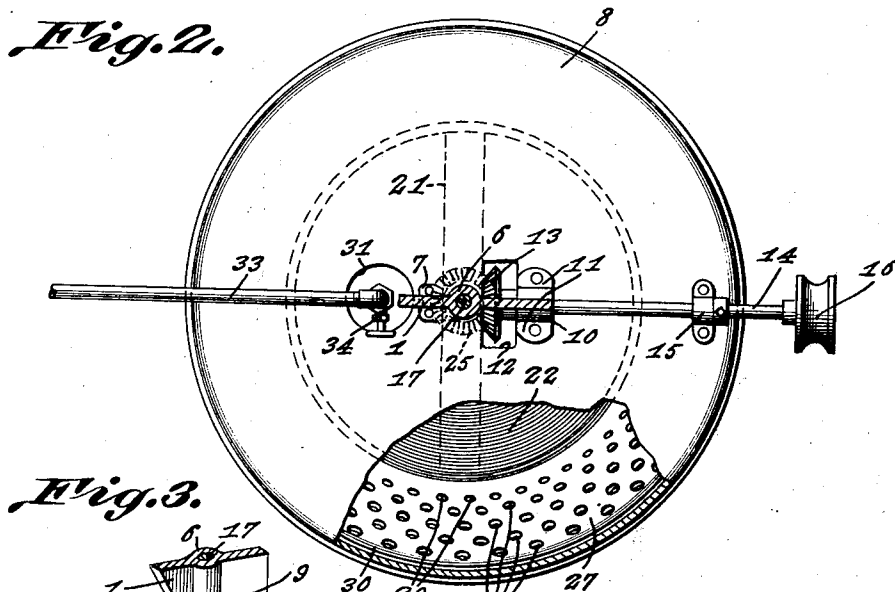
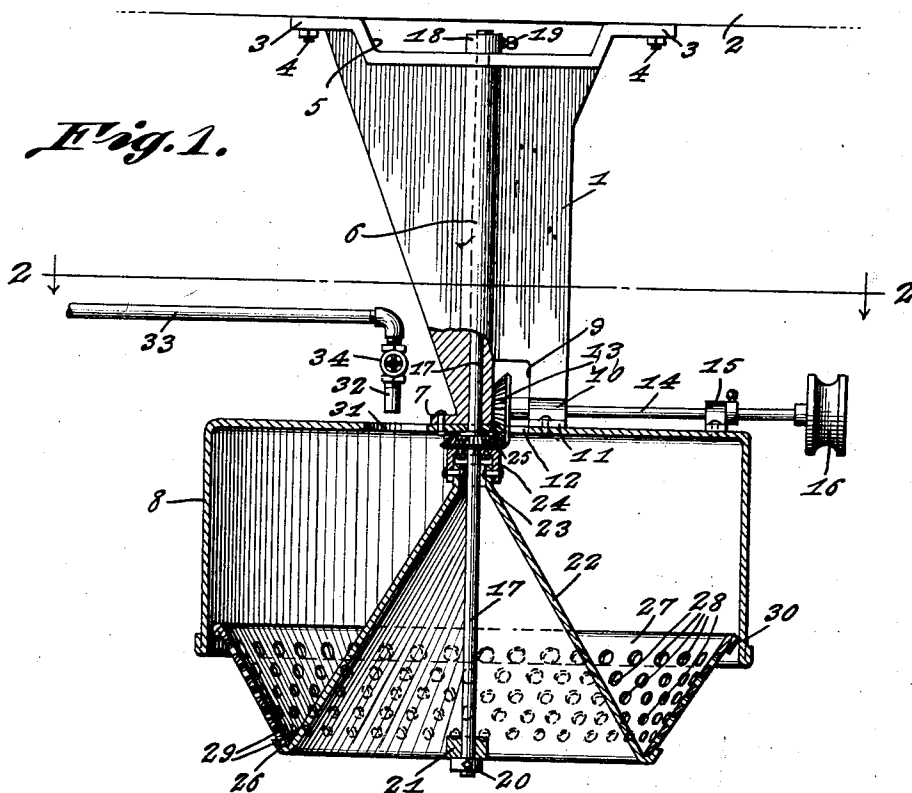
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MOLASSES DISTRIBUTOR

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MOLASSES DISTRIBUTOR

Application filed December 23, 1931. Serial No. 582,842.

This invention relates to molasses distributors, and has for its object the production of a simple and efficient distributing machine for spreading the molasses or other liquid over a wide area in fine streams so as to facilitate the proper mixing of the molasses with stock feed, and also in this manner prevent the large accumulation of the molasses in certain portions of the feed.

Another object of this invention is the production of a simple and efficient rotating distributor member mounted within the distributor which is so constructed as to spray a series of various sized streams of liquid or molasses upon the feed so as to more easily distribute the molasses throughout the entire bulk of the feed while mixing.

A still further object of this invention is the production of a simple and efficient mechanism for evenly distributing molasses over the feed so the molasses may be efficiently mixed with the feed.

Other objects and advantages of the present invention will appear throughout the following specification and claims.

In the drawing:

Figure 1 is a vertical sectional view through the body of the distributing machine, certain other portions being shown in side elevation.

Figure 2 is a section taken on line 2-2 of Figure 1.

Figure 3 is a detail perspective view of a portion of the upper end of the distributor casing or housing, showing the supporting bracket in section and illustrating the manner of connecting the supporting bracket to the casing or housing.

By referring to the drawing, it will be seen that a hanger or support 1 is provided at one end with a plurality of laterally extending straight feet 3 which receive suitable bolts 4 for connecting the said hanger or support to a suitable supporting beam 2. The hanger or supporting member 1 is provided with a depressed portion 5 and a longitudinally extending tubular portion 6 arranged centrally of the hanger or supporting member 1, as shown in Figure 1. The lower end of this tubular portion 6 is provided with a

laterally extending foot 7 which is secured to the top of the housing or casing 8 of the distributor. The hanger 1 is also provided with a notched portion 9 near the bottom thereof, and carries a journal 10 having laterally extending feet 11, which are secured to the top of the housing or casing 8, as clearly shown in Figure 3. The housing or casing 8 is provided with an elongated aperture 12 for the purpose of receiving the beveled gear 13 which is carried by the driving shaft 14. This beveled gear 13 fits through this longitudinally extending cut-out portion or notch 12, and also into the notch 9, which registers therewith, thereby permitting the beveled gear 13 to freely rotate. The driving shaft 14 is supported within the journal 10 and also upon a suitable journal 15 and this shaft 14 is driven by means of a suitable driving pulley 16 carried by the outer end of the shaft 14.

A cone supporting shaft 17 extends longitudinally through the tubular portion 6 of the hanger or supporting member 1, as shown clearly in Figure 1, and this shaft 17 carries a collar 18 which is secured in an adjusted position thereon by means of a suitable bolt 19, thereby holding the shaft 17 against downward movement through the tubular portion 6 of the hanger or supporting member 1. This collar 18 fits within the depressed portion 5 of the hanger or supporting member 1, as shown. The shaft 17 also carries an adjustably fixed collar 20 at its lower end which abuts against the transversely extending supporting bar 21 of the distributor cone 22. The shaft 17 passes through the bar 21 for the purpose of efficiently supporting the cone 22 in its proper position.

The distributor cone 22 is suspended within the inverted cup-shaped casing or housing 8, as shown in Figure 1, and this distributor cone 22 is provided with a reduced neck 23 over which fits an inverted U-shaped hanger bracket 24, which supports a beveled gear 25, and which beveled gear 25 is loosely mounted upon the suspending or cone-supporting shaft 17, as shown clearly in Figure 1. The beveled gear 25 meshes with the beveled gear 13 and is driven thereby for the purpose of

rotating the distributor cone 22, as will be obvious by carefully considering the drawing.

The lower end of the distributor cone 22 is provided with an annular flange 26 which supports a perforated flared inverted cone-shaped plate 27. The ring plate 27 has a series of perforations 28 formed therein varying in size and graduated in size from the smaller apertures 29 formed along the bottom, to the larger apertures which are formed nearer the top of the inverted cone-shaped plate 27. The outer or upper edge of the inverted cone-shaped perforated plate is rolled to constitute a reinforcing bead 30, and this is adapted to fit in close contact with the inner wall of the inverted cup-shaped housing. The small end of the distributing cone 22 fits into the housing 8 and extends up near the top thereof, the distributing cone 22 flaring outwardly toward the bottom of the housing 8, as shown, whereas the inverted cone-shaped perforated distributor plate 27 flares outwardly toward the side of the housing, as shown.

The housing 8 is provided with an aperture 31 in the top thereof which is adapted to register with the lower discharge end 32 of the molasses supply pipe 33. A suitable valve 34 is carried by the pipe to control the supply of molasses or other liquid to the distributor housing 8 and cone 22.

In operation, it should be understood that the molasses or other liquid will pass through the pipe 33 and out the discharge end 32 and enter the housing 8 through the aperture 31 and fall upon the distributor cone 22. By the centrifugal motion of this cone obtained through the driving shaft 14 and through the beveled gears 13 and 25, the molasses will be spread out and sprayed out through the graduated apertures formed in the apertured distributor plate 27 carried by the cone 22, and the molasses or other liquid will then be evenly sprayed out upon the stock feed below.

It should be understood that the distributor may be driven in any suitable or desired speed, and where the molasses is cold or heavy, the molasses will be thrown out through the various sized apertures in the distributor plate 27 in fine streams or strings.

It should be understood that certain detail changes in the mechanical structure may be employed without departing from the spirit of the invention, so long as these changes fall within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A molasses distributor comprising a hanger, an inverted cup-shaped housing fixed on the hanger, a shaft journaled through the hanger and housing, a non-apertured cone-shaped distributor journaled on the shaft, a flared cone-shaped plate on the lower and widened end of the distributor received in

the housing and provided with series of apertures, means for directing a flow of molasses through the housing onto the distributor and means for revolving the distributor.

2. A distributor of the class described comprising a hanger, a substantially inverted cup-shaped housing fixed to said hanger, a rotatable distributor cone suspended within said housing and provided with a substantially cone-shaped distributor plate at the lower end of the distributor cone and flared outwardly and upwardly, said plate being provided with graduated distributing apertures formed therein, and means for rotating said distributor cone.

3. A distributor of the class described comprising a hanger, a housing supported upon said hanger, means for supplying liquid to said housing, a distributor cone suspended within said housing and provided with an outflared distributing plate having a plurality of graduated apertures formed therein, and means for rotating said distributor cone.

4. A distributor of the class described comprising a hanger, a housing secured to said hanger, a drive shaft carried thereby, a beveled gear carried by said drive shaft, a distributor cone mounted within said housing and provided with a reduced neck, a substantially inverted U-shaped bracket carried by said neck, a beveled gear supported upon said bracket and meshing with said first mentioned beveled gear, a suspending shaft passing through said last mentioned beveled gear and through said cone, means carried by said suspended shaft for supporting said cone, an outwardly flared distributor plate carried by the lower end of said cone, the housing fitting over said cone and partly overhanging the upper edge of said distributor plate, and said distributor plate provided with graduated apertures varying in size from a series of small apertures located near the bottom to a series of larger apertures located near the top thereof.

In testimony whereof I affix my signature.
CHRISTIAN S. BEILER.