Feb. 23, 1932. C. G. STEFFEN 1,846,227

MACHINE FOR SUPPLYING PAPER CUPS TO BAKING PANS AND THE LIKE

Filed Nov. 26, 1930

Fig. 1.

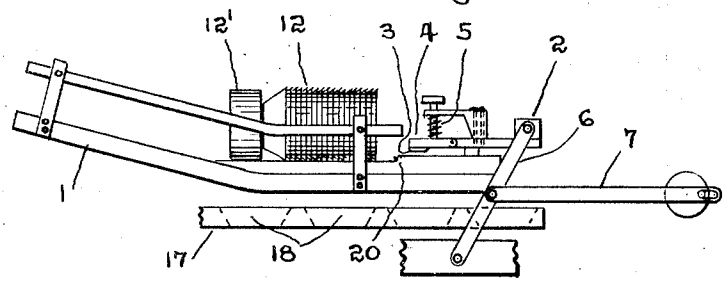


Fig. 2.

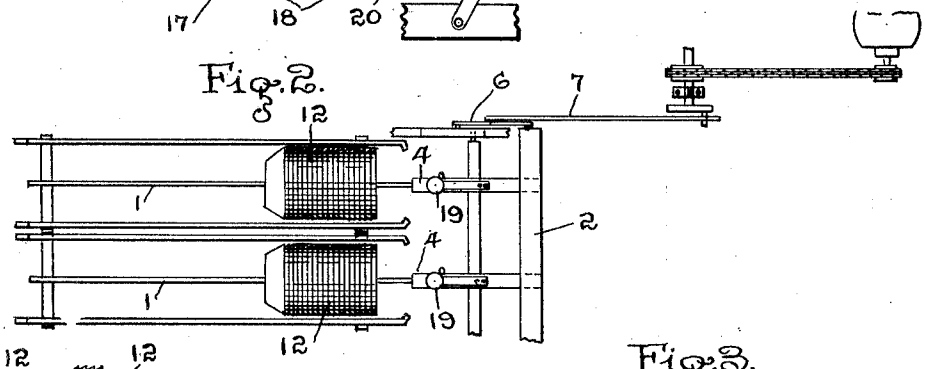


Fig. 3.

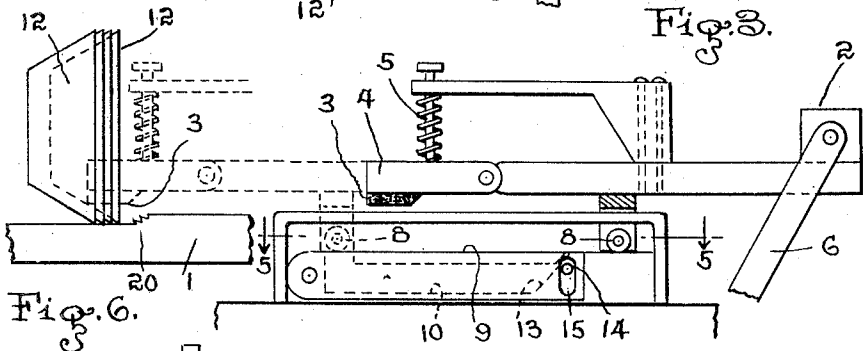


Fig. 6.

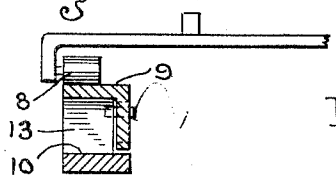


Fig. 4.

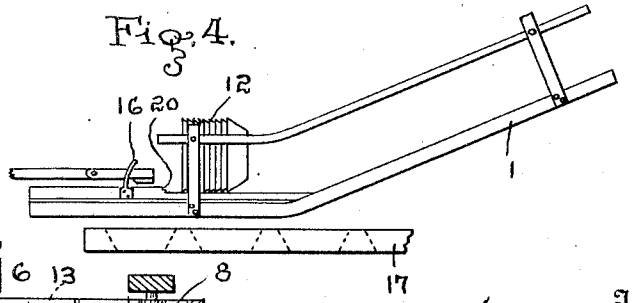
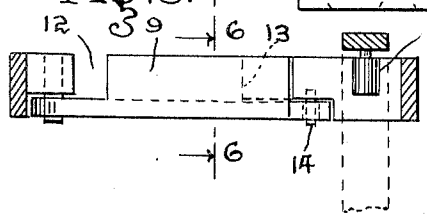


Fig. 5.



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UNITED STATES PATENT OFFICE

CHARLES G. STEFFEN, OF SOUTH JAMAICA, NEW YORK, ASSIGNOR TO DUGAN BROTHERS INC., OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK

MACHINE FOR SUPPLYING PAPER CUPS TO BAKING PANS AND THE LIKE

Application filed November 26, 1930. Serial No. 498,302.

My invention relates to means for supplying paper cups to baking pans and the like.

In the manufacture of bakery products such as cup cakes, muffins and the like it is desirable at times to bake the same in paper cups.

My invention has for its object to provide means for conveniently placing the cups in position in the baking pans.

I accomplish this object by the device illustrated in the accompanying drawings in which

Figure 1 is a side view of the device,

Figure 2 is a plan view of the same showing two of the units,

Figure 3 is a side elevation of a detail of the device with parts removed and, the carriage, in its extended position, shown in dotted lines,

Figure 4 is a detail showing the cups and engaging finger,

Figure 5 is a sectional view on the line 5—5 in Figure 3, and

Figure 6 is a section on the line 6—6 in Figure 5.

Similar characters of reference refer to similar parts throughout the several views.

My improved device includes a cup carrier frame 1 and a cup engaging and tripping device comprising a reciprocating carriage 2 having a friction pad 3 mounted on a hinged tongue 4 supported by a tension spring 5. The carriage 2 is mounted on rollers 8 which travel forward on a box track 9 and rearwardly on a lower track 10, the said tracks being parallel.

The carriage 2 is moved by means of a rocking shaft 6 driven by power supplied to the shaft 7 in any desired manner.

Cups 12 in nests are supplied to the machine from an inclined carrier frame 1 and may be moved along the same to the point of delivery by gravity by means of a suitable pushing weight 12^1, and are presented in a horizontal position with their open ends toward the machine.

The carriage 2 being advanced by means of the rocking shaft 6, upon its rollers 8 to the position shown by dotted lines in Figure 3, the friction pad 3 of the tongue 4 enters the open mouth of the forward cup 12. At this position, the roller 8 drops in the cut out aperture 12 in the track 9 causing the tongue 4 to fall with it and to frictionally engage the said cup 12. The rollers 8 of the carriage 2 then rest upon the lower track 10 and the carriage 2 is then drawn back by the rocking lever 6, whereby the said cup 12 is drawn from the nest and carried to the fixed stud 16 which engages the said cup and thereby detaches it from its frictional engagement with the friction pad 3 and the cup will then fall by gravity to the pan 17.

Adjacent the end of rearward travel of the said rollers 8 on the lower track 10 there is provided an inclined end portion 13 of the said track up which the rollers travel, raising by contact the hinged upper track 9 whereby the carriage returns to its initial position at the end of the upper track 9 and in position to repeat the operation above described.

The upper track 9 is provided with a stop-lug 14 in a slot 15 to limit its movement and falls by gravity to its normal position when the carriage has returned to its initial position as above described.

The pans 17 are preferably provided with parallel rows of cup compartments or depressions 18 and are carried on a suitable carrier, the movement of which is synchronized with the operation of the machine above described so that the pans are caused to halt in their travel with a row of said cup compartments 18 positioned immediately below the points at which the said cups are delivered as above described, the number of my cup delivery devices will correspond to the number of cup compartments in each said row. As the movement of the pan is halted my said cup delivery device will be caused to operate and deliver cups thereto when the pan will be advanced and the next row filled in like manner and the operation again repeated.

For the purpose of preventing the removal of more than a single cup at each movement of the finger 3, I preferably provide a rough friction surface 20 on the frame 1 at the point of delivery of the cups whereby

the delivery of the cups is retarded and the finger 3 will remove one cup only from the nest.

Having thus described my invention what I claim is:

1. In a device of the character described, the combination of a carriage supporting means therefor, a track upon which the said supporting means is adapted to travel, a cut out aperture in said track, a return track positioned below said first named track and upon which return track said supporting means is adapted to travel on its return, means for repositioning said supporting means on said first named track and means for moving said carriage to engage a cup.

2. In a device of the character described, the combination of a cup carrier, a reciprocating carriage means thereon adapted to engage cups delivered by said cup carrier, a track for said carriage, a second track for said carriage and spaced from and below said first named track means for moving the carriage from one said track to the other track, and means for moving said carriage on one of said tracks in one direction and on the other of said tracks in the reverse direction.

Signed at New York in the county of New York and State of New York, this 20th day of November, A. D. 1930.

CHARLES G. STEFFEN.