Nov. 7, 1950 J. M. HEMOVICH 2,528,884

CAN FEEDING MACHINE

Filed June 10, 1946 2 Sheets-Sheet 1

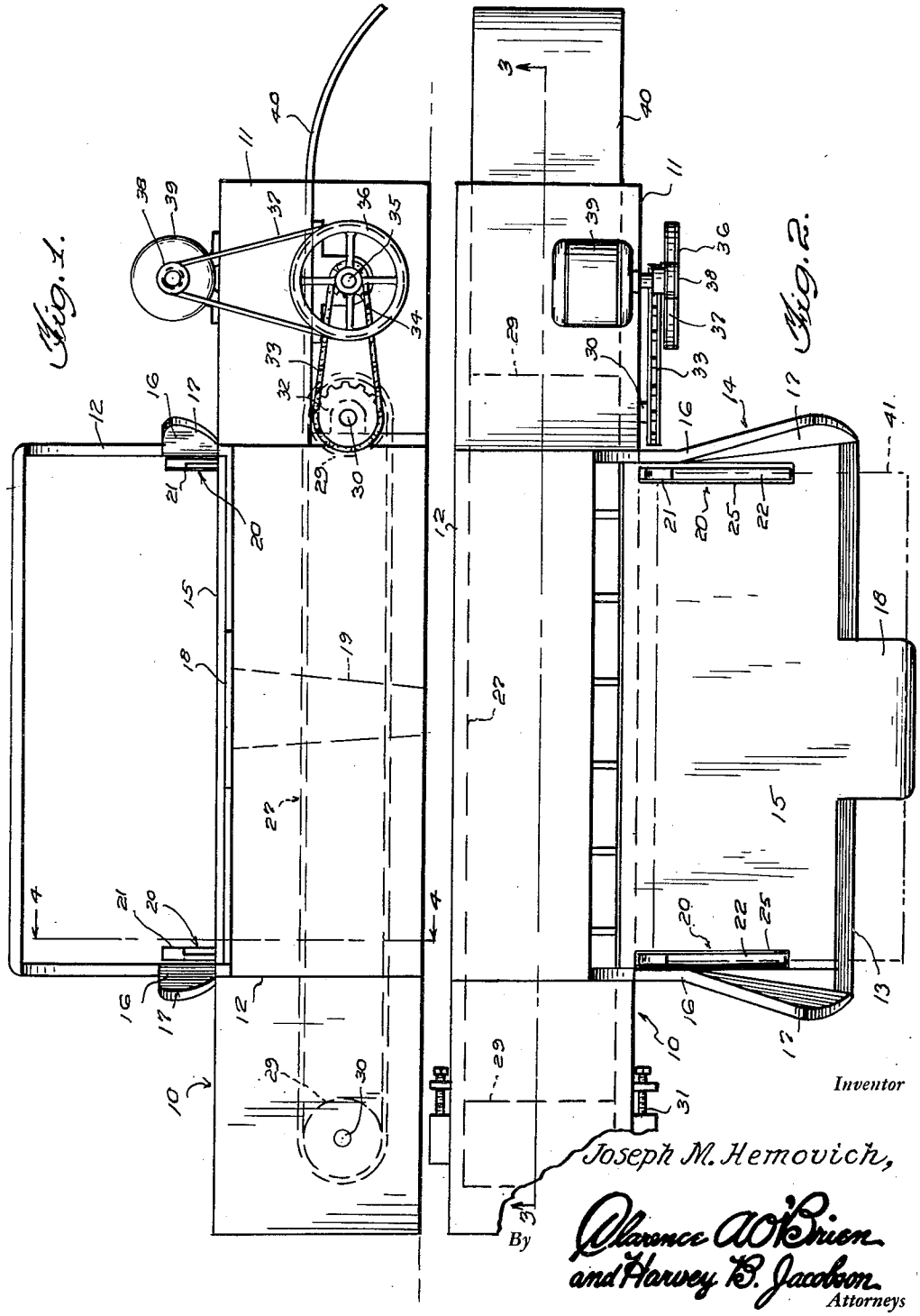


Fig. 1.

Fig. 2.

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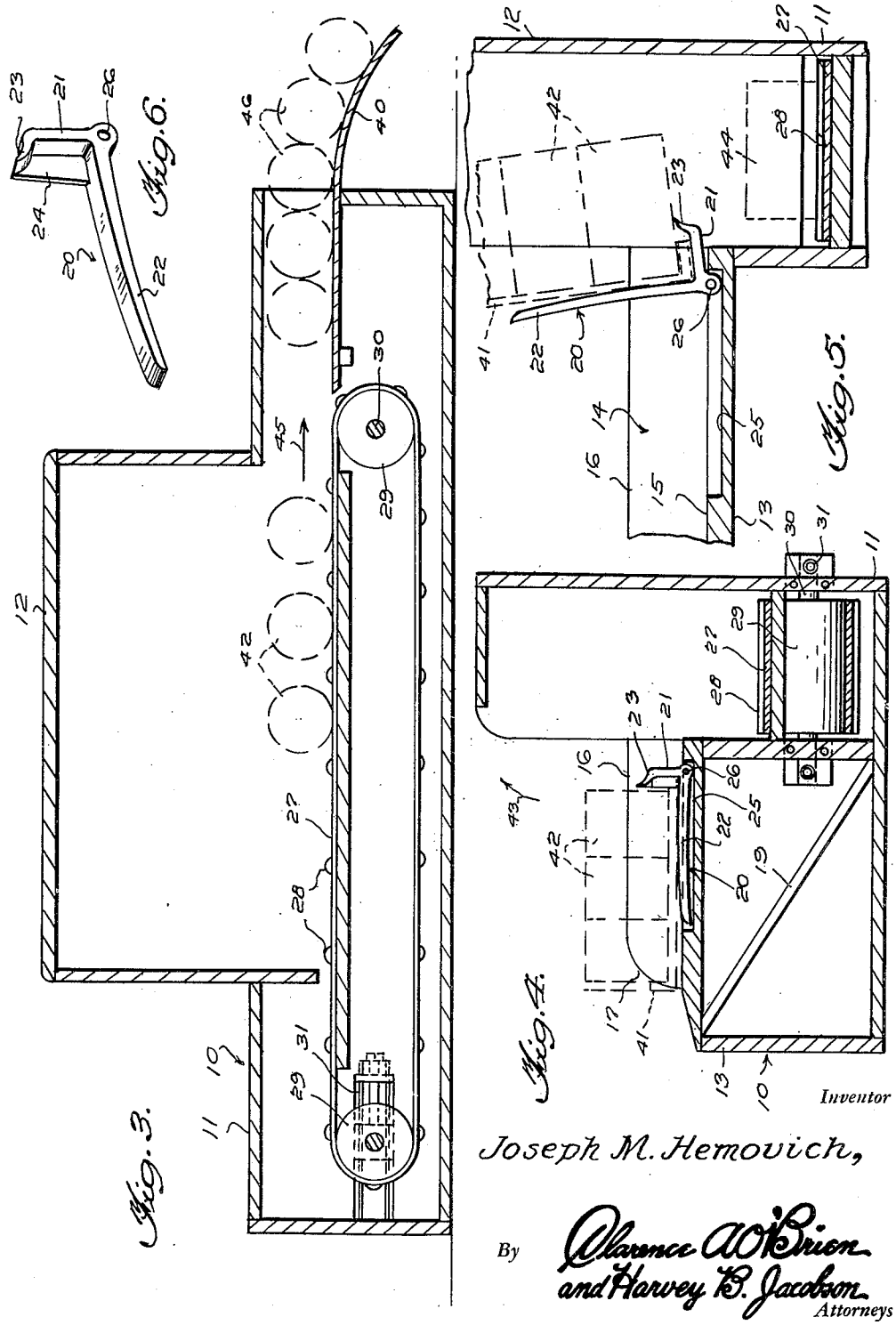


Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

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CAN FEEDING MACHINE

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Application June 10, 1946, Serial No. 675,707

2 Claims. (Cl. 214—1.1)

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This invention relates to new and useful improvements and structural refinements in can feeding machines, and the principal object of the invention is to provide a device of the character herein described, such as may be effectively and conveniently employed for feeding or conveying cans to labeling, filling or packing machines, and the like.

A further object of the invention is to provide a can feeding machine in which a plurality of cans are received simultaneously in a suitable box or container, said cans being discharged one at a time, in an orderly manner on a power driven conveyor.

Another object of the invention is to provide a can feeding machine which is simple in construction and operation.

An additional object of the invention is to provide a can feeding machine which may be easily operated by persons of limited skill.

A still further object of the invention is to provide a can feeding machine which may be readily disassembled for purposes of cleaning, inspection and repair, and which will readily lend itself to economical manufacture.

With the above more important objects in view, and such other objects as may become apparent as this specification proceeds, the invention consists essentially of the arrangement and construction of parts as illustrated in the accompanying drawings, in which:

Figure 1 is a front elevation of the invention.

Figure 2 is a top plan view thereof.

Figure 3 is a cross-sectional view, taken in the plane of the line 3—3 in Figure 2.

Figure 4 is a cross-sectional view, taken in the plane of the line 4—4 in Figure 1 and showing the machine at the commencement of the dumping operation.

Figure 5 is a cross-sectional view, similar to that shown in Figure 4, but illustrating the machine at the conclusion of the dumping operation, and

Figure 6 is a perspective view of one of the rockers used in the invention.

Like characters of reference are used to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings, in detail, the invention embodies in its construction a framework designated generally by the reference character 10, the same including an elongated enclosure 11 provided with an upwardly extending hood 12.

The enclosure 11 is also extended forwardly

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as at 13, this forwardly extending portion being substantially in alignment with the aforementioned hood 12. The portion 13 supports a feed trough 14, this being formed by the bottom sheet 15 and a pair of side flanges 16. It will be noted that the forward end portions of these flanges are flared outwardly as at 17, to facilitate insertion of boxes onto the trough.

A bevelled approach 18 is provided at the front end of the bottom sheet 15, and a suitable brace 19 is used to reinforce the trough.

A pair of rockers 20 are provided adjacent the inner end of the trough 14, each of said rockers consisting of a double arm crank, comprising a relatively short arm 21 and a relatively long arm 22.

The free ends of the arms 21 are angulated to provide a hook 23 and a lateral flange 24 is also formed on one side of this hook, as is best shown in the accompanying Figure 6. The bottom sheet 15 of the trough 14 is formed with a pair of elongated recesses 25 adjacent the flanges 16, and each of the rockers 20 is pivotally mounted as at 26 in one of the recesses, the arms 22 normally being disposed in the recesses 25 and the arms 21 normally projecting into the trough 14, as will be clearly apparent from the accompanying drawings.

A suitable conveyor belt designated collectively by the reference character 27 is positioned in the framework portion 11, and it will be noted that the conveyor is disposed at a relatively lower level with respect to the trough 14 and extends substantially at right angles thereto. The conveyor 27 is provided with a plurality of spaced, transversely extending slats 28, and the conveyor is supported in any suitable manner such as by means of the end rollers 29. These rollers are mounted on suitable shafts 30 journaled in the framework portion 11 and one of the rollers is provided with a take-up mechanism 31, such as may assume any conventional form.

The shaft 30 of the remaining roller carries a sprocket 32, this being connected by a length of endless chain 33 to a further sprocket 34, which in turn, is positioned on a countershaft 35. The latter also carries a relatively large pulley 36, connected by the belting 37 to a relatively small pulley 38, this being positioned on the armature of a suitable electric motor 39. This motor is mounted on the framework portion 11, as will be clearly apparent from the accompanying drawings.

A suitable discharge chute 40 is also provided on the framework, this chute being substantially

in alignment with the conveyor 27 and communicating with another machine (not shown) to which the cans are delivered.

When the invention is placed in use, a box 41 containing a plurality of cans 42 is positioned in the chute 14 and is slid toward the rockers 20. This step is best illustrated in the accompanying Figure 4, and it will be noted that the arms 21 of the rockers will function as effective stops for the box, while the latter is disposed above the arms 22.

The box 41 is now tilted in the direction of the arrow 43 to a position best illustrated in the accompanying Figure 5, during which operation, the cans 42 will drop out of the box 41 and onto the conveyor 27. The position of cans on this conveyor is illustrated at 44 and it will be noted that the cans will be fed in the direction of the arrow 45 and along the chute 40, to the delivery position illustrated at 46.

It will be noted that in the foregoing manner, the rockers 20 will effectively assist in the dumping of the boxes onto the conveyor.

It is believed that the advantages and use of the invention will be clearly understood from the foregoing disclosure and accordingly, further description thereof at this point is considered unnecessary.

While in the foregoing there has been shown and described the preferred embodiment of this invention it is to be understood that minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

What I claim as my invention is:

1. In a can feeding machine, a trough adapted to slidably receive a box containing a plurality of cans, a conveyor extending substantially at right angles to said trough, said trough having a discharge end disposed at one side and above said conveyor, a plurality of rockers pivotally mounted on the discharge end portion of said trough, said box being supportably receivable by said rockers and tiltable thereon to a dumping position above said conveyor, said rockers

comprising double arm cranks having relatively long arms and relatively short arms and being freely pivotable with respect to said trough, the discharge end portion of said trough being formed with longitudinally extending recesses, said long arms resting in said recesses and said short arms extending upwardly therefrom when said rockers are in their box receiving position, each of said rockers adapted to engage the corner portions of the box for retention thereof, the free end portions of said short arms terminating in angulated box engaging hooks whereby when said rockers are pivoted the box will be retained by said hooks and the cans will be discharged onto said conveyor.

2. In a can feeding machine, a trough adapted to slidably receive a box containing a plurality of cans, a conveyor extending substantially at right angles to said trough, said trough having a discharge end disposed at one side and above said conveyor, a plurality of rockers pivotally mounted on the discharge end portion of said trough, said box being supportably receivable by said rockers and tiltable thereon to a dumping position above said conveyor, said rockers comprising double arm cranks having relatively long arms and relatively short arms and being freely pivotable, the discharge end portion of said trough being formed with longitudinally extending recesses, said long arms resting in said recesses and said short arms extending upwardly therefrom when said rockers are in their box receiving position, each of said rockers adapted to engage the corner portions of the box for retention thereof.

JOSEPH M. HEMOVICH.

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