May 19, 1925. 1,538,079

J. ALBERTOLI

CAN MARKING MACHINE

Filed Jan. 19, 1924 3 Sheets-Sheet 1

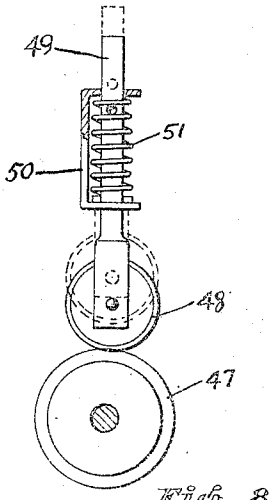


Fig. 8

Fig. 1.

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3 Sheets-Sheet 2

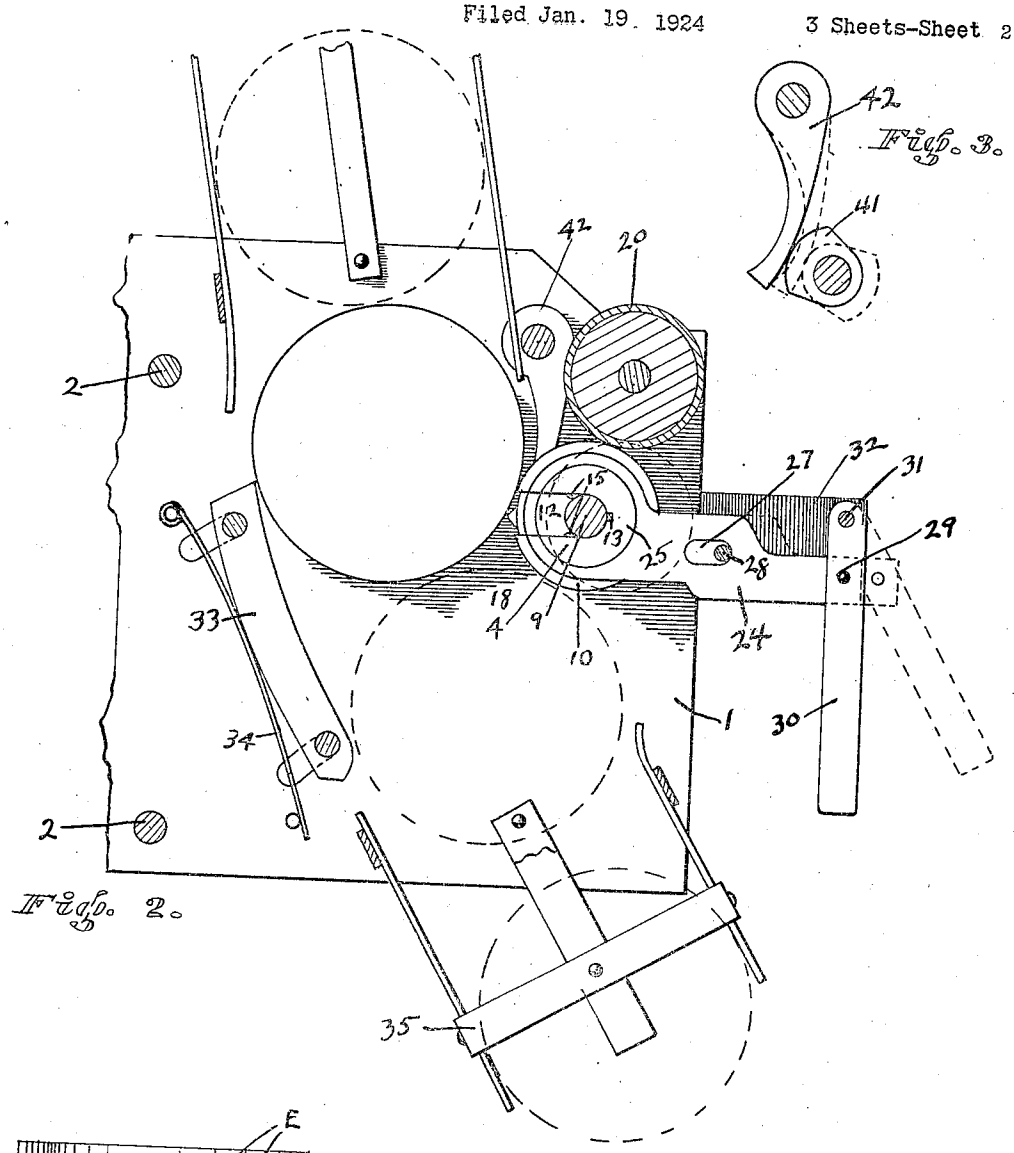


Fig. 2.

Fig. 3.

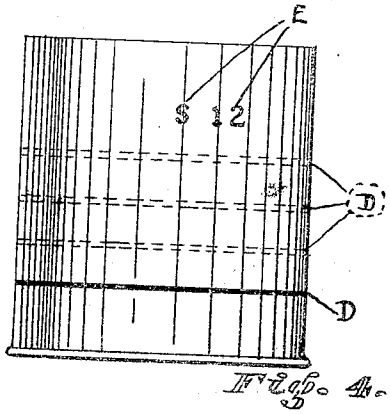


Fig. 4.

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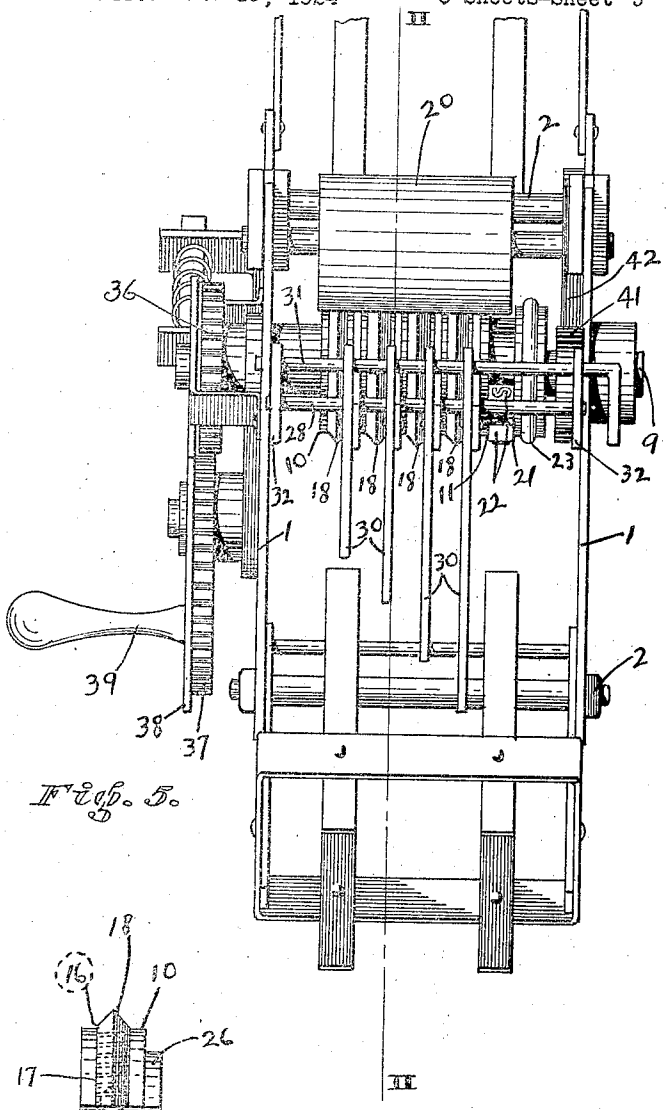


Fig. 5.

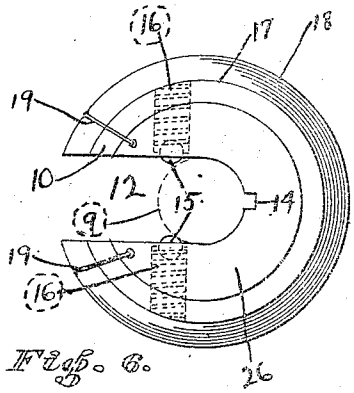


Fig. 6.

Fig. 7.

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UNITED STATES PATENT OFFICE.

JOHN ALBERTOLI, OF SAN FRANCISCO, CALIFORNIA.

CAN-MARKING MACHINE.

Application filed January 19, 1924. Serial No. 687,319.

To all whom it may concern:

Be it known that I, JOHN ALBERTOLI, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Can-Marking Machines, of which the following is a specification.

This invention relates to improvements in apparatus for marking empty cans preliminary to canning operations and resides in the provision of apparatus of this nature which may be selectively operated to make one or more of a plurality of different marks on the cans for the purpose of distinguishing from one another, cans which are to receive and which have received, different kinds or grades of material and also for the purpose of identifying the work of the particular packer and for marking dates or other designations on the cans.

An object of the invention is to provide marking apparatus such as described which will work in conjunction with the apparatus for delivering cans from a source of supply to packing stations, whereby the packers may at will, easily and quickly operate the marking mechanism to cause different marks to be made on the cans to designate the different grades of material packed in the cans and thereby facilitate the segregation and handling of the cans throughout the packing operations.

An object of the invention is to provide marking apparatus of the character described which is compact, simple as to construction, comparatively inexpensive and accurate in operation.

With the above mentioned and other objects in view, the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawings, and set forth in the claims hereto appended, it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Referring to the drawings:

Fig. 1 represents a front elevation of apparatus of my invention.

Fig. 2 represents a vertical sectional view taken through a part of the apparatus of the invention.

Fig. 3 represents a side elevation of a detail of the invention.

Fig. 4 represents a side view of a can showing the various markings thereon.

Fig. 5 is an end elevation of the machine.

Fig. 6 is a side elevation of one of the marking rollers.

Fig. 7 is a front elevation of one of said rollers.

Fig. 8 is a side elevation of a novel form of inking mechanism.

In carrying out the invention I provide a frame made up essentially of spaced plates 1 joined by suitable fastenings 2 and mounted on standards 3, above the canning table, designated A. This frame supports marking mechanisms generally designated 4 and 5, which are subject to independent operation and cause cans, as shown at B and C, to be delivered onto the table at opposite ends or sides of the marking mechanism, or better, at spaced points on the table. The cans are fed to the marking mechanisms from a main delivery chute 6 through branch chutes 7 and 8. The cans are preferably marked by making stripes or bands of ink, as shown at D, at different positions, and are also marked with the packer's identification and date marks as shown at E. For example, the can shown in Fig. 4, with the band mark near the lower end, will designate that the can is to contain or does contain, a certain grade of fruit, whereas marks at other points or levels on the can (shown in dotted lines Fig. 4), will designate that the can contains different grades of fruit or material. If the operator or packer has at hand a great quantity of two grades of fruit, the marking mechanism 5 is set and operated to make marks on cans delivered at one side of the mechanisms, which marks will indicate that a certain grade of fruit is to be packed and to other operators who handle the packed cans, that they contain a certain grade of fruit. When that particular grade of fruit has been exhausted, the marking mechanism 4 will be set and operated to make marks indicating another grade of fruit. It frequently happens that the packer will pick up fruit of one or the other of several grades from a miscellaneous group and place it in different cans therefor, and by having at hand means for supplying cans bearing different marks to take care of two different grades being simultaneously packed, a great convenience and saving in

time and labor is provided for the packer. As a certain grade of fruit is picked up, the cans as marked and delivered from one end of the mechanism will be used, and as another grade of fruit is picked up it is packed in differently marked cans taken from the other end of the mechanism. Various systems and methods of marking and handling the cans, depending on the fruit at hand and the packer, may be resorted to with this apparatus. The operator knowing the general characteristics of the fruit which is at hand to be packed, can in advance, set the two marking mechanisms for different marks and then on each operation of the marking mechanisms, cause cans having different marks to be delivered at spaced but accessible points near him.

The mechanisms 4 and 5 are identically constructed and each comprises a shaft 9 which is journaled in and extends between the plates 1. This shaft supports a plurality of marking rollers 10 and a special marking roller 11. Each of the rollers 10 is provided with a slot 12 providing for movement of the rollers into and out of marking position, and for removal of the rollers from the shaft. The shaft carries projections 13 which are adapted to engage in sockets 14 formed in the rollers at the inner ends of the slots 12, in order to provide for rotation of the rollers on turning of the shaft. To releasably hold the rollers in operative position on the shaft, there are provided spring urged friction balls 15 adapted to engage the shaft as shown in Fig. 6. These balls are fitted in openings on opposed sides of the slot and are urged outwardly by springs 16 so that they set up sufficient friction to maintain the rollers in place but will yield and permit the rollers to be moved out of marking position or off of the shaft. The peripheries of the rollers are formed with grooves 17 in which are mounted marking strips 18 being secured by suitable fastenings 19 adjacent the terminals thereof, which terminals are disposed on opposite sides of the slots. These strips are preferably formed of rubber and are inked by an inking roller 20. The roller 11 is provided with a peripheral groove 21 in which marking dies 22 may be mounted. The dies make marks which identify the packer or date the cans, or make any other designations that may be necessary. On this roller there is mounted a rubber friction ring 23 which is adapted to engage the cans discharged between the plates 1 and to cause the cans to be moved downwardly into position to be marked when the shaft is rotated.

The rollers 10 are subject to being moved into and out of marking position in order that marks may be made at different levels or points on the cans and there are provided arms 24 having circular openings 25 in certain ends, in which openings are received annular projections 26 provided on the sides of the rollers. The projections 26 and the arms 24 are provided with slots corresponding to the ones in the rollers but which slots in the members 24 are closed at both ends. These arms 24 are provided intermediate their ends with slots 27 through which a rod 28 extends in order to support said members, the rod being fastened to and between the plates. The outer ends of the arms 24 are pivoted as at 29 to the levers 30, which at their upper ends are pivoted on a rod 31 supported by extensions 32 of the plate 1. The levers are of different lengths so that the different rollers may be readily distinguished. On pulling out one of the levers, an arm 24 is pulled outwardly causing the roller to which it is attached to be correspondingly moved and to be disposed in non-marking position.

Just below the opposite ends of the chutes 7 and 8 there is provided a guide member 33 which is yieldingly forced towards the marking rollers by a spring mounting arrangement, generally designated 34. As the cans discharge from the chutes 7 and 8 between the plates, they are engaged between the yielding guide 33 and the rubber ring on the roller 11. On rotating the shaft the cans are forced downwardly by said rubber ring and are guided forwardly at the same time by the yielding guide 33, so that they will come in contact with the rollers which happen to be in marking position. Engagement of the cans with the marking rollers cause the cans to be rotated so that they are advanced and will drop from between the guides and rollers out onto the table, or as shown, through the small discharge chute 35. The shaft has a gear 36 fixed to one end thereof, which gear meshes with a drive gear 37 mounted on one of the plates of the frame. On one side of the gear 37 is a disk 38 to which a handle 39 is attached. The disk 38 is provided with a notch or shoulder 39′ which is engaged by a spring urged pawl or a detent 40, the arrangement being such that this pawl prevents rotation of the disk in one direction.

In the operation of the machine, assuming that the operator wishes to mark the cans delivered from the mechanism 5 at one end, with a single mark adjacent the bottom of the can, and to mark cans delivered to the other end of the machine with a single mark adjacent the other end of the can, the levers 30 are manipulated to cause the rollers which will make such marks to be disposed in marking position, whereas the other rollers are moved out of marking position. Under these circumstances, the operator or packer would have two grades of fruit at hand to pack and by noting that fruit of

one grade is packed in cans coming from one end of the machine, and the fruit of another grade coming from the other end of the machine, the packing operation is facilitated, not only by the particular packer but for others who would be required to segregate and further handle the cans after they have been packed. On turning the handle 39 through the gear 37, through one revolution, the mechanism operates to discharge two cans properly marked. On the shaft is a cam member 41, which cam member, twice on each revolution of the drive gear, moves the detent or trip member 42 into and out of position to engage and release the cans. This trip member is mounted between the plates and when moved outwardly towards the cans, will, together with the upper end of the guide 33, hold the cans against movement but will recede on rotation of the cans and permit two cans to move on each revolution of the handle 39.

It will thus be seen that by adjusting the levers 30, marks may be made at different points or levels on the cans to designate different qualities or grades of material packed therein. The roller 11 need not be adjusted inasmuch as the packer's identification mark or similar designation is the same for each can.

In Fig. 8 there is shown a modified form of inking device in which the marking rollers 47 are inked by individual rollers 48 containing the ink. These rollers are mounted on vertical adjustable supports 49 supported in a channel iron frame 50. An expansion spring 51 mounted on the support and body provides for urging the inking rollers into engagement with the marking rollers. On pulling up on the support the inking roller is moved out of contact with the marking roller and any suitable means may be employed for holding the roller in up position.

I claim:

1. A mechanism for making marks on cans comprising a frame, a plurality of marking rollers mounted on the frame, means for rotating the rollers, means for conducting cans to the frame, means on the frame between which and the rollers the cans engage and which guide the cans downwardly when the rollers are rotated and means for selectively moving any one of the several rollers into and out of position to engage and mark the cans.

2. A can marking mechanism comprising a frame, a plurality of marking rollers in the frame adapted to make marks at different positions on a can, means for selectively moving the rollers into and out of marking position, means for rotating the rollers and a yielding guide member in the frame between which and the rollers cans engage and are advanced downwardly on rotation of the rollers.

3. A can marking machine comprising a frame, a plurality of sets of marking members in the frame arranged to make marks at different positions on cans, means for rotating the said members, means for moving the said members into and out of marking position, guide members yieldingly engaging and forcing cans into engagement with said marking members, means for causing cans to gravitate into position of engagement with said yielding means and marking members, said cans being advanced and rotated by contact with and rotation of said marking members.

4. A can marking mechanism comprising a frame, a shaft revolvable in the frame, a plurality of marking rollers mounted on the shaft for rotation with the shaft and for movement into and out of marking position, means for selectively moving the rollers laterally relative to the shaft into and out of marking position and means for conducting cans to be marked into engagement with said rollers.

5. A marking machine comprising a frame, a plurality of marking rollers mounted in the frame, a non-rotating arcuate guide between which and the rollers, cans engage and are caused to travel around said marking rollers on rotation of said rollers, means conducting cans into position to be engaged between the guide and rollers, means for rotating the rollers and means for selectively moving the rollers into and out of marking position.

6. A can marking machine comprising a frame, a shaft revolvable in the frame, a plurality of slotted rollers shiftably mounted on and for rotation with the shaft and receiving the shaft in the slots thereof, said rollers being shiftable laterally with respect to the shaft, means for releasingly holding each roll on the shaft, means for feeding cans through the frame, means for guiding the cans in position to be engaged by the rollers, means for rotating the shaft and rollers, means for selectively moving the rollers relative to the shaft towards and away from the path of movement of the cans.

7. A can marking mechanism comprising a frame, a shaft revolvable in the frame, a plurality of marking rollers removably and adjustably mounted on the shaft, each of which rollers is provided with a slot extending from the center thereof out through its periphery and in which slot the shaft is received, means locking the rollers for rotation with the shaft which means yieldingly holds the rollers in locked position and permits lateral adjustment of the rollers relative to the shaft, means for conducting cans to be marked into engagement with the roll-

ers and means for selectively shifting the rollers laterally with respect to the longitudinal axis of the shaft to move the rollers into and out of marking position.

8. A can marking mechanism comprising a frame, a shaft revolvable in the frame, a plurality of marking rollers removably and adjustably mounted on the shaft, each of which rollers is provided with a slot extending from the center thereof out through its periphery and in which slot the shaft is received, means locking the rollers for rotation with the shaft which means yieldingly holds the rollers in locked position and permits lateral adjustment of the rollers relative to the shaft, means for conducting cans to be marked into engagement with the rollers and means for selectively shifting the rollers laterally with respect to the longitudinal axis of the shaft to move the rollers into and out of marking position without interfering with the marking operation.

9. A mechanism for marking cans comprising a plurality of separately operable can marking mechanisms, a single file can feed chute for delivering cans towards said mechanism and branch feed chutes leading from the single file feed chute and for causing cans passing from the single file chute to be fed to the plurality of marking mechanisms, said marking mechanisms being provided with means for making differing marks on cans marked thereby in order to provide two groups of differently marked cans at a point convenient or accessible to the operator.

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