

March 6, 1951

H. A. HEYWARD

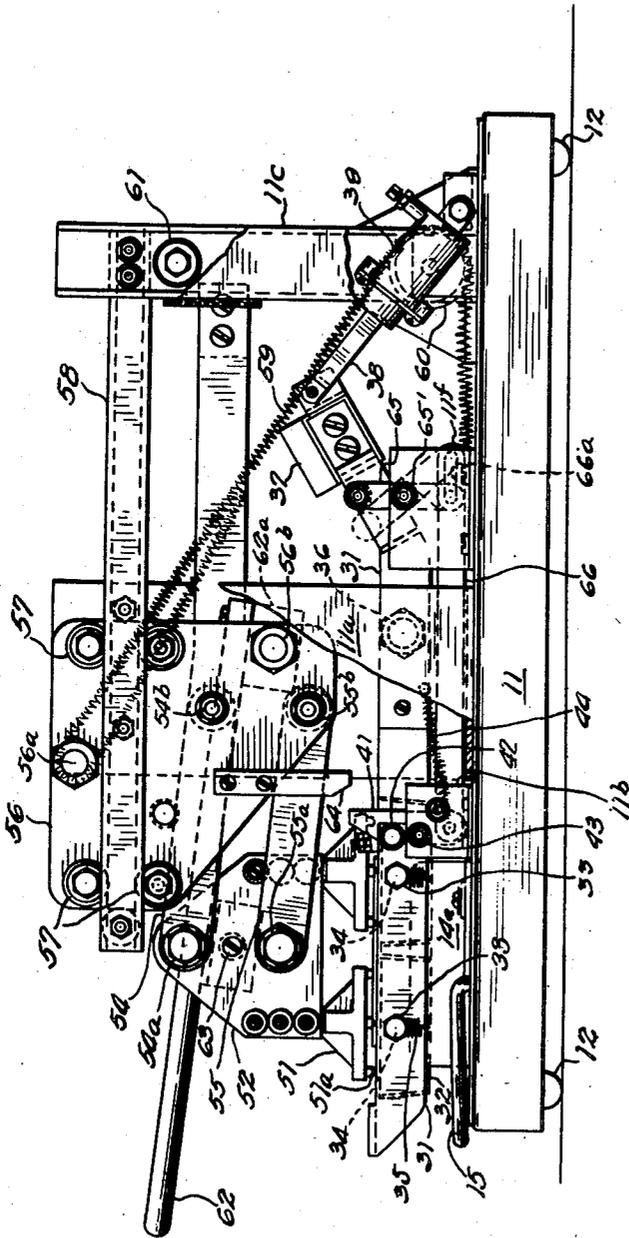
2,543,968

PACKAGE HANDLING AND TREATING MACHINE

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5 Sheets-Sheet 1

Fig. 1.



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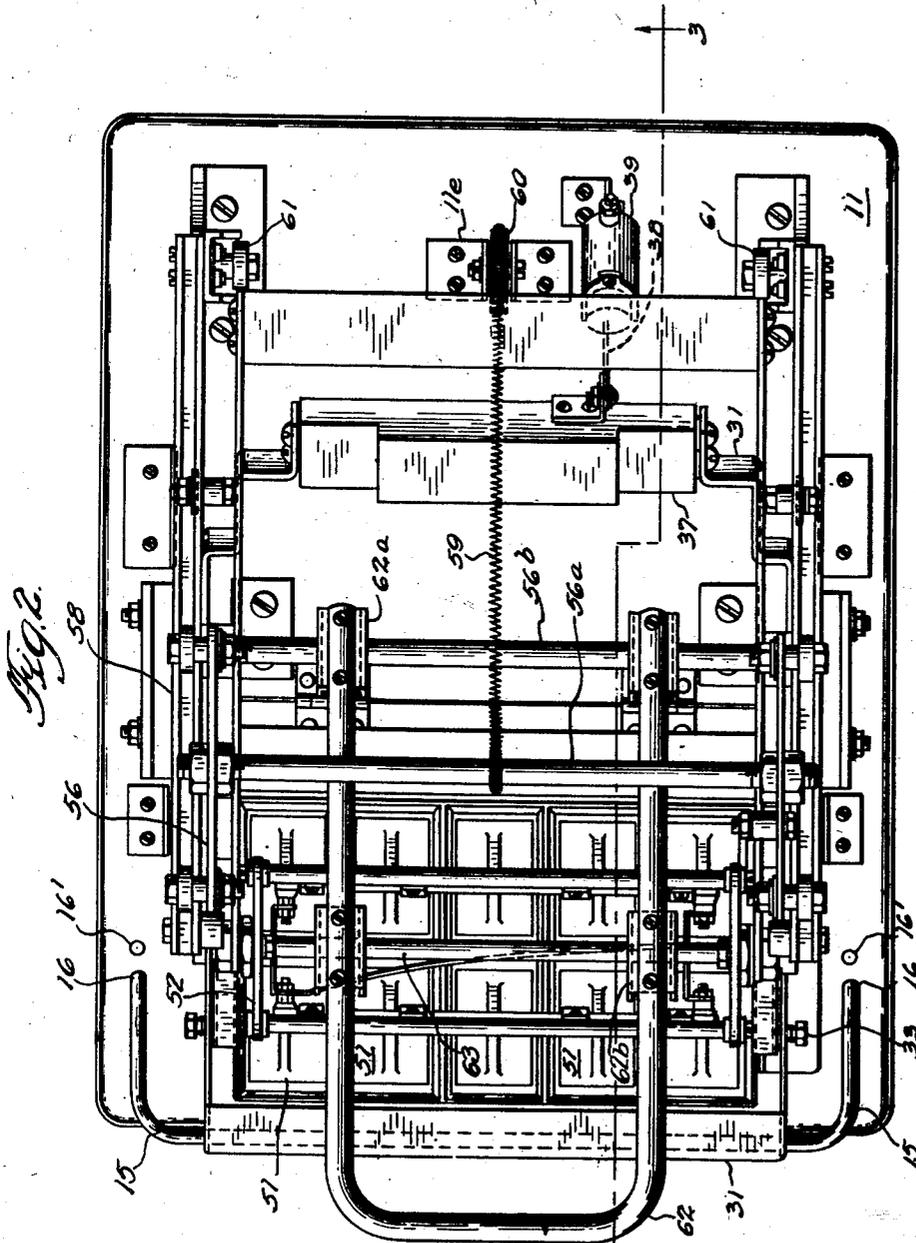


Fig. 2.

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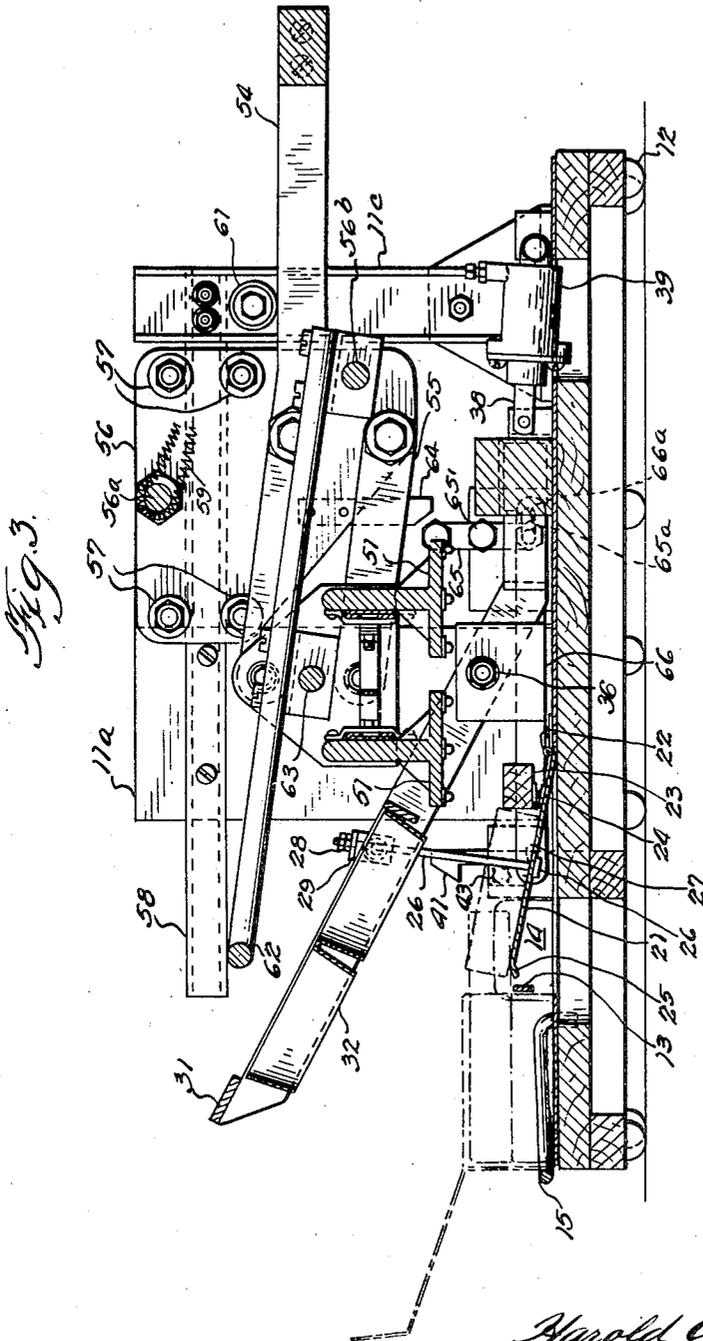
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5 Sheets-Sheet 3



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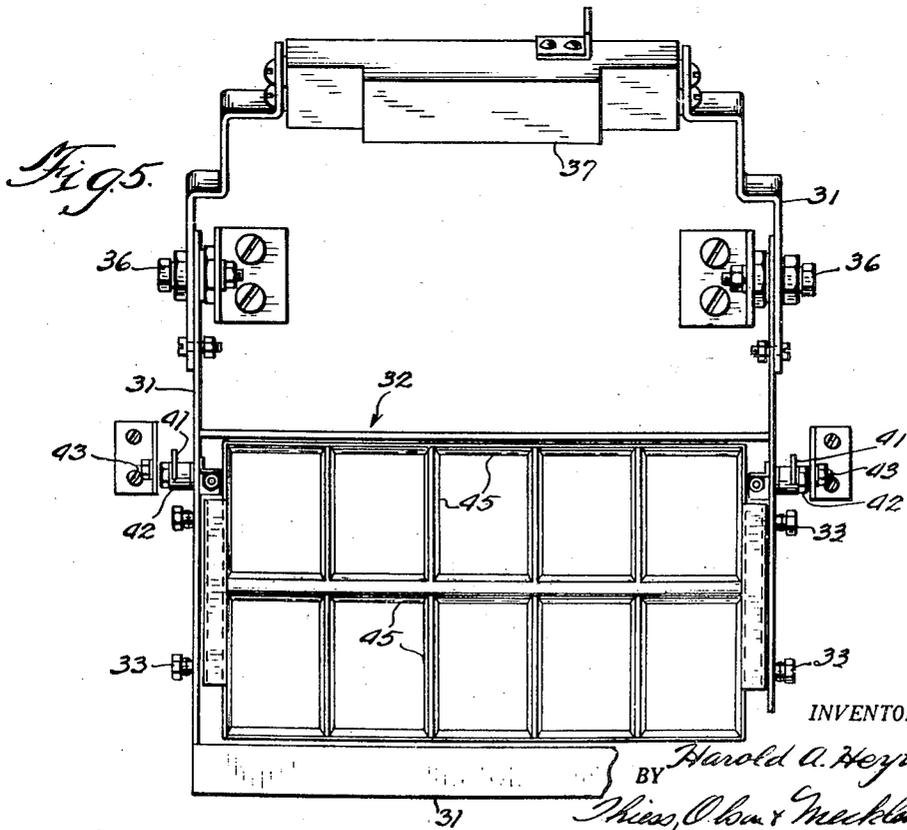
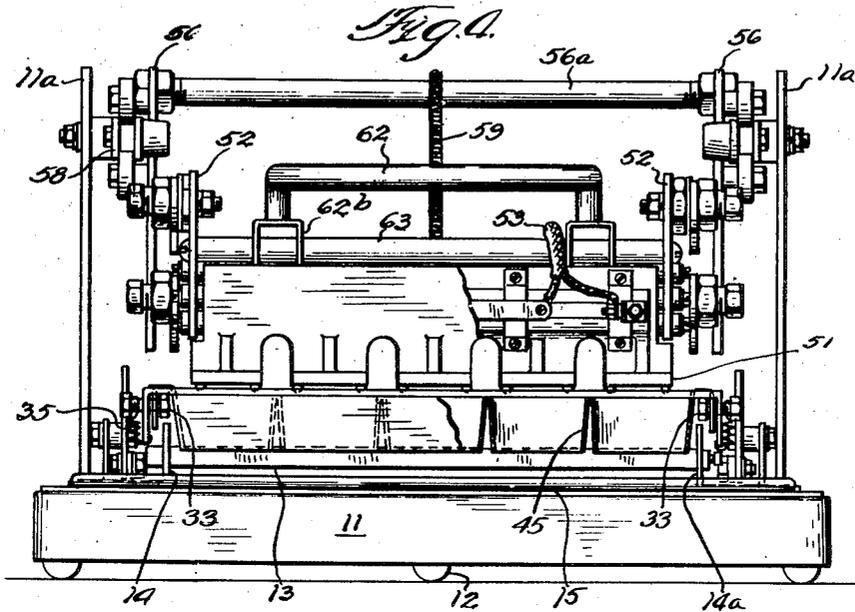
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PACKAGE HANDLING AND TREATING MACHINE

Filed May 4, 1949

5 Sheets-Sheet 4



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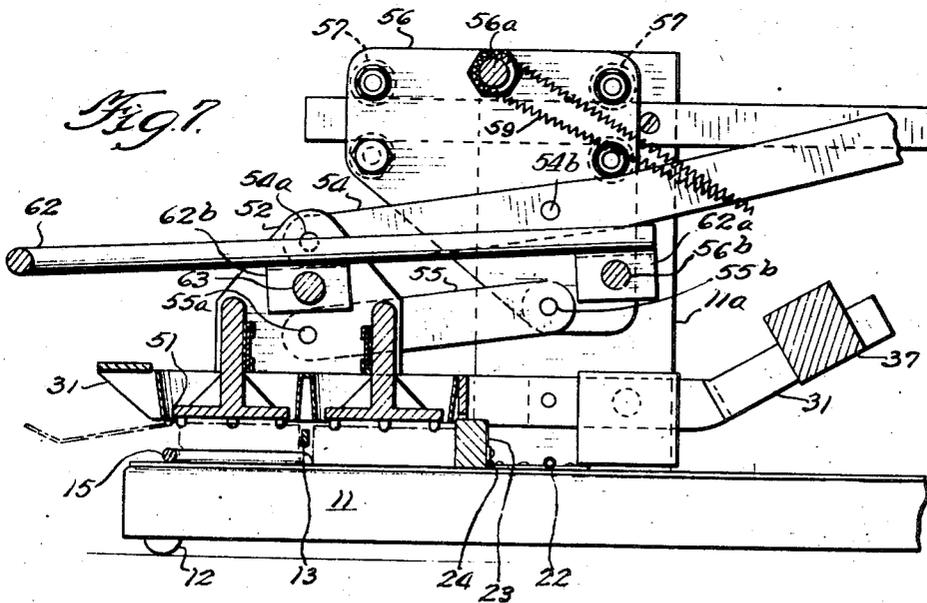
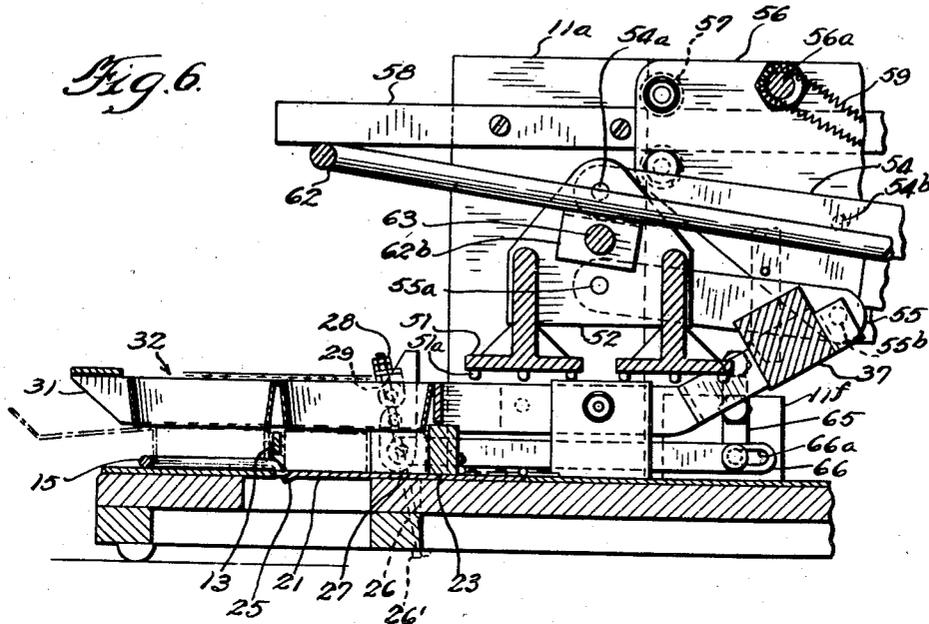
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PACKAGE HANDLING AND TREATING MACHINE

Filed May 4, 1949

5 Sheets-Sheet 5



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UNITED STATES PATENT OFFICE

2,543,968

PACKAGE HANDLING AND TREATING MACHINE

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Application May 4, 1949, Serial No. 91,379

22 Claims. (Cl. 216—9)

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This invention relates to a package handling and treating machine and it is an object of this invention to provide an improved machine of that character.

More particularly the invention relates to a machine for facilitating the performance of operations on individual packages or other objects originally contained in a carton in two tiers and which packages or other objects more particularly must be returned to the carton subsequent to such operations.

The embodiment of the invention shown and described herein is a machine for facilitating the attachment of coupons to cigarette packages, which packages are contained in a carton in two tiers and are to be returned to that carton after the attachment of such coupons, the attachment of the coupons to the packages being of such a nature as to permit subsequent detachment without mutilation of the coupons or packages.

It is common practice to dispense packages of cigarettes through the medium of coin-operated machines, and in the event that the price per package is some figure not integrally divisible by five, it is usually provided that the purchaser insert excess nickels and dimes and receive his change in pennies. These pennies are frequently inserted in the cellophane wrapper at the side of the package but this is a laborious process and sometimes results in damage to the cigarettes or loss of the pennies.

It is believed to be an improvement upon that system to attach to the package of cigarettes a coupon which is redeemable in cash or which may be accumulated toward the purchase of premiums. The embodiment of this invention shown and described is intended to facilitate the attachment of such coupons to cigarette packages but the scope of the invention is not to be construed as limited thereto.

According to the preferred embodiment of this invention, coupons are attached simultaneously to each of the ten packages normally contained in one carton. The carton is first opened on two adjoining sides and is placed on the machine in such position that each of the individual packages of cigarettes lies with its broadest faces horizontal. With two adjoining sides of the cigarette carton being open, it is possible to slide the upper tier of five packages off the lower tier as a unit. A movable shelf or ledge is provided in the machine for receiving the upper five packages, this ledge being arranged in such a manner that an operator can slide the upper five packages directly thereonto and can subsequently slide the same five packages back into the carton.

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After the upper five packages have been slid onto the ledge, a combination coupon tray and package holder is lowered onto the ten packages of cigarettes, the ledge automatically dropping during this movement of the coupon tray so that the ten packages of cigarettes lie in a single horizontal plane or at a common level. The coupon tray holds the ten packages of cigarettes securely in that position and, by means of funnel-shaped openings therein, assists in directing coupons to the proper location with respect to the individual packages. Preferably, the coupons have on their reverse sides a suitable heat responsive adhesive such as a thermoplastic material which will cause the coupons to adhere to the packages when heated to the proper temperature.

A heating element is then moved into engagement with the coupons to seal them to the exterior wrapping of the individual cigarette packages. As the heating element recedes to its original position, the coupon tray is automatically unlocked and is raised, for example by a counterweight, to its upper position. The upward movement of the coupon tray automatically raises the ledge with the result that the original upper packages may be slid directly back into the open carton.

Accordingly, it is another object of this invention to provide a machine for facilitating the performance of operations on individual packages or other objects originally contained in a carton in two tiers and which packages or other objects more particularly must be returned to the carton subsequent to such operations.

It is another object of this invention to provide a machine to facilitate the attachment of coupons to cigarette packages, which packages are contained in a carton in two tiers and are to be returned to that carton after the attachment of such coupons.

It is another object of this invention to provide a machine to facilitate the stamping or the attachment of labels or coupons to packages, which packages are originally contained in a carton in two tiers and subsequent to the attachment of the labels or coupons must be returned to that carton.

It is another object of this invention to provide a machine to facilitate the attachment of labels or coupons to packages, such machine including means for guiding a carton of such packages into a desired position, means for guiding one tier of packages, contained in the carton, to a position adjacent the other tier and in the same plane therewith, means for holding the packages in fixed position and for guiding labels or coupons

to the proper position with respect to the individual packages, means for heating the labels or coupons whereby they will be made to adhere to the packages, and means for guiding the first-mentioned tier of packages back into the carton.

This invention, together with further objects and advantages thereof, will best be understood by reference to the following description taken in connection with the accompanying drawings, and its scope will be pointed out in the appended claims.

In the drawings in which like parts are indicated by like reference numerals:

Figure 1 is a side-elevational view of a machine constructed in accordance with one embodiment of this invention, certain portions of the machine being partially broken away;

Fig. 2 is a top plan view of the same machine;

Fig. 3 is a cross-sectional view taken along the line 3—3 of Fig. 2 showing the machine in a different operating position;

Fig. 4 is a front-elevational view of the same machine with certain portions partially broken away;

Fig. 5 is a top plan view of the coupon tray and counter-balancing apparatus;

Fig. 6 is a partial cross-sectional view of the same machine similar to Fig. 3 but showing the machine in a different operating position; and

Fig. 7 is a partial cross-sectional view similar to Fig. 6 but showing the machine in still another operating position.

The entire machine is mounted on a portable base 11 having suitable foot pads 12. At the front end of the machine, which is the left-hand end in Figs. 1, 2, 3, 6 and 7, there are guide means for assisting the operator in properly locating a carton of cigarettes, to the individual packages of which labels are to be attached.

For guiding the carton of cigarettes into the proper fore and aft position, there is a thin guide bar 13 supported by brackets 14 and 14a, and a guide wire 15 whose ends extend downwardly into holes 16 in the base 11. The distance between the guide bar 13 and the main portion of the guide wire 15 is approximately equal to the long dimension of a package of cigarettes. It will be noted that a second set of holes 16' is provided in order that either regular size or king size cigarettes can be accommodated.

To guide the carton of cigarettes into the proper cross wise position, bracket 14a is made to extend forward a sufficient distance as seen in Fig. 1 to engage one end of the carton of cigarettes. Bracket 14a is at the right-hand side of the machine as seen in Fig. 4. Bracket 14 at the left-hand side of the machine is preferably made shorter than bracket 14a, as may be seen in Fig. 3.

In order to place a carton of cigarettes in the proper position on the machine, then, the guide wire 15 is set in the proper holes 16 or 16' depending upon whether the cigarettes are king size or regular size, the cover of the carton is opened and an adjoining side is torn down, and the carton is placed on base 11 between the guide bar 13 and guide wire 15 with the right-hand end of the carton abutting the right-hand bracket 14a. The open cover of the carton should be uppermost and the adjoining side of the carton which has been torn open should face the rear of the machine in order that the operator can slide the five uppermost packages of cigarettes rearwardly toward the main body of the machine.

Immediately to the rear of the carton of ciga-

rettes there is, as best seen in Fig. 3, a ledge 21 adapted to receive the upper tier of cigarette packages as they are slid rearwardly, ledge 21 being pivoted on base 11 by a hinge 22. Toward the rear edge of ledge 21 there is a stop bar 23 to limit the rearward movement of the upper tier of cigarette packages and to hold these packages forwardly in their proper relative position with respect to the lower tier of packages. It will be noted that stop bar 23 is mounted on ledge 21 by a hinge 24. With the stop bar in the position shown in Fig. 3, the ledge is adapted to accommodate king size cigarettes. However, if the stop bar is rotated on ledge 21 to the position shown in Fig. 6, the space on the ledge available for the cigarette packages is reduced in the amount of the width of the stop bar. This width is such that the space available on the ledge in Fig. 6 is just sufficient to accommodate packages of regular size cigarettes. In either event, when ledge 21 is lowered, as will subsequently be described, the outwardly facing ends of the packages on the ledge will abut the rear surface of guide bar 13.

It will be noted that ledge 21 is curved downwardly at its forward edge 25 and, in its upper position shown in Fig. 3, it slopes downwardly toward the rear with the result that when the ledge is in that position, the upper tier of cigarette packages can readily be slid rearwardly onto the ledge and forwardly again into the carton.

Ledge 21 is supported in this raised, sloping position by rods or screws 26 which pass through holes 27 in ledge 21, the screw heads 26' engaging the lower surface of the ledge. The upper end of rods 26 are threaded and are connected to coupon tray frame 31 by means of nuts 28 and brackets 29, the latter being riveted to coupon tray frame 31, all as clearly seen in Fig. 3.

The hinge 22 upon which ledge 21 pivots is located at the upper surface of base 11 with the result that when the ledge is pivoted downwardly to its lowered, horizontal position the upper tier of packages, supported by the ledge, is maintained at the same level as the lower tier of packages.

The primary purpose of coupon tray frame 31 is to support the coupon tray 32. The support connection is preferably made somewhat flexible since the coupon tray is to press down on the cigarette packages, as will subsequently be described. Accordingly, screws or rivets 33 are connected to coupon tray 32 and pass through vertically extending slots 34 in the coupon tray frame, this arrangement allowing a limited amount of vertical movement of the coupon tray with respect to the coupon tray frame. Tension springs 35 connect screws 33 with the lower edge of coupon tray frame 31 and urge the coupon tray downwardly with respect to the frame.

The coupon tray frame is pivoted on pins or screws 36 which are in turn mounted on frame member 11a supported on base 11. At the rear of the coupon tray frame there is a counterweight 37 pivotally connected to a plunger 38 which operates in conjunction with check or dashpot 39, pivotally mounted on base 11. Since the check 39 is of conventional construction, it will not be described in detail. It is believed to be sufficient for the purpose at hand to point out that the check will retard the pivotal motion of the coupon tray frame, as desired, in accordance with its adjustment, and is particularly intended to prevent the slamming of the coupon tray frame and its associated equipment at the end

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of its upward movement, the counterweight 37 being of sufficient weight to cause the coupon tray frame and associated apparatus to rise at its forward end.

A latching arrangement is provided for holding the coupon tray and coupon tray frame in its lower position, illustrated in Fig. 1. Hooks 41 are arranged to latch over the pins 42 rigidly secured to the sides of coupon tray frame 31, hooks 41 being pivoted at 43 on brackets 11b, secured to base 11. This latching arrangement is provided at both sides of the coupon tray frame. The hooks are urged toward their latching or forward positions by springs 44 and their upper forward edges are beveled in order that pins 42 in their downward movement can force the hooks rearwardly and automatically latch. The arrangement provided for unlatching the hooks will be described subsequently.

Coupon tray 32 is provided with double partitions 45 arranged in downwardly opening V-form and so spaced with respect to each other and to the carton guiding means that the edges of packages of regular-sized cigarettes are engaged by these partitions with the result that the packages are held firmly against base 11. The resulting funnel-shaped openings in coupon tray 32, as defined by the sloping partitions 45, facilitate the proper placing of the coupons with respect to the cigarette packages preparatory to attaching the coupons to the packages.

As will subsequently become apparent, it is necessary that the coupons have on their reverse sides a suitable heat responsive adhesive such as a thermoplastic material for detachably connecting the coupons to the packages of cigarettes. Since many adhesives of such character are well known in the art, further specification of the material is considered unnecessary and the adhesive will subsequently be referred to merely as a heat responsive adhesive.

It will be noted that where king-sized cigarettes are being handled, these longer packages will protrude beyond the forward and rearward edges of the coupon tray. However, with the wire guide 15 and stop bar 23 properly adjusted for the size of cigarettes being handled, one end of the packages of both the upper and lower tiers will abut guide bar 13 which is centered between the two walls of the double partition 45 extending across the center of the coupon tray.

A heating unit is provided for tacking coupons to the cigarette packages. As the coupons generally contain considerable writing on at least one face thereof with a plain margin thereabout, the heating unit is designed to affix the coupons to the cigarette packages in such manner that the coupons will be securely maintained thereon against accidental displacement, but may be intentionally removed when desired without mutilation of the written portions of the coupons. This is accomplished by providing heating pads 51 having spaced contacting nibs 51a arranged to engage the coupons at spaced points adjacent the periphery of the coupon.

The heating pads are mounted on a heating pad frame 52 containing any suitable electric heating elements for maintaining the nibs 51a at the proper temperature for the particular heat responsive adhesive used in attaching the coupons to the cigarette packages. Current is supplied to the pads 51 by a lead or conductor 53.

Heater frame 52 is pivotally mounted on upper rocker arms 54 and lower rocker arms 55 by pins 54a and 55a respectively, the rocker arms in turn

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being pivotally mounted on a carriage 56 by pins 54b and 55b. The pivot pins 54a, 54b, 55a and 55b define the corners of a parallelogram whereby the faces of heating pads 51 remain always in the same horizontal plane. Accordingly, the nibs 51a will always engage the cigarette packages simultaneously and with uniform force regardless of deviations in the thickness of cigarette packages between different cartons.

Carriage 56 is supported by rollers 57 rotatably mounted on the carriage and arranged to engage the upper and lower surfaces of a pair of rails 58 which are in turn supported by and rigidly secured to frame members 11a and 11c, both of which are secured to base 11.

It follows then that carriage 56, and hence frame 52 and heating pads 51, can be moved forwardly and rearwardly along rails 58 on rollers 57. The carriage and its associated parts are urged rearwardly by a tension spring 59 connected to a bar 56a, rigidly mounted on the carriage. Spring 59 extends from bar 56a around pulley 60 to a suitable anchor point, not shown, on base 11. Pulley 60 is carried by bracket 11e which is secured to base 11.

In order to prevent accidental contact of the heating pads with other parts of the machine, it is desirable that downward movement of frame 52 and pads 51 be prevented except when the pads are in their forwardmost position, properly aligned with the funnel-shaped openings in coupon tray 32. Accordingly, the upper rocker arms 54 extend rearwardly beyond pivot points 54b and their upper surfaces normally engage rollers 61, rotatably mounted on frame element 11c. As long as contact between rocker arms 54 and rollers 61 is maintained the rocker arms, and hence the heater frame and heating pads, will be held in the elevated position shown in Figs. 1, 3 and 5. However, when the heater frame has been drawn to its forwardmost position the rearward ends of rocker arms 54 clear the rollers 61 and the rocker arms may pivot, lowering the heater pads into coupon tray 32 and into contact with the coupons.

A handle 62 is provided for convenient manipulation of the heater frame and heating pads. In the embodiment shown, handle 62 is pivoted on bar 56b through brackets 62a and has a sliding pivotal connection with a bar 63, rigidly mounted on heater frame 52, through brackets 62b, handle 62 being slidable in brackets 62b and the brackets being pivotable on rod 63.

Mounted on carriage 56 are a pair of trip arms 64 which are arranged to trip hooks 41 and release the coupon tray. This action occurs when the carriage is allowed to move rearwardly on rails 58 to its rearwardmost position. As the carriage approaches that position, trip arms 64 strike the upper ends of tray release levers 65 which are pivotally mounted at 65' on brackets 11f, secured to base 11. The lower ends of levers 65 will then move forward and, since they are connected by tray release links 66 to the lower ends of hooks 41, the hooks will pivot and release the coupon tray and frame to move upwardly.

It will be noticed that lost motion is provided in the connection between tray release levers 65 and tray release links 66, pins 65a being secured to levers 65 and operating in slots 66a in links 66. This lost motion is necessary to permit trip arms 64 to move forwardly past levers 65. Accordingly, when trip arms 64 are moved forwardly they tilt lever 65 forwardly, as shown in dotted lines in Fig. 1, and the lower ends of the levers

are permitted to move rearwardly, pins 65a sliding in slots 66a. Levers 65 are arranged so as to pivot back to the vertical position under their own weight in order that they may be in position to be engaged by the trip arms on the next rearward movement of carriage 56.

In the interest of greater clarity, a complete operation of the machine will now be described. A carton of cigarettes is first opened and an adjoining side torn down. If the cigarettes contained in the carton are king size, the guide wire 15 is inserted in holes 16 in base 11 and stop bar 23 is pivoted rearwardly to the position shown in Fig. 3. If regular-sized cigarettes are being handled, guide bar 15 is placed in holes 16' and stop bar 23 is rotated forwardly to the position shown in Figs. 6 and 7.

The carton of cigarettes is then placed between guide bar 13 and guide wire 15 with the open sides facing upwardly and rearwardly, as best seen in Fig. 3. The carton is then moved to the right, as in Figs. 4 and 5, until the right-hand end abuts against bracket 14, and the upper tier of packages is manually slid rearwardly onto ledge 21 and against stop bar 23.

Coupon tray frame 31 is then lowered which permits ledge 21 to drop to a horizontal position and brings coupon tray 32 into contact with the ten packages previously contained in the carton, all of these packages now being at the same level. Suitable stop means, which will not be described in detail, are employed to limit the downward movement of ledge 21 to the horizontal plane co-extensive with the upper surface of base 11. Rod 26, upon which ledge 21 depends in its raised position, is free to slide downwardly through opening 27 in the ledge when the ledge has reached its lowermost position and the coupon tray frame continues to move downwardly.

The coupon tray frame is locked in its lower or package-holding position by spring latch 41 and coupon tray 32 is then ready to receive the coupons to be attached to the packages. One coupon is laid in each of the large openings in the coupon tray and the sloping partitions 45 guide these coupons into the proper position with respect to the packages.

Carriage 56 and the heater and the heater pads are then drawn forward against the force of spring 59 to the forwardmost position. At this point, rocker arm 54 clears roller 61 and the heater pads may be lowered into contact with the coupons. The heater pads are held in this position until the coupons have been made to adhere to the packages, after which the handle 62 is raised.

Spring 59 will then draw the carriage, the heater and the heater pads rearwardly along rails 58 to their rearwardmost position. During this movement, trip arm 64 strikes tray release lever 65 and trips spring latch 41, thereby releasing the coupon tray frame. Counterweight 37 causes the coupon tray and the front end of the coupon tray frame to rise, plunger 38 and check 39 retarding this motion in order to prevent slamming of these parts into their raised position. As the coupon tray frame approaches its uppermost position, rod 26 raises ledge 21 to the position shown in Fig. 3 and the upper tier of packages may be slid easily into the carton after which the carton of cigarettes may be removed and resealed.

It will be apparent from this brief account of one operation of the machine that a great saving of labor is effected by the use of such a machine

since it greatly facilitates and expedites the handling of the packages, the location of the coupons with respect to the packages, the attachment of the coupons to the packages, and the returning of the packages into the carton.

It will also be apparent to those skilled in the art that this invention is well adapted to facilitate any form of treatment of individual packages which are contained in a carton of more than one tier. The step described above as an application of heat to secure coupons to cigarette packages might well be, for example, any printing, stamping, stitching, punching or other operation which must be performed on individual packages originally contained in two tiers in a carton, and particularly where those packages must be returned to that carton. The machine can also, of course, be made more completely automatic without departing from the spirit of this invention.

While particular embodiments of the invention have been shown, it will be understood, of course, that the invention is not limited thereto since many modifications may be made, and it is, therefore, contemplated to cover by the appended claims any such modifications as fall within the true spirit and scope of the invention.

The invention having thus been described, what is claimed and desired to be secured by Letters Patent is:

1. In a machine for facilitating and expediting the performance of an operation on individual packages or other objects which are contained in an upper and lower tier within a carton and are to be returned to such carton after the performance of such an operation; means for supporting such a carton in a predetermined position with respect to said machine, and a movable ledge for receiving such upper tier, said ledge being movable between a raised position, in which it is adapted to receive and discharge such upper tier with a simple sliding motion of such packages, and a lowered position, in which such upper tier is supported at the same level as the lower tier.

2. In a machine for facilitating and expediting the performance of an operation on individual packages or other objects which are contained in an upper and lower tier within a carton and are to be returned to such carton after the performance of such an operation; means for guiding such a carton into proper position with respect to said machine; a movable ledge for receiving such upper tier, said ledge being movable between a raised position, in which it is adapted to receive and discharge such upper tier with a simple sliding motion of such packages, and a lowered position, in which such upper tier is supported on the same plane as the lower tier; and a holding member movable between a raised and a lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its lowered position permitting said movable ledge to descend to its lowered position, said member when in its lowered position also holding both tiers in fixed positions on the same plane.

3. In a machine for facilitating and expediting the performance of an operation on individual packages or other objects which are contained in an upper and lower tier within a carton and are to be returned to such carton after the performance of such an operation, such machine having associated therewith operating means for performing such an operation on such packages or other objects; means for guiding such a

carton into proper position with respect to said machine; a movable ledge for receiving such upper tier of packages, said ledge being movable between a raised position, in which it is adapted to receive and discharge such upper tier of packages with a simple sliding motion of such packages, and a lowered position, in which such upper tier of packages is supported on the same plane as the lower tier of packages; a holding member movable between a raised and a lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its holding position permitting said movable ledge to descend to its lowered position, said member when in its lowered position also holding both tiers of packages in fixed positions on the same plane; means urging said holding member upwardly; latching means for holding said holding member in its lowered position; and releasing means associated with such operating means for tripping said latching means after the completion of such an operation.

4. In a machine for facilitating and expediting the performance of an operation on individual packages or other objects which are contained in an upper and lower tier within a carton and are to be returned to such carton after the performance of such an operation, such machine having associated therewith operating means for performing such an operation on such packages or other objects; means for guiding such a carton into proper position with respect to said machine; a movable ledge for receiving such upper tier of packages, said ledge being pivotable between a raised sloping position and a lowered horizontal position, the free edge of said ledge being downwardly curved and adjacent such properly positioned carton whereby said ledge when in its raised position is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, said ledge when in its lowered position supporting said upper tier of packages on the same plane as and closely adjacent such lower tier of packages; a holding member movable between a raised and a lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its holding position permitting said movable ledge to descend to its lowered position, said member when in its lowered position also holding both tiers of packages in fixed positions at a common level; means urging said holding member upwardly; latching means for holding said holding member in its lowered position; and releasing means associated with such operating means for tripping said latching means after the completion of such an operation.

5. In a machine for attaching coupons to packages of cigarettes, means for guiding into proper position with respect to said machine a carton of cigarettes containing two tiers of packages of cigarettes; a movable ledge for receiving the upper tier of packages, said ledge being movable between a raised position, in which it is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, and a lowered position, in which such upper tier of packages is supported on the same plane as the lower tier of packages; and a holding member movable between a raised and a lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its lower position permitting said movable ledge to descend to its

lowered position, said member when in its lowered position holding both tiers of packages in fixed positions on the same plane.

6. In a machine for attaching coupons to packages of cigarettes, means for guiding into proper position with respect to said machine a carton of cigarettes containing two tiers of packages of cigarettes; a movable ledge for receiving the upper tier of packages, said ledge being movable between a raised position, in which it is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, and a lowered position, in which such upper tier of packages is supported on the same plane as the lower tier of packages; and a coupon guiding member movable between a raised and a lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its lower position permitting said movable ledge to descend to its lowered position, said member when in its lowered position serving to guide such coupons into positions immediately overlying each of such packages.

7. In a machine for attaching coupons to packages of cigarettes, guiding means for guiding into proper position with respect to said machine a carton of cigarettes containing two tiers of packages of cigarettes; a movable ledge for receiving the upper tier of packages of cigarettes, said ledge being movable between a raised position, in which it is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, and a lowered position, in which such upper tier of packages is supported on the same plane as the lower tier of packages; and a holding member movable between a raised and a lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its lower position permitting said movable ledge to descend to its lowered position, said member when in its lowered position holding both tiers of packages in fixed positions on the same plane, said holding member also being adapted when in its lowered position to guide such coupons into positions immediately overlying each of such packages.

8. A machine for attaching coupons to packages of cigarettes, such coupons having a suitable heat responsive adhesive on the reverse side thereof, comprising means for guiding into proper position with respect to said machine a carton of cigarettes containing two tiers of packages of cigarettes; a movable ledge for receiving the upper tier of packages, said ledge being movable between a raised position, in which it is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, and a lowered position, in which such upper tier of packages is supported on the same plane as the lower tier of packages; a holding member movable between a raised and a lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its lower position permitting said movable ledge to descend to its lowered position, said member when in its lowered position holding both tiers of packages in fixed positions on the same plane, said holding member also being adapted when in its lowered position to guide such coupons into positions immediately overlying each of such packages; and heating means for each such package, said heating means being movably mounted for common movement

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toward and away from such packages and having a plurality of downwardly extending points for contacting such coupons.

9. A machine for attaching coupons to packages of cigarettes, such coupons having a suitable heat responsive adhesive on the reverse side thereof, comprising means for guiding into proper position with respect to said machine a carton of cigarettes containing two tiers of packages of cigarettes; a movable ledge for receiving the upper tier of packages, said ledge being pivotable between a raised sloping position, in which it is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, and a lowered horizontal position, in which such upper tier of packages is supported on the same plane as the lower tier of packages; and a holding member movable between a raised and a lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its lowered position permitting said movable ledge to descend to its lowered position, said member when in its lowered position holding both tiers of packages in fixed positions at a common level.

10. A machine for attaching coupons to packages of cigarettes, such coupons having a suitable heat responsive adhesive on the reverse side thereof, comprising means for guiding into proper position with respect to said machine a carton of cigarettes containing two tiers of packages of cigarettes; a movable ledge for receiving the upper tier of packages, said ledge being pivotable between a raised sloping position, in which it is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, and a lowered horizontal position, in which such upper tier of packages is supported on the same plane as the lower tier of packages; and a coupon guiding member movable between a raised and a lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its lowered position permitting said movable ledge to descend to its lowered position, said member when in its lowered position serving to guide such coupons into positions immediately overlying each of such packages.

11. A machine for attaching coupons to packages of cigarettes, such coupons having a suitable heat responsive adhesive on the reverse side thereof, comprising means for guiding into proper position with respect to said machine a carton of cigarettes containing two tiers of packages of cigarettes; a movable ledge for receiving the upper tier of packages, said ledge being pivotable between a raised sloping position, in which it is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, and a lowered horizontal position, in which such upper tier of packages is supported on the same plane as the lower tier of packages; and a holding member movable between a raised and a lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its lowered position permitting said movable ledge to descend to its lowered position, said member when in its lowered position holding both tiers of packages in fixed positions at a common level, said holding member also being adapted when in its lowered position to guide such coupons into posi-

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tions immediately overlying each of such packages.

12. A machine for attaching coupons to packages of cigarettes, such coupons having a suitable heat responsive adhesive on the reverse side thereof, comprising means for guiding into proper position with respect to said machine a carton of cigarettes containing two tiers of packages of cigarettes; a movable ledge for receiving the upper tier of packages, said ledge being pivotable between a raised sloping position, in which it is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, and a lowered horizontal position, in which such upper tier of packages is supported on the same plane as the lower tier of packages; a holding member movable between a raised and a lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its lowered position permitting said movable ledge to descend to its lowered position, said member when in its lowered position holding both tiers of packages in fixed positions at a common level, said holding member also being adapted when in its lowered position to guide such coupons into positions immediately overlying each of such packages; means urging said holding member upwardly; latching means for holding said holding member in its lowered position; heating means for each such package, said heating means being movably mounted for common movement toward and away from such packages and having a plurality of downwardly extending nibs for contacting such coupons; and releasing means associated with said heating pads for tripping said latching means when said heating pads are moved out of engagement with such coupons.

13. A machine for attaching coupons to packages of cigarettes, such coupons having a suitable heat responsive adhesive on the reverse side thereof, comprising means for guiding into proper position with respect to said machine a carton of cigarettes containing two tiers of packages of cigarettes, said guiding means being adjustable to receive various sized packages of cigarettes; a movable ledge for receiving the upper tier of packages, said ledge being pivotable between a raised sloping position, in which it is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, and a lowered horizontal position, in which such upper tier of packages is supported on the same plane as the lower tier of packages, said movable ledge having associated therewith an adjustable stop whereby said ledge is adaptable to receive various sized packages of cigarettes; a holding member movable between a raised and a lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its lowered position permitting said movable ledge to descend to its lowered position, said member when in its lowered position holding both tiers of packages in fixed positions at a common level, said holding member also being adapted when in its lowered position to guide such coupons into positions immediately overlying each of such packages; means urging said holding member upwardly; latching means for holding said holding member in its lowered position; a heating pad for each such package, said heating pads being movably mounted for common movement toward and

away from such packages and having a plurality of downwardly extending nibs for contacting such coupons; releasing means associated with said heating pads for tripping said latching means when said heating pads are moved out of engagement with such coupons; and means associated with said heating pads for preventing the downward movement of said heating pads into contact with such coupons at all times except when said heating pads are in proper alignment with such packages and such coupons.

14. A machine for facilitating the attachment of labels or coupons to packages contained in two tiers in a carton comprising means for guiding such carton into proper position with respect to said machine; a movable ledge for receiving the upper tier of packages, said ledge being movable between a raised position, in which it is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, and a lowered position, in which such upper tier of packages is supported at the same level as the lower tier of packages; a movable coupon guiding member movable between a raised and lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its holding position permitting said movable ledge to descend to its lowered position, said member when in its lowered position serving to guide such labels or coupons into positions immediately overlying each of such packages, said member also being adapted when in its lowered position to hold both tiers of packages in fixed positions at a common level; and a plurality of devices one for each of such packages for attaching such labels or coupons to such packages, said plurality of devices being movably mounted for common movement toward and away from such packages.

15. A machine for facilitating the attachment of labels or coupons to packages contained in two tiers in a carton comprising means for guiding such carton into proper position with respect to said machine; a movable ledge for receiving the upper tier of packages, said ledge being movable between a raised position, in which it is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, and a lowered position, in which such upper tier of packages is supported on the same plane as the lower tier of packages; a movable holding member movable between a raised and lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its holding position permitting said movable ledge to descend to its lowered position, said member when in its lowered position contacting the edges of the packages and holding both tiers of packages in fixed positions on the same plane, said holding member also having a plurality of openings therethrough, said openings serving, when said member is in its lowered position, to guide such labels or coupons into positions immediately overlying each of such packages; and a plurality of devices one for each of such packages for attaching such labels or coupons to such packages, said plurality of devices being movably mounted for common movement toward and away from such packages.

16. A machine for facilitating the attachment of labels or coupons to packages contained in two tiers in a carton comprising means for guid-

ing such carton into proper position with respect to said machine; a movable ledge for receiving the upper tier of packages, said ledge being pivotable between a raised sloping position to a lowered horizontal position, the free edge of said ledge being adjacent such properly positioned carton whereby said ledge when in its raised position is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, said ledge when in its lowered position supporting said upper tier of packages on the same plane as and closely adjacent such lower tier of packages; a movable holding member movable between a raised and lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its lowered position permitting said movable ledge to descend to its lowered position, said member when in its lowered position holding both tiers of packages in fixed positions on a single plane, said holding member also being adapted when in its lowered position to guide such labels or coupons into positions immediately overlying each of such packages; and a plurality of devices one for each of such packages for attaching such labels or coupons to such packages, said plurality of devices being movably mounted for common movement toward and away from such packages.

17. A machine for facilitating the attachment of labels or coupons to packages contained in two tiers in a carton comprising means for guiding such carton into proper position with respect to said machine; a movable ledge for receiving the upper tier of packages, said ledge being pivotable between a raised sloping position to a lowered horizontal position, the free edge of said ledge being adjacent such properly positioned carton whereby said ledge when in its raised position is adapted to receive and discharge such upper tier of packages with a simple sliding motion of the packages, said ledge when in its lowered position supporting said upper tier of packages on the same plane as and closely adjacent such lower tier of packages; a movable holding member movable between a raised and lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its holding position permitting said movable ledge to descend to its lowered position, said member when in its lowered position holding both tiers of packages in fixed positions at a common level, said holding member also having a plurality of openings therethrough, said openings serving, when said member is in its lowered position, to guide such labels or coupons into positions immediately overlying each of such packages; and a plurality of devices one for each of such packages for attaching such labels or coupons to such packages, said plurality of devices being movably mounted for common movement toward and away from such packages.

18. A machine for facilitating the attachment of labels or coupons to packages contained in two tiers in a carton comprising means for guiding such carton into proper position with respect to said machine; a movable ledge for receiving the upper tier of packages, said ledge being pivotable between a raised sloping position to a lowered horizontal position, the free edge of said ledge being adjacent such properly positioned carton whereby said ledge when in its raised position is adapted to receive and discharge such upper tier of packages with a simple sliding mo-

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tion of the packages, said ledge when in its lowered position supporting said upper tier of packages on the same plane as and closely adjacent such lower tier of packages; a movable holding member movable between a raised and lowered position, said member when in its raised position supporting said movable ledge in its raised position, said member when moved to its holding position permitting said movable ledge to descend to its lowered position, said member when in its lowered position holding both tiers of packages in fixed positions at a common level, said holding member also having a plurality of openings therethrough, said openings serving, when said member is in its lowered position, to guide such labels or coupons into positions immediately overlying each of such packages; means urging said holding member upwardly; latching means for holding said holding member in its lowered positions; and tripping means associated with said devices for tripping said latching means when said devices are moved away from such packages.

19. In a machine for performing an operation on individual packages or other objects which are contained in upper and lower tiers within a carton and are to be returned to the carton after the performance of the operation, means for supporting such a carton in a predetermined position with respect to said machine, a ledge adjacent such carton positioned to receive the upper tier of packages and to permit return of such packages from said ledge to a position on said lower tier upon a simple sliding movement of said upper tier of packages, and operating means arranged to perform an operation on said packages when said upper tier of packages is located on said ledge.

20. In a machine for performing an operation on individual packages or other objects which are contained in upper and lower tiers within a carton and are to be returned to the carton after the performance of the operation, means for supporting such a carton in a predetermined position with respect to said machine, a ledge adjacent such carton positioned to receive the upper tier of packages and to permit return of

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said packages to a position on said lower tier upon a simple sliding movement of said upper tier of packages, holding means for locating said upper tier of packages in a predetermined position on said ledge, and operating means arranged to perform an operation on said packages when said upper tier of packages is located on said ledge.

21. In a machine for performing an operation on individual packages or other objects which are contained in upper and lower tiers within a carton and are to be returned to the carton after the performance of the operation, means for supporting such a carton in a predetermined position with respect to said machine, a ledge movable between an operating position and a receiving and discharging position, said ledge when in said latter position being adjacent said carton and positioned to receive such upper tier of packages and to permit return of said packages to a position on said lower tier upon a simple sliding movement of said upper tier of packages, and operating means arranged to perform an operation on said packages when said ledge is in said operating position and said upper tier of packages is located thereon.

22. In a machine for attaching to packages coupons having a suitable heat-responsive adhesive on the reverse side thereof, means for supporting in a predetermined position with respect to said machine a carton containing two tiers of packages, a ledge adjacent said carton located to receive the upper tier of packages and to return said tier of packages to a position on said lower tier upon simple sliding movement of said upper tier of packages, a member movable between an inoperative position and an operative position adjacent said tiers of packages when said upper tier is located on said ledge, said member having provision for guiding coupons onto each of said packages when in operative position, and movable heating means arranged to engage the coupons on said packages to cause said coupons to be affixed to said packages.

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No references cited.