

Dec. 2, 1930.

H. E. NAGLE

1,783,479

PACKAGE DISPENSING MACHINE

Filed Aug. 5, 1929

2 Sheets-Sheet 1

Fig 1

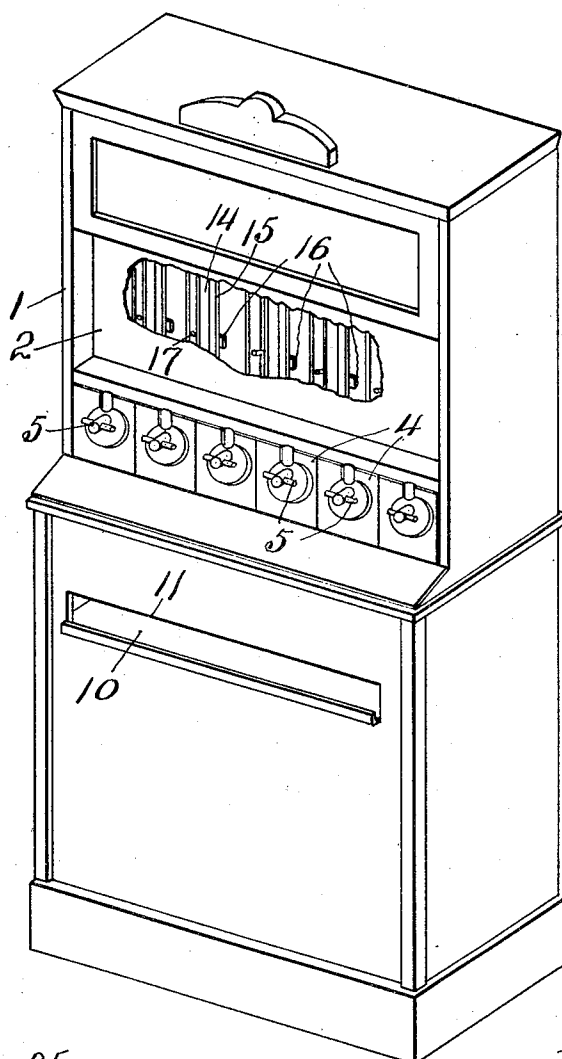


Fig 4

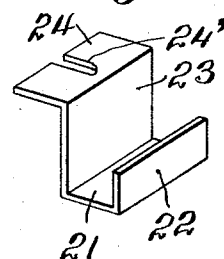


Fig 3

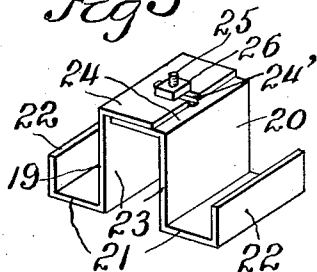
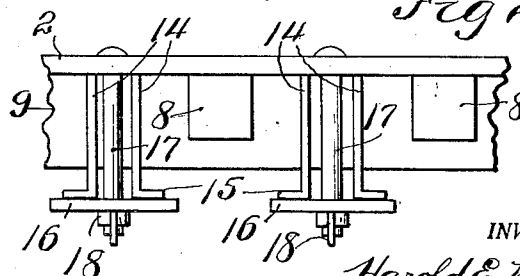


Fig 2



Witness
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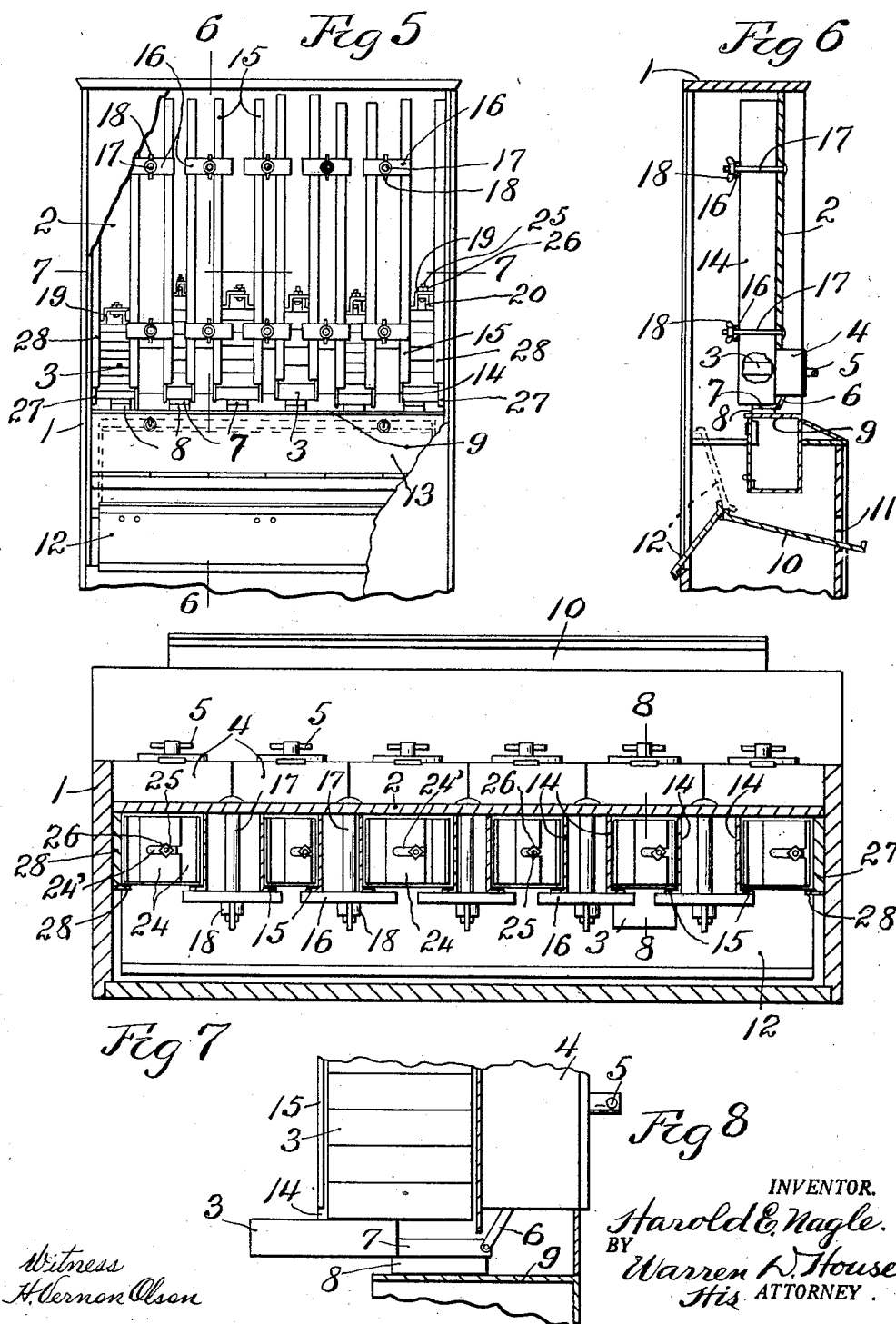
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UNITED STATES PATENT OFFICE

HAROLD E. NAGLE, OF KANSAS CITY, MISSOURI

PACKAGE-DISPENSING MACHINE

Application filed August 5, 1929. Serial No. 383,521.

My invention relates to improvements in package dispensing machines, of the type in which packages are disposed one above the other between guiding members, and ejected one at a time from the bottom of the pile by a suitable coin or check controlled ejecting mechanism.

One of the objects of my invention is to provide novel package guiding mechanism by which the machine is adapted for dispensing packages having certain dimensions, or adjusted so as to dispense package of different dimensions.

A further object of my invention is to provide novel package guiding means, which is simple, cheap, durable, not likely to get out of order, which is adapted for use in machines such as are in general use, which can be easily and quickly adjusted for dispensing packages of different dimensions, and which is efficient.

My invention provides further a novel weight adjustable as to length for use between my adjustable guiding means.

The novel features of my invention are hereinafter fully described and claimed.

In the accompanying drawings, which illustrate the preferred embodiment of my invention,

Fig. 1 is a perspective view, partly broken away, of my improved package dispensing machine.

Fig. 2 is an enlarged top view of a portion of my improved package guiding and supporting mechanism.

Fig. 3 is an enlarged perspective of one of my improved weights for forcing the packages downwardly.

Fig. 4 is a perspective view, enlarged of one of the members of one of my improved adjustable weights.

Fig. 5 is a view, partly in rear elevation and partly broken away of my improved package dispensing machine.

Fig. 6 is a section, partly broken away, on the line 6—6 of Fig. 5.

Fig. 7 is an enlarged section on the line 7—7 of Fig. 5, showing a package partly ejected from the pile.

Fig. 8 is an enlarged section in the vertical plane of the line 8—8 of Fig. 7, showing a

lower portion of one of the piles of packages and parts adjacent thereto.

1 designates a casing having fastened in its upper portion a vertical front package guiding member 2, at the rear of which are adapted to be disposed a plurality of piles of packages 3, which are to be dispensed from the machine.

Arranged in a horizontal row at the front of the machine, and below the front guiding member 2 are a plurality of coin or check actuated package ejecting mechanisms, 4, of usual type and each of which is provided with an operating knob 5, which, when turned, after a proper coin or check is inserted, will by means of mechanism, not shown, swing a lever 6, Figs. 6 and 8, forwardly, thereby moving a horizontal package supporting and ejecting horizontal member 7 forwardly or to the right, as shown in Figs. 6 and 8, until the rear end of the member 7 is forward of the front side of the pile of packages 3, the bottom one of which up to that time rested upon the ejecting member 7.

The withdrawal of the ejecting member 7 from under the pile which has been resting on it, permits the pile to lower until the bottom package 3 of the pile rests on a supporting member 8.

The knob 5 now being released will return to its original position, as will the lever 6, thereby forcing rearwardly the member 7, which will force the bottom package 3 rearwardly out of the pile and off from the supporting member 8.

Supporting members 8 corresponding to the number of ejecting members 7 and respectively disposed thereunder, are mounted on the top of a coin or check receiving box 9 which extends transversely in the casing 1 above and spaced from a plate 10, Fig. 6, which inclines forwardly and downwardly and extends through a horizontal transverse delivery opening 11 in the front of the casing 1.

For receiving the ejected packages 3 and guiding them onto the inclined plate 11, the latter has pivoted to its rear edge the front longitudinal edge of a swinging plate 12, Fig. 6, which in its operative position inclines

upwardly and rearwardly from the plate 11, as indicated in dotted lines in Fig. 6.

The plate 12 is adapted to be swung downwardly to the position shown in solid lines in Figs. 5 and 6, so that access may be had to the coin receiving box 9, which at its rear side is provided with a door 13, which is normally closed and locked, but which may be swung rearwardly on its hinged lower edge to an open position.

Serving as side guiding members for the packages in the different piles, I provide a plurality of pairs of vertical guiding members, each pair comprising two vertical plates 14 disposed respectively at opposite sides of the pile which they are to guide, and provided each at its rear longitudinal edge with a longitudinal flange 15 which extends toward the opposite guiding member 14 of the pair and which serves as a rear guide for the adjacent pile of packages 3. The flanges 15 are adapted to be disposed higher at their lower ends than the top of the bottom package 3 in the pile, so that the bottom package can be ejected from the pile below the flanges 15.

In order that the side guiding members 14 may be adjusted vertically to adapt them for packages of different vertical thicknesses, as disposed in the piles, and to adapt them for use with packages of different transverse lengths, the following described means for supporting the guiding members 14 is provided.

The forward longitudinal edges of the side guiding members 14 are disposed against the rear side of the front guiding member 2 against which they are held by means of transverse clamping plates 16, which are arranged, as shown in Fig. 5, in two horizontal rows, and which are respectively slidably mounted on bolts 17, two rows of which are provided, and which extend rearwardly through the front guiding member 2 against the front side of which bear the heads of the bolts.

The bolts 17 are disposed in pairs respectively between the side guiding members 14 of adjacent pairs, and the clamping plates 16 on said bolts respectively, bear against the rear sides of the flanges 15 of the guiding members 14 of adjacent pairs.

Thumb nuts 18 are respectively mounted on the bolts 17 and respectively bear against the adjacent clamping plates 16, Figs. 5 and 7. By loosening the thumb nuts 18 which hold the two clamping plates 16 to a pair of guiding members 14, the latter may be adjusted laterally toward and from each other to adapt them as side guides for packages of different transverse lengths, or the guiding members 14 may be adjusted vertically to properly position the rear guide flanges 15 so as to adapt them for packages of different vertical thicknesses.

For longer packages, the members 14 are adjusted away from each other to a position in which they will be respectively adjacent to the ends of the packages 3. For thicker packages, the members 14 are raised so that the flanges 15 clear the top of the bottom package in the pile. The nuts 18 are then tightened.

For assisting the weight of the packages 3 in feeding them downwardly, I provide a plurality of weights which are respectively placed upon the tops of the piles between the side guiding members 14. Each weight is adjustable as to its length transverse to the guiding members 14, so as to be adapted for packages of different transverse lengths. Each weight comprises, as shown in Figs. 3, 4, 5 and 7, two members 19 and 20, each having a horizontal portion adapted to rest on a package 3 and designated by 21, a vertical side flange 22 adapted to be disposed adjacent to a member 14, an upright portion 23 and a lateral flange 24 at the upper end of the portion 23 and overlapping the adjacent flange 24 of the other weight member. Each flange 24 is provided with an edge slot 24' through which extends a bolt 25 having thereon a nut 26 bearing against one of the flanges 24, the head of the bolt bearing against the other flange 24.

By loosening the nut 26, the members 19 and 20 may be adjusted toward and from each other, to adapt the weight for the length of package to be dispensed, after which the nut is tightened.

In the operation of the machine, the thumb nuts 18 are loosened, and the side guiding members 14 are adjusted laterally and vertically to suit the dimensions of the packages which they are to guide, and the thicknesses thereof. The packages are then arranged in piles between the guiding members 2 and 14 and the weights 19-20 placed respectively upon the piles.

The plate 12 is then disposed and fastened in the operative position shown in dotted lines in Fig. 6. If now a proper coin or check is inserted in one of the ejecting mechanisms 4, and the knob 5 thereof operated, the adjacent ejecting member 7 will, as has been described, eject the bottom package 3 from the adjacent pile, which package will pass onto the plate 10 from which it can be removed through the opening 11.

As outer side guides for the two outside piles of packages, there are provided two vertical guide strips 27 respectively fastened to the inner sides of the side walls of the casing 1.

To the rear longitudinal edge of each strip 27 is fastened a strip of metal 28 which extends laterally inwardly beyond the adjacent strip 27 so as to serve as a rear guide for the adjacent pile of packages.

I do not limit my invention to the struc-

ture shown and described as many modifications, within the scope of the appended claims, may be made without departing from the spirit of my invention.

What I claim is:—

1. In a package dispensing machine, a weight adapted to rest on a pile of packages for forcing the packages downwardly as they are fed one at a time from the bottom of the pile, comprising two members adjustable transversely of each other to vary the length of the weight, and means for fastening said members together in the position to which they may be adjusted.

2. In a package dispensing machine, a weight adapted to rest on a pile of packages for forcing the packages downwardly as they are fed one at a time from the bottom of the pile, comprising two members transversely adjustable one on the other, one having a slot, and a fastening means extending through the other member and through said slot and adjustable lengthwise of said slot for fastening said members together in the position to which they may be adjusted.

3. In a package dispensing machine, the combination with means for supporting packages in a pile and means for ejecting the packages one at a time from the bottom of the pile, of a front package guiding member, two bolts mounted on the said front member and extending rearwardly therefrom, two side package guiding members between said bolts and adjustable one toward and from the other and bearing at their front longitudinal edges against the rear side of said front member, two clamping members respectively mounted on said bolts and respectively bearing against the rear of said side members, and two nuts mounted respectively on said bolts and bearing respectively against said clamping members.

4. In a package dispensing machine, the combination with means for supporting packages in a pile and means for ejecting the packages one at a time from the bottom of said pile, of a front package guiding member, two side package guiding members having their front longitudinal edges bearing against the rear side of said front member and adjustable one toward and from the other, a bolt mounted on said front member and extending rearwardly therefrom between said side members, a clamping member on said bolt bearing against the rear of said side members, and a nut on said bolt bearing against said clamping member.

5. In a package dispensing machine, the combination with a front package guiding member, of a side package guiding member bearing at its front longitudinal edge against the rear side of said front member and adjustable laterally, and means bearing against said side member for holding it against said

front member in the position to which said side member may be adjusted.

6. In a package dispensing machine, the combination with a front package guiding member, of a side package guiding member adjustable laterally and vertically and having its front longitudinal edge bearing against the rear side of said front member and having a lateral flange adapted to serve as a rear package guide, and means bearing against said side member for holding it against said front member in the position to which said side member may be adjusted.

7. In a package dispensing machine, the combination with a front package guiding member, of two side package guiding members adjustable toward and from each other and vertically and bearing at their front longitudinal edges against the rear side of said front member, each side member having a laterally extending flange at its rear longitudinal edge adapted to serve as a rear package guide, a bolt mounted on said front member and extending rearwardly between said side members, a clamping member on said bolt bearing against said flanges and holding said side members against said front member, and a nut on said bolt bearing against said clamping member and holding the latter against said side members.

In testimony whereof I have signed my name to this specification.

HAROLD E. NAGLE.

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