May 23, 1950 P. W. SCHICK 2,508,689

CORNCOB BUTTERING MACHINE

Filed June 25, 1947 3 Sheets-Sheet 1

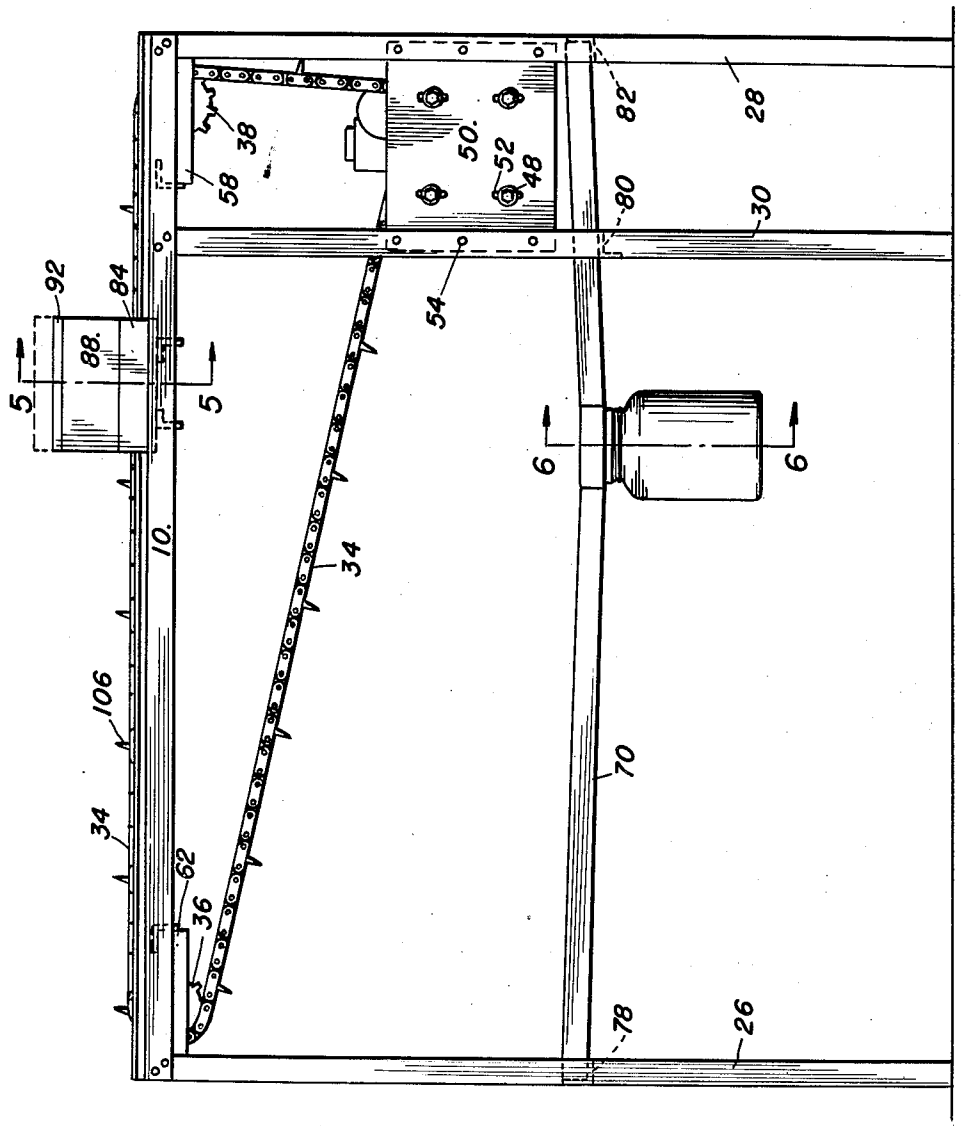


Fig. 1.

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CORNCOB BUTTERING MACHINE

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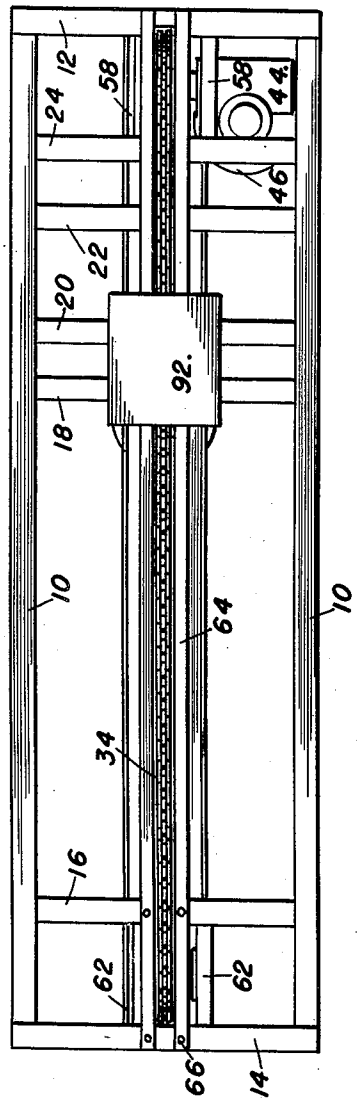


Fig. 2.

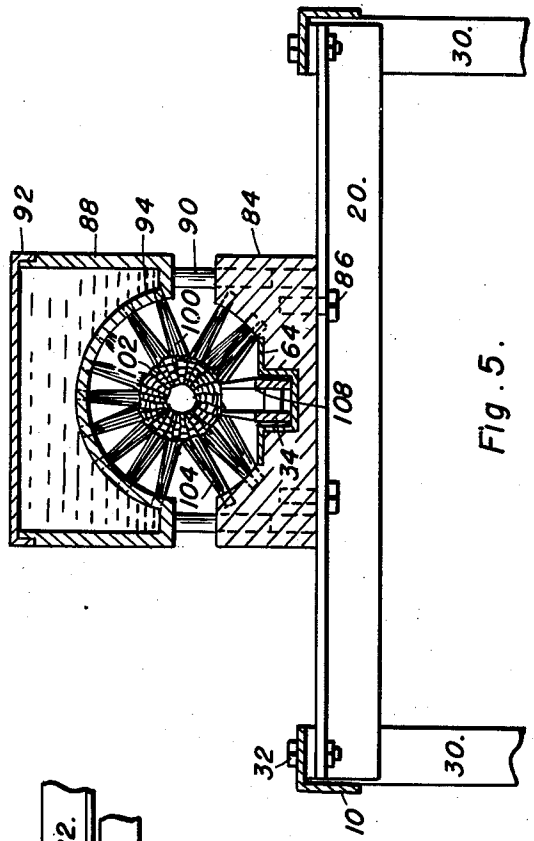


Fig. 5.

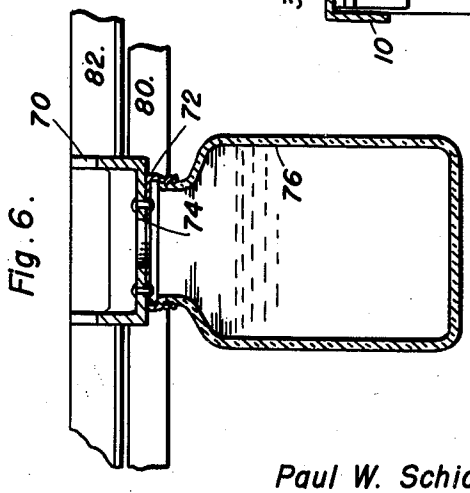


Fig. 6.

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CORNCOB BUTTERING MACHINE

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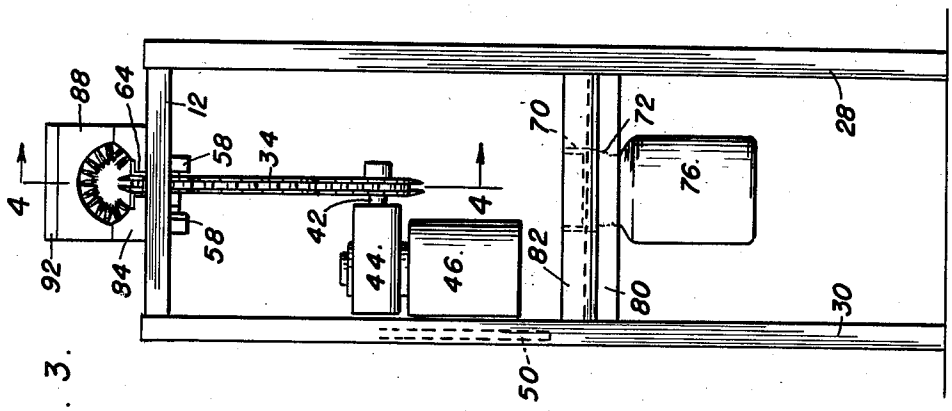


Fig. 3.

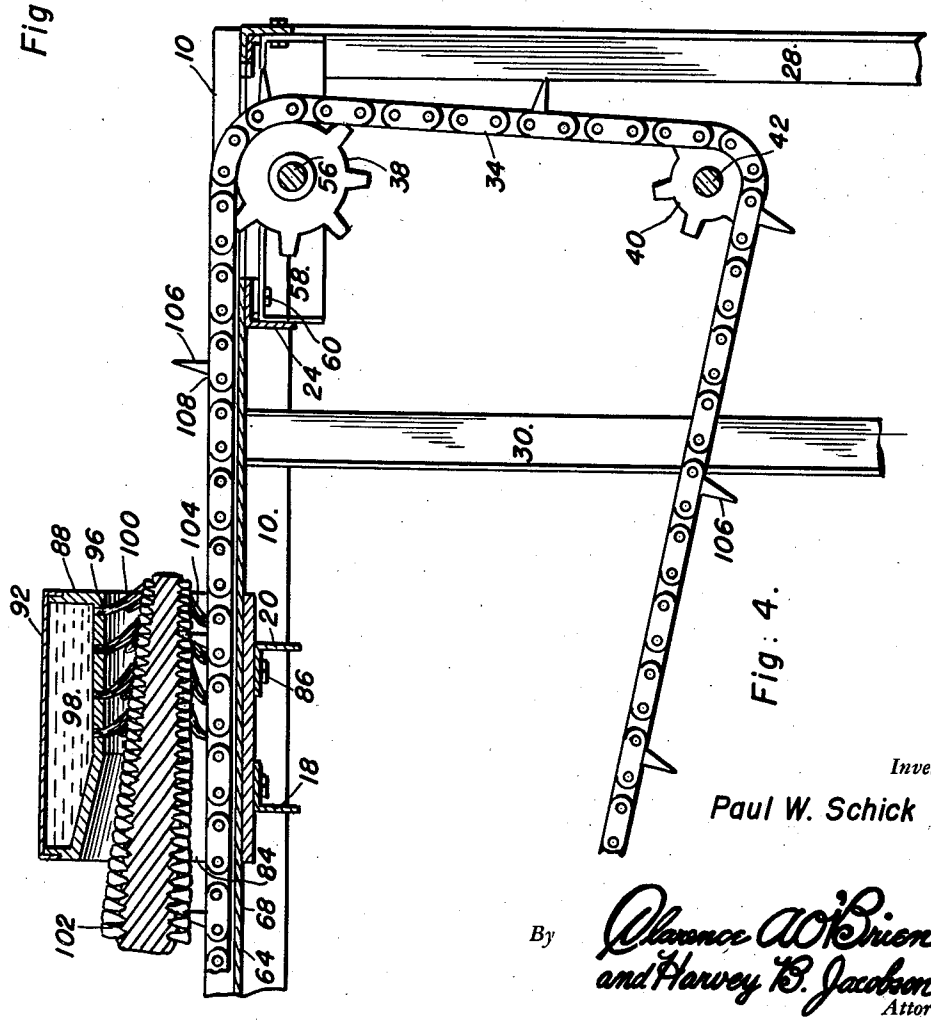


Fig. 4.

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UNITED STATES PATENT OFFICE

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CORNCOB BUTTERING MACHINE

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Application June 25, 1947, Serial No. 756,853

3 Claims. (Cl. 91—2)

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This invention relates generally to coating devices, and more particularly to a corncob buttering machine including an endless conveyor operatively mounted on a frame, a liquid butter reservoir with restricted outlets in the base thereof to allow the liquid butter to gravitate downwardly into corncobs carried under the reservoir by the conveyor, the device including novel reservoir mounting means and a brush of multiple character adapted to spread the butter evenly on the cobs.

A primary object of this invention is to accelerate and simplify the process of buttering corncobs, and the device has been developed primarily for the use of vendors of buttered corn on the cob, as at beach resorts and amusement centers.

Another object of this invention is to provide a device of this character which will uniformly coat corncobs with a film of butter and which will be very economical in the use of this butter, the device including means to limit the flow of liquid butter when no cob is in contact with the brush spreading means.

Another object of this invention is to provide a corncob buttering machine which is very easily cleaned and in which means is incorporated to collect any moisture or butter which may drip from the corncobs.

And a still further object of this invention is to provide means for adjusting the tension of the conveyor and means for automatically adapting the device for use with corncobs of different sizes.

A last object to be specifically mentioned is to provide a corncob buttering machine which is relatively inexpensive and practicable to manufacture, extremely simple and convenient to use, the conveyor being ordinarily motor driven, and which will give generally efficient and durable service.

With these objects definitely in view, this invention resides in certain novel features of construction, combination and arrangement of parts and portions as will be hereinafter described in detail in the specification, particularly pointed out in the claims hereunto appended, and illustrated in the accompanying drawings which form a material part of this application, and in which:

Figure 1 is a side elevational view of the assembled machine;

Figure 2 is a top plan view of the assembled machine;

Figure 3 is an end elevational view of the assembled machine, the view being taken as from the right hand end of Figure 1;

Figure 4 is a fragmentary enlarged vertical sectional view of a portion of the machine, taken on the line 4—4 in Figure 3;

Figure 5 is an enlarged detail vertical sectional

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view of the buttering means assembly, the view being taken on the line 5—5 in Figure 1; and

Figure 6 is an enlarged detail view of a portion of the drip pan and the removable receptacle secured thereon, the view being a vertical sectional view taken on the line 6—6 in Figure 1.

Similar characters of reference designate similar or identical parts and portions throughout the specification and throughout the several views of the drawings.

Referring now to these drawings in detail, it will be noted that this machine is supported on a frame comprised essentially of horizontally disposed top outside frame members 10, top end members 12 and 14, cross brace members 16, 18, 20, 22 and 24, end legs 26 and 28, a pair of intermediate legs 30 and a complement of attaching bolts 32.

An endless conveyor 34 is mounted on the sprocket wheels, the sprocket wheel 36 being mounted at one end of the frame and at the top thereof, the sprocket wheel 38 being mounted at the other end of the frame and on a level with the sprocket 36, and the sprocket wheel 40 being mounted on a shaft 42 which is connected with the gear reduction assembly 44 associated with the electric motor 46. This electric motor is adjustable by means of the bolts 48 on the plate 50. The plate 50 is provided with a plurality of slots 52 and is laterally offset for attachment to the legs 28 and 30 by means of the bolts or rivets 54. The sprocket wheel 38 is mounted on a shaft 55 whch is terminally mounted in angle plates 58 secured by bolts 60 to the cross brace member 24 and the end frame member 12.

The sprocket wheel 36 is similarly mounted on a pair of angle iron brackets 62 which are secured in spaced relation to the cross brace member 16 and the end frame member 14.

An elongated trough member 64, of a length substantially equal to the length of the frame, is secured on the top of the frame by bolts 66 and the chain 34 travels within this trough, as illustrated in Figure 5. The base of the trough is apertured as at 68 to allow excess butter and any condensed moisture to escape through the base of the trough and to fall into the drip pan 70 which is coextensive in length with the frame and is U-shaped in cross section. It should be noted that this drip pan is bent intermediate the length thereof so that the excess butter and moisture thereinto will gravitate towards an intermediate point where a bracket 72 is secured, this bracket and the registering portion of the base of the drip pan being apertured as at 74 to provide access to the receptacle 76 which is adapted to be screwed onto the bracket 72, all as clearly illustrated in Figure 6. In this connection it should be noted that the drip pan 70 is

terminally secured, as by welding, to leg cross braces 78 at one end of the frame and to other braces 80 and 82 at an intermediate portion and at the other end of the frame, respectively.

Intermediate the length of the frame, and on the top thereof, there is a block 84 which is provided with a deep channel on the upper surface thereof to receive the trough 64, this block being secured in place by bolts 86 inserted through the cross braces 18 and 20 and into the base of the block. The liquid butter reservoir 88 is mounted on this block to slide vertically by means of a plurality of spaced pins 90 which are rigidly secured to the base of the reservoir and extend downwardly into suitable bores provided in the block 84. The reservoir 88 is provided with a removable cap or cover 92 and the base of the reservoir is upwardly arcuate as at 94, there being a plurality of apertures 96 provided in this arcuate portion to allow the liquid butter 98 which will be placed in the reservoir to gravitate into the centers of brushes 100 which are secured in any suitable manner radially of this arcuate portion, the attached end of each brush encircling one of the apertures 96. One end of this arcuate portion of the reservoir 88, that is the end thereof adjacent the cross brace 18, is outwardly flared to guide a corncob 102 to the portion provided with the brushes 100, and the block 84 is provided with similar brushes 104 which are also disposed substantially radially of the corncob 102 when the same is being moved by the chain 34 between the brushes 100 and the lower brushes 104.

The endless sprocket chain 34 is provided with a plurality of teeth 106 and these teeth are so proportioned and positioned on the chain to adapt the same for impaling or pushing the cobs 102 along the top of the machine. The teeth will ordinarily be welded to individual links in the chain, as indicated at 108.

The operation of this invention will be clearly understood from the foregoing description of the mechanical details thereof, taken in connection with the above recitation of the objects sought to be achieved by this invention but in recapitulation it may be noted that the corncobs 102 will be manually placed on the portion of the revolving chain 34 disposed as to the left in Figure 1, the cobs being carried by the chain into contact with the brushes 100 and 104. Liquid butter 98 will gravitate downwardly through the apertures 96 ito the brushes 100 ad these brushes 100 will spread this liquid butter evenly over the surface of the cob and feed liquid butter to the brushes 104 which will complete the process of coating the cob with liquid butter. It has been found that provision of the brushes encircling the apertures 96, and formed with small channels extending through the brush, has resulted in satisfactory control of the flow of the liquid butter, the said flow being substantially stopped when the brushes are not agitated by the cobs 102. Obviously the cobs, after being buttered, will be removed from the chain 34, as at the right hand end of the Figure 1.

From the foregoing description it is thought that a clear understanding of how this invention may be reduced to practice may be obtained, and further description is thought unnecessary.

Though there has been shown a particular embodiment of this invention, this application is not limited to this particular embodiment, but

it is desired to include in the scope of this invention the construction, combination and arrangement of parts and portions substantially as set forth in the appended claims.

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

1. A corncob buttering machine comprising a frame, an endless conveyor operatively mounted on said frame, a liquid butter reservoir mounted on said frame above a portion of said conveyor and having a restricted outlet in the base thereof, and means to actuate said conveyor, said reservoir having brush means adjacent said outlet and substantially encircling cobs brought into contact therewith by said conveyor, said brush being divided into upper and lower portions, the lower portion being fixed on the frame and the upper portion being vertically slidably mounted on the lower portion to accommodate cobs of different sizes.

2. A corncob buttering machine comprising a frame, an endless conveyor operatively mounted on said frame, a liquid butter reservoir mounted on said frame above a portion of said conveyor and having a plurality of restricted outlets in the base thereof, and means to actuate said conveyor, said reservoir having a brush assembly adjacent said outlet and substantially encircling cobs brought into contact therewith by said conveyor, said reservoir being vertically slidable and said brush being divided into upper and lower portions to accommodate cobs of different sizes, the upper portion of said brush assembly carrying said reservoir and having guiding pins vertically slidably mounted in said lower portion, the lower portion being fixed on said frame, and said brush assembly comprising groups of bristles having ends attached to said reservoir in encircling arrangement with reference to said outlets so that liquid butter will gravitate from the reservoir through the outlets and bristles on the upper portion of the brush assembly to drip onto that part of the brush assembly on the lower portion of the brush assembly.

3. A corncob buttering machine comprising a frame, an endless conveyor operatively mounted on said frame, a liquid butter reservoir mounted on said frame above a portion of said conveyor and having a restricted outlet in the base thereof, a motor to actuate said conveyor, said conveyor being entrained on three sprockets one of which is carried by the drive shaft of said motor, a plate fixed on said frame and having slot apertures therein to receive bolts adjustably securing said motor on said plate.

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